

VILLAGE OF DOWNERS GROVE
REPORT FOR THE VILLAGE COUNCIL WORKSHOP
AUGUST 12, 2008 AGENDA

SUBJECT:	TYPE:	SUBMITTED BY:
Stormwater and Flood Plain Ordinance Amendment	Resolution Ordinance Motion ✓ Discussion Only	Robin A. Weaver Interim Director of Public Works

SYNOPSIS

On August 1, 2008, an amendment to the DuPage County Stormwater and Flood Plain Ordinance became effective. Chapter 26 of the Municipal Code automatically adopts any amendments and additions to the County's Stormwater and Flood Plain Ordinance.

STRATEGIC PLAN ALIGNMENT

The Five Year Plan and Goals for 2007-2012 identified *Top Quality Village Infrastructure & Facilities*. A supporting objective of this goal is *Improve Neighborhood Infrastructure Curbs, Gutters, Streets, Sidewalks, Stormwater and Drainage System*.

FISCAL IMPACT

N/A.

RECOMMENDATION

Information only.

BACKGROUND

The Stormwater and Flood Plain Ordinance (SWFPO) is the vehicle by which the Village manages stormwater. In conjunction with the Building Code and Zoning Ordinance, it provides the regulation for the development and redevelopment of land within the Village. The County has revised the SWFPO to conform to the U.S. Environmental Protection Agency's National Pollution Discharge Elimination System (NPDES), Phase II requirements. The amended ordinance adds stricter requirements relative to the quality of stormwater runoff. It includes requirements for developers and builders to employ Best Management Practices (BMPs) when they develop or redevelop land. The requirements apply to all projects that require a stormwater permit, but a fee-in-lieu-of payment alternative is provided for those projects where the BMP installation may be impractical.

The Village's Stormwater and Flood Plain Ordinance, in addition to containing the County's ordinance, includes local standards and regulations that are stricter than the County's. At present, staff is researching if any of those local ordinances conflict with the County's revised ordinance. If any amendments are necessary, staff will present them to the Village Council at a later date.

Along with other municipalities, the Village voiced its concern about BMP compliance for single family lots in the County's previously proposed draft of the amended ordinance. The Village Council was informed of these concerns, and on December 4, 2007, the Village Council approved a motion to authorize a letter from Mayor Sandack be sent to the County recommending modifications.

The following is a description of the concern and the modifications the County made to address it.

- Proposed Draft Standard – The BMP fee-in-lieu-of payment for all development on any single family lot was unquantifiable, leading many to believe these costs would be burdensome for single family lot development.
- Approved Standard – The standards requiring BMP compliance no longer apply to parcels of less than one acre, unless there is 5000 square feet or greater of disturbance. The fee-in-lieu-of payment for single family lots has been fixed at \$3000 per acre.

The amended Stormwater and Flood Plain Ordinance is attached and includes comments from DuPage County municipalities and the County's responses as well as a previous draft of the ordinance.

ATTACHMENTS

County Stormwater and Flood Plain Ordinance

ORDINANCE

OSM-004-07

AMENDMENTS TO CHAPTER 15 OF THE DUPAGE COUNTY CODE - DU
PAGE COUNTY COUNTYWIDE STORMWATER AND FLOODPLAIN ORDINANCE

WHEREAS, the County of DuPage pursuant to authority granted it under 55 ILCS 5/5-1062 and 5/5-15001 et seq. and other applicable authority, adopted the *DuPage County Countywide Stormwater and Floodplain Ordinance* (hereinafter referred to as the "Stormwater Ordinance"); and

WHEREAS, the Stormwater Ordinance is further identified as Appendix F to the DuPage County Stormwater Management Plan, as originally adopted under Ordinance SMO-0001-91, dated September 24, 1991 and last revised under Ordinance OSM-001-06 dated February 28, 2006; and

WHEREAS, the DuPage County Stormwater Management Division has worked closely with the municipal engineers of DuPage County communities to develop equitable and effective standards for stormwater management and watershed planning; and

WHEREAS, the proposed Stormwater Ordinance revisions have undergone a thirty (30) day agency, public and community review in accordance with the requirements of the enabling legislation, Section 15-259 of the Stormwater Ordinance, and the DuPage County Stormwater Management Plan; and

WHEREAS, the proposed Stormwater Ordinance revisions include revisions to the floodplain, erosion and sediment, permit submittal requirements and enforcement section of the Stormwater Ordinance; and

WHEREAS, the ordinance changes address requirements set forth by the United States Environmental Protection Agency ("USEPA") National Pollution Discharge Elimination System ("NPDES") Phase II permit issued to the County and its co-permittees; and

WHEREAS, enacting the proposed amendments to the Stormwater Ordinance is in the best interests of the County and its residents; and

WHEREAS, the Stormwater Management Planning Committee of the DuPage County Board has reviewed and recommends approval of the attached revisions to various sections of the Stormwater Ordinance; and

WHEREAS, the Stormwater Management Planning Committee further recommends that the revised Stormwater Ordinance take effect upon adoption by the County Board.

NOW, THEREFORE, BE IT ORDAINED by the DuPage County Board, that the Stormwater Ordinance is hereby amended as attached; and

BE IT FURTHER ORDAINED by the DuPage County Board pursuant to authority granted to the County of DuPage by the Illinois General Assembly the revised DuPage County Countywide Stormwater and Floodplain Ordinance, Chapter 15 of the DuPage County Code shall become effective August 1, 2008; and

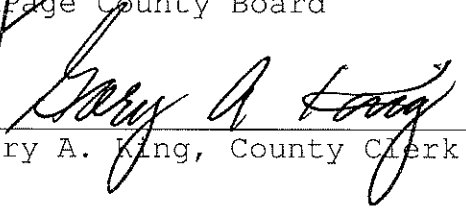
BE IT FURTHER ORDAINED that the County Clerk shall publish this Ordinance amendment in the newspaper of general circulation in the County of DuPage.

Enacted and approved this 25th day of March, 2008 at Wheaton, Illinois.



Robert J. Schillerstrom, Chairman
DuPage County Board

ATTEST:



Gary A. King, County Clerk

Ayes: 15
Absent: 3

COMMENT RESPONSE DOCUMENT

**AMENDMENT TO THE DUPAGE COUNTY COUNTYWIDE STORMWATER AND
FLOOD PLAIN ORDINANCE**

Article 2 Definitions

SECTION 15-47

SECTION 15-112

SECTION 15-114

SECTION 15-146

SECTION 15-149

SECTION 15-177

SECTION 15-259

SCHEDULE B

September 17, 2007

Prepared for
The DuPage County
Stormwater Management Committee

Prepared by
DuPage County
Departments of Economic Development and Planning and Public Works

COMMENT RESPONSE DOCUMENT

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SECTION 15-146; SECTION 15-149;
SECTION 15-177; SECTION 15-259;
SCHEDULE B

PREFACE

This Comment Response Document compiles comments made on the proposed amendments to the DuPage County Code DuPage County Countywide Stormwater and Flood Plain Ordinance and corresponding Water Quality Best Management Practices Guidance, for inclusion into Appendix E-Technical Guidance for the DuPage County Stormwater Ordinance. The document responds to all written comments received during the 30 day comment period from July 13, 2007 through August 13, 2007.

Comment authors are identified and numbered in Section 1, along with copies of each of their comment letters. Section 2 contains responses to each identified comment. A copy of the proposed Ordinance changes is included in Section 3. Section 4 contains a copy of the Water Quality Best Management Practices Guidance, for inclusion into Appendix E-Technical Guidance for the DuPage County Stormwater Ordinance.

SECTION 1

LETTERS OF COMMENT

<u>WRITTEN COMMENTS</u>	<u>COMMENT DESIGNATOR</u>
City of Naperville Erskine Klyce, P.E., Project Engineer	A
Village of Lombard David P. Gorman, P.E., Development Engineer Stormwater Administrator	B
Village of Woodridge Christopher Bethel, Director of Public Works	C
Stormwater and Floodplain Ordinance Oversight Committee Donald Eckman, P.E., Chairman	D
City of Warrenville David Brummel, Mayor	E



Naperville

A

August 13, 2007

Jennifer Boyer
Department of Economic Development and Planning
421 North County Farm Road
Wheaton, Illinois 60187

Re: Addition of the Water Quality Best Management Practices Technical Guidance (BMP Manual) into Appendix E – Technical Guidance for the DuPage County Countywide Stormwater and Floodplain Ordinance and the Proposed Ordinance Changes to Incorporate Use of the BMP Manual into the Ordinance

Dear Ms. Boyer:

We have reviewed the subject documents and have the following comments.

Proposed Ordinance Changes to Incorporate Use of the BMP Manual into the Ordinance

- A-1 The ordinance changes are regulatory in nature but Appendix E is not a regulatory document. It contains guidelines. Appendix E has always been a guideline document from the beginning of the ordinance. This presents a problem in enforcement as the same material can't be discretionary and mandatory.
- A-2 The County has not addressed the cost of the subject revisions sufficiently. The county appears to be planning to deal with costs through some administrative procedure. All costs should be part of the public review documents. We do not believe that implementing BMP's on a lot by lot basis is feasible or practical. We do not believe that we can enforce the BMP requirements over say a decade or more with any degree of reliability. The cost to do so would be prohibitive. This appears to be a planned revenue stream using fee in lieu procedures for the county. That is few believe BMP's are practical on a small lot basis, hence the small developer in particular will opt for fee in lieu of procedures. This is an excessive burden for small developers that is an individual homeowner.
- A-3 We do not agree with the intent to require BMP's for small road projects less than one acre. This again appears to be a revenue stream without benefits exceeding costs to the municipalities.

- A-4 We also feel that the burden on small less than one acre non-residential development to implement BMP's is also too high. Maintenance costs and enforcement are issues here too.
- A-5 Page 10 The definition of pollutant is very broad. Air pollution would fit this definition. What BMP would we have to implement for air pollution? Do we have to deal with pollutants coming from upstream into our watersheds from outside of the city of Naperville? What is harmful to the environment?
- A-6 Page 12 In the municipal engineers meetings we are talking about permeable pavers and the fact that the county considers them to be essentially impervious because the underlying soils will most likely have a clay layer. Yet the county considers them a BMP. The definition refers to the fact the BMP's are stormwater management facilities. Are credits planned use of BMP's?
- A-7 Page 13 The definitions of Waters of the DuPage appear to expand the jurisdiction of the County beyond special management areas. This should be addressed. The June 19, 2006 Supreme Court decision involving Rapanos and Carabell should also be addressed.
- A-8 Page 17 We do not agree with the requirement requiring partial waiver communities to have an environmental scientist on staff or request assistance from DuPage County to review water quality BMP's. the County can't handle the normal workload it has.. In a presentation in the county board room on 8/7/07 it was publicly stated that many county sotrwater programs have been curtailed due to funding and staff constraints.
- A-9 Pages 30, 31, 32, 33 & 34 It is unclear why a number of the paragraphs have marks indicating changes when no changes appear to have been made.
- A-10 Page 35 Sec. 15-113. Under Article 9 (the heading is Sec 15-11 through 15-122). This is confusing and should be edited. Paragraph 11 – Developed area is not defined in the ordinance. The paragraph uses the word “treat”. What does that mean? It is not define din the ordinance. 100% may not be practical in all cases. Any exceptions granted should be informal administrative actions by the communities not formal ones. Are parking lots the only areas that we can grant exceptions?
- A-11 Page 36 We have already stated our objections to BMPs for single family and two family lots and for small non residential and road projects too. We consider this impractical and an unfunded mandate. Schedule B is not supported with the costs analysis only the numbers to be used. We do not support use of these figures. Supporting analysis should have been include in the public review draft.
- A-12 Pages 37 (bottom of page), and pages 55-58 What changes have been made?
- A-13 Page 59 Sub Paragraph (5) The planting plan is essentially a landscape and seeding plan combined. It is not clear that this is adding any new information to exiting processes in

the communities. What performance standards are to be addressed and for what period of time?

- A-14 It is noted that the paragraph numbering system seems to be a bit confusing. For instance what section is Paragraph (5) in?
- A-15 Page 65 What changes have been made?
- A-16 Page 66 top of page. What time period is to be used for the security? Six months, ten years or what?
- A-17 Page 82 This paragraph is dealing with grandfather issues. What does " unless otherwise noted" mean in this paragraph? Noted where?
- A-18 While the general view of the need and value for BMP's is clear, the value of making them mandatory and establishing significant fees and fee in lieu procedures is less clear. It really gets down to vague water quality benefits from BMP's and unfunded mandates by the federal government. Having said this, we do believe in the value of BMP's.

Water Quality Best Management Practices Technical Guidance (BMP Manual) into Appendix E – Technical Guidance for the DuPage County Countywide Stormwater

- A-19 It Is not clear exactly how the BMP material will be added to Appendix E. This particular Appendix has been under consideration for revision by the County for many years and has not occurred due to funding constraints. It is not clear whether any aspects of the BMP narrative conflicts with the existing technical guidance document. It is also not clear how changes will be made to the BMP manual. If this done administratively whenever needed without public involvement, there may be implications for the regulatory language in the County Countywide Stormwater and floodplain Ordinance.
- A-20 The technical aspects of the BMP narrative have been under review by the municipal engineers group since early this year. The narrative is well done. However, the costs of implementing these procedures for development activity has not been addressed sufficiently. We have received cost information for small sites not evaluations to implement these practices on larger developments. This should be done.

Stormwater Utility Impacts

- A-21 Since the County is close to moving to a stormwater utility(SU), we have added some additional thoughts related to BMP impacts on the proposed SU concept that the County is currently considering.

How can credits be issued for clean(er) runoff as associated with a SU.

Allow fee-in-lieu, but at a rate that will financially support off-site regional BMP's, or as noted if BMP's are installed, be ready to credit them in a SU.

The ordinance should allow retro-fit with BMP's to address credit issue.

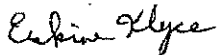
The fate of credits for single family should be addressed. Thus if we require BMP's we should allow SU credits. This could present a problem with a flat rate SU for single family.

A-22 Street ROW BMP's should be regionally addressed, not case by case. They should be excepted from the ordinance, except in the case of newly developed roads (brand new - vacant land to highway, ie. new subdivision, totally new road. Widening should be excepted)

A-23 There should be a worksheet format that defines how to calculate the pollution impact that a property creates or not. See credit comments above.

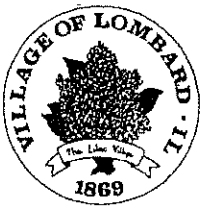
Thank you for the opportunity to provide our comments on the subject material.

Sincerely,



Erskine Klyce, P.E.
Project Engineer

Cc: Bill Novack, P.E. – City Engineer/Engineering Services Team Leader
Bob Kozurek, P.E. – Engineering Manager/Deputy City Engineer



VILLAGE OF LOMBARD
255 E. Wilson Avenue
Lombard, IL 60148-3931
(630) 620-5700 FAX: (630) 620-8222
TDD: (630) 620-5811
www.villageoflombard.org

August 10, 2007

Village President
William J. Mueller

Village Clerk
Brigitte O'Brien

Trustees
Greg Alan Gron, Dist. 1
Richard J. Tross, Dist. 2
John "Jack" T. O'Brien, Dist. 3
Dana L. Moreau, Dist. 4
Laura A. Fitzpatrick, Dist. 5
Rick Soderstrom, Dist. 6

Village Manager
William T. Lichter

Ms. Jennifer Boyer
DuPage County Department of Development & Stormwater
421 N. County Farm Road
Wheaton, Illinois 60187

RE: Countywide Ordinance Amendments for Best Management Practices

Dear Ms. Boyer:

In response to your public notice, the Village of Lombard has reviewed the proposed Countywide Ordinance amendments and the draft Appendix E and offers the following comments.

B-1 1. We recommend that Article 9, Number 11 be revised to read "Developments requiring a Stormwater Management Permit under Section 15-147 of this Ordinance shall treat impervious areas for pollutants from the site..." The majority of pollutants are from impervious areas. Eliminating the "100% of the developed area" requirement would afford necessary flexibility for design in order to achieve a minimum BMP composite number.

"Our shared *Vision* for Lombard is a community of excellence exemplified by its government working together with residents and business to create a distinctive sense of spirit and an outstanding quality of life."

B-2 2. The required minimum BMP composite numbers in Section 4 should be a weighted average of the impervious area treatments.

B-3 3. The minimum BMP composite number for single-family, single lot developments should be less than 2.5, recognizing the lower level of pollutants from those impervious areas. Discussions about how to treat driveway runoff have not yielded viable alternatives beyond permeable pavers and trench drains. Using a weighted average and a lower composite number, the driveway could drain to the roadway untreated provided that downspout discharges are treated.

"The *Mission* of the Village of Lombard is to provide superior and responsive governmental services to the people of Lombard."

B-4 4. We recommend that BMP easements not be required for single-family, single lot developments. We anticipate that the vast majority of these BMPs will be dry wells, which are not likely to change or require significant maintenance. Based on our experience with dry wells that have been installed in Lombard since 2001, we believe it is only necessary to inspect dry wells during construction since they require minimal maintenance.

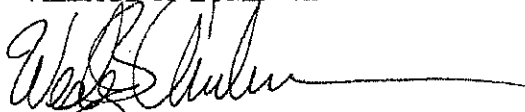
August 10, 2007
BMP Comments
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- B-5 5. We recommend that the required design, including sizing, be specified in Appendix E.
- B-6 6. The County should provide training for administrators and consultants over the next couple years to ensure uniformity and consistency during this period of considerable learning curve.

We appreciate the County for taking the lead in this necessary effort. Please call me at 620-5740 if you have any questions.

Respectfully,

VILLAGE OF LOMBARD



Wesley B. Anderson
Director of Public Works

BMP Comments

cc: William T. Lichter, Village Manager
David A. Hulseberg, AICP, Asst. Village Manager
David P. Gorman, PE, Asst. Dir. of Public Works
Nick Hatfield, PE, Development Engineer



Village of Woodridge

Department of Public Works • One Plaza Drive • Woodridge, IL 60517-5015
(630) 719-4753 • TTY (630) 719-2498 • FAX (630) 719-0971

August 8, 2007

Ms. Jennifer Boyer
Senior Wetland Specialist
Department of Economic Development and Planning
421 N. County Farm Road
Wheaton, IL 60187

Re: Best Management Practices (BMP) Manual - Comments

Dear Jennifer:

Please allow me to first extend the Village of Woodridge's appreciation to DuPage County for allowing us to review and offer constructive feedback on this Best Management Practices amendment. The Village of Woodridge has reviewed the draft copy of the Best Management Practices (BMP) manual and the proposed amendment to the Countywide Stormwater and Flood Plain Ordinance related to BMP as a requirement as opposed to its current advisory capacity for all future development.

As noted, the BMP manual, an addition to the DuPage County Technical Guidance Document, Appendix E of the DuPage County Stormwater Management Plan (June 1989), is not regulatory in scope, the planning and selection guidelines found in this manual are merely intended to help demonstrate compliance with regulations such as those found in the DuPage County Countywide Stormwater and Flood Plain Ordinance. This manual is intended to provide guidance on the design and implementation of measures to maintain and improve overall stormwater quality. This being stated, the Village of Woodridge, through its various departments of professional staff, have carefully reviewed this major revision and we respectfully present the following concerns and possible remedies:

Concerns Regarding the proposed BMP and Stormwater Ordinances Revisions

- C-1 1. Another concern involves the point values assigned to specific BMPs and the total average point value required for new developments. The values do not appear to be consistent with the various land uses nor within the same land use as applied to existing and new developments.

For example, a vegetated swale with native vegetation is worth 3 points on a residential lot but is worth only 2 points on a commercial site. Permeable pavers are only worth 2 points on a residential lot but are worth 3 points on commercial and industrial sites.

Further, why are large residential subdivisions (an average of 2.0 points) required to have less treatment than individual residential lots (an average of 2.5 points)?

- **Please provide a clear justification for the point values applied to the various improvements and again a justification of the point values as applied to the various land uses.**

C-2 2. The proposed revisions to the Countywide Stormwater and Flood Plain Ordinance will require all partial-waiver communities such as Woodridge to have an environmental scientist with four years experience either on staff or as a consultant in order to review site plans for BMP compliance, to inspect BMP construction, and to review completed projects for compliance with BMP requirements.

- **This implies that site plans will opt to apply the BMP standards. In order to determine workload both locally and regionally, what estimate has been made as to the number of permits by community and countywide that will be reviewed annually?**

C-3 3. A determination can be made by the Ordinance Administrator that the required BMPs are impractical for certain properties/developments, and as such, may pay into the fee-in-lieu-of program.

- **What criteria are used by the Ordinance Administrator to determine whether the application of these BMP requirements is practical or impractical?**

C-4 4. Residential development that requires a stormwater permit but does not require detention may forego the installation of permanent BMPs by paying into a fee-in-lieu-of program. Non-residential development and roadways meeting this same criteria, and with a determination by the Ordinance Administrator that required BMPs are impractical, may also pay into the fee-in-lieu-of program. The County's proposed fee schedule identifies reasonable and rational costs for failure to construct permanent BMPs:

- A. Single-family and Two-family Residential = \$ 3,000 per acre
- B. Multi-family and non-residential = \$ 15,000 per acre
- C. Major roadway improvements = \$ 30,000 per acre

- **How were these fees calculated?**

C-5 5. The construction of permanent BMPs on single-family residential construction on individual lots is impractical. This has been brought to the attention of DuPage County staff by the Municipal Engineers Group. The costs associated with the different land uses appear to be the

staff's opinion of what the market will bear. If none of the single-family houses can practically comply, then that indicates that perhaps the requirements are too high. If the assumption is made that the present BMP guidelines are the best course of action for the overall improvement of stormwater quality and it is also assumed that it will be impractical for the majority of properties and developments to comply with the guidelines if they are made mandatory, is it assumed the fee-in-lieu-of program will be the likely route for property owners/developers?

- **Have regional BMP Water Quality projects been prioritized with projected costs and completion dates?**
- **Will this program be implemented similar to the Wetland/Special Management Area fee-in-lieu of program? If so, please provide an overview of the administration of this program and how the program has impacted wetland restoration and/or relocation.**

C-6 6. It is more difficult to incorporate BMPs into a roadway project than it is into a commercial or industrial project with a detention pond, so it is not clear why the cost for roadway improvements is so much more.

- **How was this determined?**

C-7 7. Although the municipality has the option of instituting its own fee-in-lieu-of program and could theoretically pay itself for BMPs not incorporated into the roadway improvements, the net result is a County-mandated program to divert funding from roadways into environmental programs on local road projects. Small roadway projects not requiring detention still require a stormwater permit, but they are not mentioned in the manual. It is unclear what average point value they must meet or what amount must be paid to a fee-in-lieu-of program if BMPs are not constructed.

C-8 8. DuPage County has maintained that these BMP requirements are necessary for the communities in the County to remain in compliance with the NPDES Phase 2 requirements. While an environmentally friendly development policy is a welcome endeavor, the practicality of implementation should always be sufficiently evaluated first.

Moreover, if the assumption is made that the present BMP guidelines are the best course of action for the overall improvement of stormwater quality and to remain in compliance with NPDES, why not encourage the BMP by offering a monetary credit, such as a rebate on the Stormwater Property Tax, to property owner/ developers that do in fact meet the BMP guidelines and thereby improve the water quality?

- **Please provide the County's position as to a credit program as opposed to a fee program to meet the objectives of the BMP guidelines.**

Therefore, aside from the possible exemption of Single-family residential construction on existing and/or proposed subdivision lots, public roadway improvements in an urban setting, and revisiting the

requirement for an environmental scientist, the Village of Woodridge would greatly appreciate responses to the above stated concerns including the possibility of a credit program as opposed to the fee program.

Again, thank you for the opportunity to present our concerns. Interaction and project development from all stakeholders is truly the mark of good government. Should you have any questions, please do not hesitate to contact me, John Perry, Village Administrator, Christopher Bethel, Director of Public Works, or Zill Khan, Village Engineer.

Respectfully Submitted,
VILLAGE OF WOODRIDGE



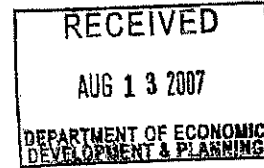
Christopher Bethel
Director of Public Works

Cc: Thomas Cuculich, Director of Economic Development and Planning
Clayton Hefter, Stormwater Permitting Manager
John Perry, Village Administrator
Zill Khan, Village Engineer

*Stormwater and Flood Plain Oversight Committee
Village of Downers Grove, IL*

August 10, 2007

Jennifer Boyer
Senior Wetland Specialist
Department of Economic Development and Planning
County of DuPage
421 North County Farm Rd
Wheaton, IL 60187



RE: Public Comment Period
Proposed BMP Manual and Stormwater Ordinance Revisions

Dear Ms. Boyer:

On behalf of Stormwater and Flood Plain Oversight Committee, a citizen advisory committee of the Village of Downers Grove, please consider the following comments regarding the proposed Stormwater Quality Best Management Practices (BMPs) Technical Guidance (Appendix E) and the associated proposed revisions to the *Countywide Stormwater and Flood Plain Ordinance*.

The Committee has invested significant time and effort into a review of the proposed revisions and concludes that substantial modifications are necessary to ensure that the Ordinance remains practical and enforceable. As written, highly variable and inequitable interpretations are inevitable throughout the County. Our most significant concern is the current code and appendix language regarding single-family residential developments on individual lots. Specifically, we recommend a number of changes to the methodology presented on page 87 of Appendix E (Section 4.1 BMP Selection Guide) regarding BMP effectiveness calculations for individual residential lots. Additional modifications are recommended for the ordinance text to further the goal of a reasonable and enforceable document.

- D-1 • Lower the minimum importance value (2.5) to a number attainable under real-world conditions.
- D-2 • Define the composite site importance value as an area-weighted average based on the quantity of impervious area treated by each BMP.
- D-3 • Clarify that compliance can be achieved by a combination of physical improvements and fee payment.
- D-4 • Add dry well design guidelines, particularly minimum size parameters, to Appendix E.
- D-5 • Eliminate easement requirements and encourage BMPs that are simple to maintain and inspect in a dense residential environment.
- D-6 • Modify Section 15-113.11 to require treatment only for impervious areas and not for vegetated areas, because all vegetated areas can serve as BMPs.

We also strongly encourage the devotion of significant resources to conduct thorough training of County staff, municipal officials, design consultants, and developers to ensure uniform and consistent permit review and enforcement.

Failing the above changes, the stormwater ordinance should exempt single-lot residential developments. The Committee strongly believes that the recommended modifications to the County's proposed revisions will greatly increase the practicality of design and enforcement, which will better serve to support the overall goal of improved water quality and compliance with federal and state requirements.

It should be noted that the comments contained herein, are solely the comments of the citizen advisory committee. The comments have not been adopted, endorsed nor reviewed by the Village Council of the Village of Downers Grove.

Sincerely,

Donald E. Eckmann, P.E., Chairman
Stormwater and Flood Plain Oversight Committee

c: Downers Grove Stormwater and Flood Plain Oversight Committee
Cara Pavlicek, Village Manager
Robin Weaver, Director of Public Works
Jonathan Hall, P.E., Stormwater Administrator

City of Warrenville

28W701 Stafford Place • Warrenville, IL 60555
630/393-9427 • FAX 630/393-6948

August 7, 2007

Ms. Jennifer Boyer
Department of Economic Development and Planning
421 North County Farm Road
Wheaton, IL 60187

RE: PROPOSED BMP ORDINANCE AMENDMENTS

Dear Ms. Boyer:

E-1 DuPage County is currently considering the adoption of the Water Quality Best Management Practices Technical Guidance (the BMP Manual), as well as proposed ordinance changes to incorporate the use of the BMP Manual into the Countywide Stormwater and Flood Plain Ordinance. The public comment period for these proposed ordinance changes runs from July 13, 2007 to August 13, 2007, which leaves little time for discussion of the proposed changes at the City Council level.

E-2 While the City of Warrenville supports the implementation of BMP's, we are concerned that several aspects of the proposed ordinance changes could have a negative impact on community development, the City's administration of that development, and the City's Capital Improvement (Road) Program. We believe the mandatory inclusion of Best Management Practices in all development, no matter how small, requires further study and evaluation.

E-3 The additional administrative burden and costs associated with these new requirements may impact both City infrastructure improvement plans and private development within the City. The significant. The City of Warrenville will have to hire and coordinate the work of an environmental consultant to review, inspect and approve all new BMP improvements. This will require additional time and additional cost to complete project reviews and will therefore increase the time and cost it takes for individual roadway improvement and private development projects to acquire a permit. These additional costs will have to be passed on to the development community in the form of higher permit fees and to the City residents as either higher taxes and/or fees. While the BMP Manual includes a very basic outline of the costs required to satisfy the required level of BMP improvements we are concerned that not enough evaluation has been performed on the fiscal impact the new requirement and administrative responsibilities may have on individual municipalities in DuPage County.

E-4 The BMP Manual addresses the design of various elements which can be incorporated into development plans to enhance the environment and improve the quality of stormwater runoff.

But neither the BMP Manual nor the proposed ordinance changes address the municipality's responsibility with regards to construction inspection, final inspection and maintenance of these enhancements. What will prevent an individual property owner from removing or from not maintaining installed BMP measures? City of Warrenville staff will likely notice if major BMP improvements are neglected or removed from large commercial or industrial developments. But the City will never have the resources to fund an inspection program to ensure that BMP measures are being maintained on every small residential and commercial property, in perpetuity.

E-5 We believe the proposed ordinance changes are especially onerous for single-family residential development. From our initial review of the proposed requirements, it appears as if it will be very difficult, if not impossible, for small lot, single-family, infill residential development to incorporate BMP measures to the level outlined in the proposed manual. According to our consulting City Engineer, DuPage County staff has publicly stated they expect very few single lot developers to comply with the new BMP requirements and instead these developers will pay into a BMP fee-in-lieu-of program. If a governmental body institutes a program with requirements that are not feasible for the majority of projects in a specific class of development (i.e. small lot, single-family, infill, residential development) to satisfy, we believe the requirements may be overly restrictive. Our primary concern here relates to how the proposed new requirements impact single-lot residential development. Residential subdivisions over three acres are required to have detention ponds and BMP measures can be incorporated rather easily. We feel consideration should be given to exempting small single-lot house construction from these new requirements. If this exemption proves to be detrimental to overall water quality, the issue could be revisited in the future.


E-6 It does not appear as if the proposed ordinance changes include provision for developments that provide partial BMP compliance. Developments are required to treat all stormwater runoff to an average point value, as defined in the manual, or to treat none of the stormwater and pay fee-in-lieu-of instead. The proposed point system seems cumbersome and does not appear to provide for partial credit. The point system will also be difficult to explain to individual residents/small builders and will be difficult to satisfy in small developments not requiring detention facilities. We feel this portion of the proposed ordinance change requires additional study to come up with a system that is both practical and logical.

E-7 The incorporation of Best Management Practices into the design of a new roadway is difficult due to the linear nature of roadway improvements, but is still achievable. However, BMP measures for a roadway reconstruction project in an urban commercial district or residential neighborhood do not make sense. The fee-in-lieu-of cost of \$30,000 per acre for roadway improvements (twice the amount of industrial or commercial development) will become a de facto mandate from DuPage County to force local municipalities to transfer a portion of their already stretched transportation budgets to an environmental program. This has the potential of delaying needed street improvements and may be counter to the best interests of our residents. The proposed ordinance changes do not address maintenance of BMP measures in the public right-of-way either. Typically, adjoining property owners are responsible for maintenance of the

vegetated parkways. We do not see how we can require homeowners to maintain BMPs in front of their house. Clearly, the issue of BMPs in public right-of-way requires additional study before passage of an ordinance that may well prove to be unworkable.

E-8 In closing, we want to make clear that the City of Warrenton is decidedly in favor of Best Management Practices wherever they can logically be incorporated into a development design. For some time, we have actively worked in a cooperative manner with individual developers to facilitate their installation of stormwater BMP's including, but not limited to, native plantings around all detention ponds. We are currently undertaking construction of the first permeable paver public street pavement in the area. However, it is our belief that there has not been enough discussion in public forums on the ramifications of the proposed new mandatory BMP requirements. It appears that the ordinance changes may be impractical and/ or overly costly with regards to single-lot residential development and urban roadway improvements. We recommend the County consider focusing the ordinance amendments, and thus our limited municipal resources, on addressing development project where BMP's can be (i) more easily incorporated into the design and (ii) are more likely to be maintained long in the long term. Therefore, we support enacting the proposed BMP requirements for non-residential developments over one acre and residential subdivisions over three acres at this time as Phase I. After we have implemented and administered the Phase I requirements over the next 1-3 years, we will be in a much better position to evaluate the merits and potential pitfalls of a potential Phase 2 expansion of BMP requirements to single-lot residential developments and urban roadway improvement projects.

Sincerely,



David Brummel
Mayor

C: City Council
City Administrator Coakley
City Consulting Engineer Darnell
Community Development Director Mentzer

SECTION 2

COMMENTS AND RESPONSES

COMMENT A

City of Naperville
Erskine Klyce, P.E., Project Engineer

Comment A1: *The ordinance changes are regulatory in nature but Appendix E is not a regulatory document. It contains guidelines. Appendix E has always been a guideline document from the beginning of the ordinance. This presents a problem in enforcement as the same material can't be discretionary and mandatory.*

Response A1: Noted, Appendix E is not a regulatory document. It provides guidelines for acceptable Best Management Practices (BMPs) to meet the requirements of the Ordinance. As noted in the BMP manual other practices and designs may be acceptable upon presentation to the permitting agency during the permit approval process.

Comment A2: *The County has not addressed the cost of the subject revisions sufficiently. The county appears to be planning to deal with costs through some administrative procedure. All costs should be part of the public review documents. We do not believe that implementing BMPs on a lot by lot basis is feasible or practical. We do not believe that we can enforce the BMP requirements over say a decade or more with any degree of reliability. The cost to do so would be prohibitive. This appears to be a planned revenue stream using fee in lieu procedures for the county. That is few believe BMP's are practical on a small lot basis, hence the small developer in particular will opt for fee in lieu of procedures. This is an excessive burden for small developers that an individual homeowner.*

Response A2: It is the consensus of the Municipal Engineers group, the water quality stakeholders group, and county staff that residential land uses contribute a great deal to the impairment of our rivers and streams. According to preliminary findings of the DuPage River Watershed Plan Update (prepared by the Conservation Foundation), residential land uses contributed 60% of total solids and 68% of total phosphorous in the representative watershed. The purpose of the ordinance revisions and technical guidance is to meet the intent of the NPDES Phase II program and the associated water quality attainment standards. The Municipal Engineers group acknowledges the difficulty in providing and maintaining BMPs on small lots and is therefore recommending an option to pay a fee in lieu of these requirements. The fee is based on the lowest calculated cost to construct and maintain an acceptable BMP on-site. Funds collected will be used to provide water quality enhancements within the same watershed planning area.

Comment A3: *We do not agree with the intent to require BMPs for small road projects less than one acre. This again appears to be a revenue stream without benefits exceeding costs to the municipalities.*

Response A3: Research indicates that roadways contribute a large portion of pollutants found in stormwater runoff. In the event that installation of BMPs within a 1-acre or less roadway project is not feasible, an in-lieu fee for constructing the BMP may be paid to the County or the Municipality's fund to design, construct and maintain BMPs. The purpose of the ordinance revisions and associated technical guidance is to meet the intent of the NPDES Phase II program.

Comment A4: *We also feel that the burden on small less than one acre non-residential development to implement BMPs is also too high. Maintenance costs and enforcement are issues here too.*

Response A4: Research indicates that less than 1-acre commercial and industrial developments contribute a large portion of pollutants found in stormwater runoff. In the event that installation of BMPs within a 1-acre or less project is not feasible, an in-lieu fee for constructing the BMP may be paid to the County or the Municipality's fund to design, construct and maintain BMPs. The purpose of the ordinance revisions and associated technical guidance is to meet the intent of the NPDES Phase II program.

Comment A5: *Page 10 The definition of pollutant is very broad. Air pollution would fit this definition. What BMP would we have to implement for air pollution? Do we have to deal with pollutants coming from upstream into our watersheds from outside of the city of Naperville? What is harmful to the environment?*

Response A5: Air pollution would not fall under the definition as it cannot be discharged from a storm sewer. It is not the intent of the ordinance revisions to treat off-site stormwater pollutants, only those from new, or re-development activities.

Comment A6: *Page 12 In the municipal engineers meetings we are talking about permeable pavers and the fact that the county considers them to be essentially impervious because the underlying soils will most likely have a clay layer. Yet the county considers them a BMP. The definition refers to the fact the BMPs are stormwater management facilities. Are credits planned use of BMPs?*

Response A6: This comment is confusing water quantity management with water quality. While this manual recognizes water quality benefits, DuPage County does not recognize the water quantity benefits of permeable pavers. At this time, the use of credits is under consideration in association with the proposed Storm Water Utility.

Comment A7: *Page 13 The definitions of Waters of the DuPage appear to expand the jurisdiction of the County beyond special management areas. This should be addressed. The June 19, 2006 Supreme Court decision involving Rapanos and Carabell should also be addressed.*

Response A7: Not applicable. This comment is not relevant to the proposed ordinance revision as the definition of Waters of DuPage is not being modified at this time.

Comment A8: *Page 17 We do not agree with the requirement requiring partial waiver communities to have an environmental scientist on staff or request assistance from DuPage County to review water quality BMPs. The County can't handle the normal workload it has. In a presentation in the county board room on 8/7/07 it was publicly stated that many county stormwater programs have been curtailed due to funding and staff constraints.*

Response A8: An environmental scientist is necessary for the review of BMPs with native vegetation (e.g. native vegetated swale, detention basin, filter strip, etc.). In other types of BMP practices the stormwater administrator is responsible for determining the need for an environmental scientist. This issue was debated in great length with the municipals engineers group and the overall consensus was that an environmental scientist would be needed to review BMPs with native plantings. A permitting agency has the option to keep an environmental scientist on staff, contract with an environmental firm, or enter into an agreement with the County to perform these reviews.

Comment A9: *Pages 30, 31, 32, 33 & 34 It is unclear why a number of the paragraphs have marks indicating changes when no changes appear to have been made.*

Response A9: Not applicable. These sections were included for reference purposes and no changes were made.

Comment A10: *Page 35 Sec. 15-113. Under Article 9 (the heading is Sec 15-11 through 15-122). This is confusing and should be edited. Paragraph 11 – Developed area is not defined in the ordinance. The paragraph uses the word "treat". What does that mean? It is not define in the ordinance. 100% may not be practical in all cases. Any exceptions granted should be informal administrative actions by the communities not formal ones. Are parking lots the only areas that we can grant exceptions?*

Response A10: The definition of "treat" is the common usage of the word. Please refer to section 15-17 'Definitions' in the Ordinance: words and terms not defined shall have the meanings set forth indicated by common dictionary definition. As discussed in the municipal engineers meeting, treating 100% of the developed area may not always be feasible (e.g. driveway aprons), however, runoff from off-site areas tributary to the project site can offset untreated areas of the development. In the unlikely event that 100% of the developed area cannot be treated a variance would be required.

Comment A11: *Page 36 We have already stated our objections to BMPs for single family and two family lots and for small non residential and road projects too. We consider this impractical and an unfunded mandate. Schedule B is not supported with the costs analysis only the numbers to be used. We do not support use of these figures. Supporting analysis should have been include in the public review draft.*

Response A11: The objections are noted. Please refer to comment response A2 regarding the mandate and fee schedule. It is not common practice to include planning documents during the public review process. These calculations were developed, reviewed, and approved by the Municipal Engineers group.

Comment A12: *Pages 37 (bottom of page), and pages 55-58 What changes have been made?*

Response A12: Not applicable. These sections were included for reference purposes and no changes were made.

Comment A13: *Page 59 Sub Paragraph (5) The planting plan is essentially a landscape and seeding plan combined. It is not clear that this is adding any new information to exiting processes in the communities. What performance standards are to be addressed and for what period of time?*

Response A13: Performance criteria and monitoring periods can differ between sites and would therefore be too specific for inclusion in the ordinance. Example performance standards and monitoring criteria have been included in Appendix E. An environmental scientist would determine appropriate performance criteria and monitoring periods for each project.

Comment A14: *It is noted that the paragraph numbering system seems to be a bit confusing. For instance what section is Paragraph (5) in?*

Response A14: Noted. The formatting will be revised accordingly.

Comment A15: *Page 65 What changes have been made?*

Response A15: The subject ordinance revisions refer back to provisions on this page. These sections were included for reference purposes only.

Comment A16: *Page 66 top of page. What time period is to be used for the security? Six months, ten years or what?*

Response A16: The performance security should be held until all conditions or other applicable provisions of the permit are satisfied as required under section 15-177. The time period for holding a security should be based on a management and monitoring plan with performance standards for the successful establishment of a healthy plant community. The environmental scientist should use their professional judgment to consider all variables such as, but not limited to, species and soil type, planting method, time of year, and site conditions.

Comment A17: *Page 82 This paragraph is dealing with grandfather issues. What does "unless otherwise noted" mean in this paragraph? Noted where?*

Response A17: "Unless otherwise noted" refers to the possibility that another provision may take precedence.

Comment A18: *While the general view of the need and value for BMPs is clear, the value of making them mandatory and establishing significant fees and fee in lieu procedures is less clear. It really gets down to vague water quality benefits from BMPs and unfunded mandates by the federal government. Having said this, we do believe in the value of BMPs.*

Response A18: The objections are noted. Please refer to comment response A2 regarding the mandate.

Comment A19: *It is not clear exactly how the BMP material will be added to Appendix E. This particular Appendix has been under consideration for revision by the County for many years and has not occurred due to funding constraints. It is not clear whether any aspects of the BMP narrative conflicts with the existing technical guidance document. It is also not clear how changes will be made to the BMP manual. If this is done administratively whenever needed without public involvement, there may be implications for the regulatory language in the County Countywide Stormwater and floodplain Ordinance.*

Response A19: Future revisions to Appendix E will be evaluated and discussed with the Municipal Engineers Group and other steps as deemed appropriate by the State's Attorney.

Comment A20: *The technical aspects of the BMP narrative have been under review by the municipal engineers group since early this year. The narrative is well done. However, the costs of implementing these procedures for development activity has not been addressed sufficiently. We have received cost information for small sites not evaluations to implement these practices on larger developments. This should be done.*

Response A20: It is not common practice to include planning documents during the public review process. These calculations were developed, reviewed, and approved by the municipal engineers group.

Comment A21: *Since the County is close to moving to a stormwater utility (SU), we have added some additional thoughts related to BMP impacts on the proposed SU concept that the County is currently considering. How can credits be issued for clean(er) runoff as associated with a SU. Allow fee-in-lieu, but at a rate that will financially support off-site regional BMPs, or as noted if BMPs are installed, be ready to credit them in a SU. The ordinance should allow retro-fit with BMPs to address credit issue. The fate of credits for single family should be addressed. Thus if we require BMPs we should allow SU credits. This could present a problem with a flat rate SU for single family.*

Response A21: While these comments may have merit under a Stormwater Utility program, the impacts of such a program are not relevant to this public notice. A credit

system for BMPs will be given full consideration as the process for implementing a Stormwater Utility Program moves forward.

Comment A22: *Street ROW BMPs should be regionally addressed, not case by case. They should be excepted from the ordinance, except in the case of newly developed roads (brand new - vacant land to highway, ie. new subdivision, totally new road. Widening should be excepted)*

Response A22: The objections are noted. Please refer to comment responses A2 and A3.

Comment A23: *There should be a worksheet format that defines how to calculate the pollution impact that a property creates or not. See credit comments above.*

Response A23: It is not common practice to include planning documents during the public review process. The methodology used to develop the pollution impact scoring criteria was reviewed and approved by the municipal engineers group.

COMMENT B

Village of Lombard
David P. Gorman, P.E., Development Engineer
Stormwater Administrator

Comment B1: *We recommend that Article 9, Number 11 be revised to read "Developments requiring a Stormwater Management Permit under Section 15-147 of this Ordinance shall treat impervious areas for pollutants from the site. . ." The majority of pollutants are from impervious areas. Eliminating the "100% of the developed area" requirement would afford necessary flexibility for design in order to achieve a minimum BMP composite number.*

Response B1: Studies have shown that pervious areas such as residential lawn, etc. contribute substantial amounts of pollutants such as nitrogen and phosphorus. Please see comment response A2

Comment B2: *The required minimum BMP composite numbers in Section 4 should be a weighted average of the impervious area treatments.*

Response B2: The selection guide is not all inclusive and its use is not mandatory under the Ordinance. It provides guidance for selecting a BMP, or suite of BMPs that equal or exceed a certain average importance value, and which fully treat the target pollutant categories for each type of development. Using the guide provides reasonable assurance that the design will meet the BMP site runoff requirements of the Ordinance. However, all development plans are unique and professional judgment should be used in the design and review of each case.

Comment B3: *The minimum BMP composite number for single-family, single lot developments should be less than 2.5, recognizing the lower level of pollutants from those impervious areas. Discussions about how to treat driveway runoff have not yielded viable alternatives beyond permeable pavers and trench drains. Using a weighted average and a lower composite number, the driveway could drain to the roadway untreated provided that downspout discharges are treated.*

Response B3: The selection guide is not all inclusive and its use is not mandatory under the Ordinance. It provides guidance for selecting a BMP, or suite of BMPs that equal or exceed a certain average importance value, and which fully treat the target pollutant categories for each type of development. As discussed and debated in the municipal engineers meeting, treating 100% of the developed area may not always be feasible (e.g. driveway aprons), however, runoff from off-site areas tributary to the project site can offset untreated areas of the development. Treating the issue in this manner reflects a general consensus among the Municipal Engineers.

Comment B4: *We recommend that BMP easements not be required for single-family, single lot developments. We anticipate that the vast majority of these BMPs will be dry wells, which are not likely to change or require significant maintenance. Based on our*

experience with dry wells that have been installed in Lombard since 2001, we believe it is only necessary to inspect dry wells during construction since they require minimal maintenance.

Response B4: Easements will not be required for single family residential developments. Changes to the proposed draft will be made. As part of the permitting process, it may be prudent to record the existence of a BMP against the title of a given property in order to notify future property owners.

Comment B5: *We recommend that the required design, including sizing, be specified in Appendix B.*

Response B5: Example sizing has been provided in section 3.2.2.3 of Appendix E.

Comment B6: *The County should provide training for administrators and consultants over the next couple years to ensure uniformity and consistency during this period of considerable learning curve.*

Response B6: Noted. Training will be provided.

COMMENT C

Village of Woodridge
Christopher Bethel, Director of Public Works

Comment C1: *Another concern involves the point values assigned to specific BMPs and the total average point value required for new developments. The values do not appear to be consistent with the various land uses nor within the same land use as applied to existing and new developments. For example, a vegetated swale with native vegetation is worth 3 points on a residential lot but is worth only 2 points on a commercial site. Permeable pavers are only worth 2 points on a residential lot but are worth 3 points on commercial and industrial sites. Further, why are large residential subdivisions (an average of 2.0 points) required to have less treatment than individual residential lots (an average of 2.5 points)? Please provide a clear justification for the point values applied to the various improvements and again a justification of the point values as applied to the various land uses.*

Response C1: The change in values of practices between industrial, residential, roadways, etc is designed to address the fact that one development type contributes more of certain pollutants than another. For instance, residential areas tend to contribute more nitrogen than oil. As a result, a vegetated swale, which can handle some amount of nutrients, but not oil, is worth more to a designer on a residential lot than on an industrial site. On the industrial site, an oil/grit separator would be more effective than the vegetated swale, and so on. The point system used to guide the selection of BMPs is based on an arbitrary numbering assignment using integers 1-3. Due to differing pollutant loads and land uses in separate development categories, it is not appropriate to compare point values between categories. The overall point system was discussed and a consensus reached by the Municipal Engineers Group.

Comment C2: *The proposed revisions to the Countywide Stormwater and Flood Plain Ordinance will require all partial-waiver communities such as Woodridge to have an environmental scientist with four years experience either on staff or as a consultant in order to review site plans for BMP compliance, to inspect BMP construction, and to review completed projects for compliance with BMP requirements. This implies that site plans will opt to apply the BMP standards. In order to determine workload both locally and regionally, what estimate has been made as to the number of permits by community and countywide that will be reviewed annually?*

Response C2: In the review of all types of BMP practices, the Stormwater Administrator is responsible for determining the need for an environmental scientist. This issue was debated in great length with the municipals engineers group and the overall consensus was that an environmental scientist would be needed to review BMPs with native plantings. Education and experience requirements were added in order to help ensure that the work would be performed by a qualified professional. The permitting agency has the option to keep an environmental scientist on staff, contract with an environmental firm, or enter into an agreement with the County to perform these reviews. Development within each community is variable, both in total numbers, and in type, therefore each municipality is better equipped to determine the costs for

implementing the updates to the current ordinance requirements to meet the conditions of the County's NPDES Phase II permit.

Comment C3: *A determination can be made by the Ordinance Administrator that the required BMPs are impractical for certain properties/developments, and as such, may pay into the fee-in-lieu-of program. What criteria are used by the Ordinance Administrator to determine whether the application of these BMP requirements is practical or impractical?*

Response C3: Professional judgment should be used when reviewing these arguments. Based on the guidance from the Municipal Engineers, exact requirements were not included in the BMP Manual, but will be included in the upcoming training sessions.

Comment C4: *Residential development that requires a stormwater permit but does not require detention may forego the installation of permanent BMPs by paying into a fee-in-lieu-of program. Nonresidential development and roadways meeting this same criteria, and with a determination by the Ordinance administrator that required BMPs are impractical, may also pay into the fee-in-lieu-of program. The County's proposed fee schedule identifies reasonable and rational costs for failure to construct permanent BMPs:*

A. Single-family and Two-family Residential = \$ 3,000 per acre

B. Multi-family and non-residential = \$ 15,000 per acre

C. Major roadway improvements = \$30,000 per acre

How were these fees calculated?

Response C4: A comparison was made of likely BMPs for each type of development. The most practical and cost effective measures were chosen and cost estimates were produced based on average development scenarios. The fee for each development type is based on the most cost effective measures that would also meet the intent of the ordinance provisions. The calculation of these fees was determined and approved by the Municipal Engineers group.

Comment C5: *The construction of permanent BMPs on single-family residential construction on individual lots is impractical. This has been brought to the attention of DuPage County staff by the Municipal Engineers Group. The costs associated with the different land uses appear to be the staff's opinion of what the market will bear. If none of the single-family houses can practically comply, then that indicates that perhaps the requirements are too high. If the assumption is made that the present BMP guidelines are the best course of action for the overall improvement of stormwater quality and it is also assumed that it will be impractical for the majority of properties and developments to comply with the guidelines if they are made mandatory, is it assumed the fee-in-lieu-of program will be the likely route for property owners/developers? Have regional BMP Water Quality projects been prioritized with projected costs and completion dates? Will this program be implemented similar to the Wetland/Special Management Area fee-in-lieu of program? If so, please provide an overview of the administration of this program and how the program has impacted wetland restoration and/or relocation.*

Response C5: It is likely that most builders of residential homes on single lots will opt to pay a fee in lieu of providing BMPs. No, fees were developed based on the cost to implement BMPs as opposed to the costs to implement a regional water quality project because the acreage of developed area on a parcel does not necessarily translate to acreage in a constructed, regional water quality project. Instead, the focus of a water quality improvement project is on the type and quantity of pollutants removed from stormwater runoff. No, the program will be handled similarly to that of the fee-in-lieu-of detention program. Please also see comment response A2.

Comment C6: *It is more difficult to incorporate BMPs into a roadway project than it is into a commercial or industrial project with a detention pond, so it is not clear why the cost for roadway improvements is so much more. How was this determined?*

Response C6: A roadway BMP costs more to implement. For instance: In order to treat runoff, and assuming one acre of developed area, a vegetated swale and two manufactured structures are the most likely and cost effective practices to be chosen by the design engineer. Including installation, the costs of these measures would be approximately \$30,000. All costs associated with this estimate were based upon actual expected costs of installation in our region.

Comment C7: *Although the municipality has the option of instituting its own fee-in-lieu-of program and could theoretically pay itself for BMPs not incorporated into the roadway improvements, the net result is a County-mandated program to divert funding from roadways into environmental programs on local road projects. Small roadway projects not requiring detention still require a stormwater permit, but they are not mentioned in the manual. It is unclear what average point value they must meet or what amount must be paid to a fee-in-lieu-of program if BMPs are not constructed.*

Response C7: The selection guide for commercial sites less than one acre should be used for roadway projects less than one acre due to a similarity of pollutant type and load. The title will be revised accordingly. All roadways must provide BMPs if practical. The point values should be the same regardless of the length or extent of the roadway project. The size of the roadway project is based on development area, which in turn dictates the design of the appropriate BMP. Roadway projects which cannot provide BMPs would pay an in-lieu, in the amount of \$30,000 per acre of disturbed area.

Comment C8: *DuPage County has maintained that these BMP requirements are necessary for the communities in the County to remain in compliance with the NPDES Phase 2 requirements. While an environmentally friendly development policy is a welcome endeavor, the practicality of implementation should always be sufficiently evaluated first. Moreover, if the assumption is made that the present BMP guidelines are the best course of action for the overall improvement of stormwater quality and to remain in compliance with NPDES, why not encourage the BMP by offering a monetary credit, such as a rebate on the Stormwater Property Tax, to property owner/developers that do in fact meet the BMP guidelines and thereby improve the water quality? Please provide the County's position as to a credit program as opposed to a fee program to meet the objectives of the BMP guidelines.*

Response C8: A credit system for BMPs will be given full consideration as the process for implementing a Stormwater Utility Program moves forward.

COMMENT D

Stormwater and Floodplain Ordinance Oversight Committee
Donald Eckman, P.E., Chairman

Comment D1: *Lower the minimum importance value (2.5) to a number attainable under real-world conditions.*

Response D1: The selection guide is not all inclusive and its use is not mandatory under the Ordinance. It provides guidance for selecting a BMP, or suite of BMPs that equal or exceed a certain average importance value, and which fully treat the target pollutant categories for each type of development. Using the guide provides reasonable assurance that the design will meet the BMP site runoff requirements of the Ordinance. These calculations were reviewed, and a consensus reached of the members in the Municipal Engineers group.

Comment D2: *Define the composite site importance value as an area-weighted average based on the quantity of impervious area treated by each BMP.*

Response D2: Using a weighted average may result in inadequate treatment for portions of a site due to the fact that all BMPs do not treat pollutants equally. Therefore, averaging by area would be inappropriate. The selection guide is not all inclusive and its use is not mandatory under the Ordinance. It provides guidance for selecting a BMP, or suite of BMPs that equal or exceed a certain average importance value, and which fully treat the target pollutant categories for each type of development. Using the guide provides reasonable assurance that the design will meet the BMP site runoff requirements of the Ordinance.

Comment D3: *Clarify that compliance can be achieved by a combination of physical improvements and fee payment.*

Response D3: The fee in lieu of BMPs program currently does not allow for a combination of physical improvements and fee payment. Calculating the area and percentage for each pollutant group and deficient developed area was thought to be too cumbersome. Due to the fact that certain BMP measures treat specific pollutants, this would require an analysis of pollutant loading on each site.

Comment D4: *Add dry well design guidelines, particularly minimum size parameters, to Appendix E.*

Response D4: Example sizing has been provided in section 3.2.2.3 of Appendix E.

Comment D5: *Eliminate easement requirements and encourage BMPs that are simple to maintain and inspect in a dense residential environment.*

Response D5: Easements will not be required for single family residential developments. As part of the permitting process, it may be prudent to record the existence of a BMP against the title of a given property in order to notify future property owners. Appendix E provides guidance on acceptable BMPs that can be installed on single family residential lots that require little maintenance and would be difficult to remove for ease of enforcement.

Comment D6: *Modify Section 15-113.11 to require treatment only for impervious areas and not for vegetated areas, because all vegetated areas can serve as BMPs.*

Response D6: Studies have shown that pervious areas such as residential lawn, etc. contribute substantial amounts of pollutants such as nitrogen and phosphorus. Please also see comment response A2.

COMMENT E

City of Warrenville
David Brummel, Mayor

Comment E1: *DuPage County is currently considering the adoption of the Water Quality Best Management Practices Technical Guidance (the BMP Manual), as well as proposed ordinance changes to incorporate the use of the BMP Manual into the Countywide Stormwater and Flood Plain Ordinance. The public comment period for these proposed ordinance changes runs from July 13, 2007 to August 13, 2007, which leaves little time for discussion of the proposed changes at the City Council level.*

Response E1: The drafting of Appendix E began in 2005. Appendix E and the Ordinance revisions have been discussed at length during the water quality stakeholders meetings and also the monthly and special call municipal engineers meetings since early 2006. Due to the length of the discussions with the municipal engineers and the quickly approaching NPDES deadline, it was determined that a 30 day public review period was sufficient.

Comment E2: *While the City of Warrenville supports the implementation of BMPs, we are concerned that several aspects of the proposed ordinance changes could have a negative impact on community development, the City's administration of that development, and the City's Capital Improvement (Road) Program. We believe the mandatory inclusion of Best Management Practices in all development, no matter how small, requires further study and evaluation.*

Response E2: Noted. Please see comment response A2.

Comment E3: *The additional administrative burden and costs associated with these new requirements may impact both City infrastructure improvement plans and private development within the City be significant. The City of Warrenville will have to hire and coordinate the work of an environmental consultant to review, inspect and approve all new BMP improvements. This will require additional time and additional cost to complete project reviews and will therefore increase the time and cost it takes for individual roadway improvement and private development projects to acquire a permit. These additional costs will have to be passed on to the development community in the form of higher permit fees and to the City residents as either higher taxes and/or fees. While the BMP Manual includes a very basic outline of the costs required to satisfy the required level of BMP improvements we are concerned that not enough evaluation has been performed on the fiscal impact the new requirement and administrative responsibilities may have on individual municipalities in DuPage County.*

Response E3: Please see response C2.

Comment E4: *The BMP Manual addresses the design of various elements which can be incorporated into development plans to enhance the environment and improve the quality of stormwater runoff. But neither the BMP Manual nor the proposed ordinance changes address the municipality's responsibility with regards to construction inspection, final inspection and maintenance of these enhancements. What will prevent an individual property owner from removing or from not maintaining installed BMP measures? City of Warrenville staff will likely notice if major BMP improvements are neglected or removed from large commercial or industrial developments. But the City will never have the resources to fund an inspection program to ensure that BMP measures are being maintained on every small residential and commercial property, in perpetuity.*

Response E4: Residential properties contribute a large portion of pollutants found in stormwater. All new single family residential developments should also be providing BMPs (Please see comment response A2). Appendix E provides guidance on acceptable BMPs that can be installed on single family residential lots that require little maintenance and would be difficult to remove for ease of enforcement. In the event that a developer would prefer to pay a fee in lieu of installing a BMP on-site, such a fee may be paid to the County's or the Municipality's fund to design, construct and maintain larger water quality projects. The county and each municipality will be responsible for the inspection and enforcement of BMPs. As part of the permitting process; it may be prudent to record the existence of a BMP against the title of a given property in order to notify future property owners.

Comment E5: *We believe the proposed ordinance changes are especially onerous for single-family residential development. From our initial review of the proposed requirements, it appears as if it will be very difficult, if not impossible, for small lot, single-family, infill residential development to incorporate BMP measures to the level outlined in the proposed manual. According to our consulting City Engineer, DuPage County staff has publicly stated they expect very few single lot developers to comply with the new BMP requirements and instead these developers will pay into a BMP fee-in-lieu-of program. If a governmental body institutes a program with requirements that are not feasible for the majority of projects in a specific class of development (i.e. small lot, single-family, infill, residential development) to satisfy, we believe the requirements may be overly restrictive. Our primary concern here relates to how the proposed new requirements impact single-lot residential development. Residential subdivisions over three acres are required to have detention ponds and BMP measures can be incorporated rather easily. We feel consideration should be given to exempting small single-lot house construction from these new requirements. If this exemption proves to be detrimental to overall water quality, the issue could be revisited in the future.*

Response E5: The BMP requirements were not intentionally made difficult for single family residential development. During the development of the BMP program, staff and municipal engineers recognized that some measure should be adopted that would allow all developments to comply with the new BMP requirements. As a result, a fee program was initiated in order to pay for water quality projects on a more regional basis as compensation for the small, single-lot residential developments that were unable or unwilling to construct BMPs on the lot. Please also see comment responses A2 and E4.

Comment E6: *It does not appear as if the proposed ordinance changes include provision for developments that provide partial BMP compliance. Developments are required to treat all stormwater runoff to an average point value, as defined in the manual, or to treat none of the stormwater and pay fee-in-lieu-of instead. The proposed point system seems cumbersome and does not appear to provide for partial credit. The point system will also be difficult to explain to individual residents/small builders and w11 be difficult to satisfy in small developments not requiring detention facilities. We feel this portion of the proposed ordinance change requires additional study to come up with a system that is both practical and logical.*

Response E6: See response D2. It is intended that the BMP selection guide and manual will be revised as innovations in thinking, procedure, or design are developed.

Comment E7: *The incorporation of Best Management Practices into the design of a new roadway is difficult due to the linear nature of roadway improvements, but is still achievable. However, BMP measures for a roadway reconstruction project in an urban commercial district or residential neighborhood do not make sense. The fee-in-lieu-of cost of \$30,000 per acre for roadway improvements (twice the amount of industrial or commercial development) will become a de facto mandate from DuPage County to force local municipalities to transfer a portion of their already stretched transportation budgets to an environmental program. This has the potential of delaying needed street improvements and may be counter to the best interests of our residents. The proposed ordinance changes do not address maintenance of BMP measures in the public right-of-way either. Typically, adjoining property owners are responsible for maintenance of the vegetated parkways. We do not see how we can require homeowners to maintain BMPs in front of their house. Clearly, the issue of BMPs in public right-of-way requires additional study before passage of an ordinance that may well prove to be unworkable.*

Response E7: See response A3.

Comment E8: *In closing, we want to make clear that the City of Warrenville is decidedly in favor of Best Management Practices wherever they can logically be incorporated into a development design. For some time, we have actively worked in a cooperative manner with individual developers to facilitate their installation of stormwater BMPs including, but not limited to, native plantings around all detention ponds. We are currently undertaking construction of the first permeable paver public street pavement in the area. However, it is our belief that there has not been enough discussion in public forums on the ramifications of the proposed new mandatory BMP requirements. It appears that the ordinance changes may be impractical and/ or overly costly with regards to single-lot residential development and urban roadway improvements. We recommend the County consider focusing the ordinance amendments, and thus our limited municipal resources, on addressing development project where BMP' s can be (i) more easily incorporated into the design and (ii) are more likely to be maintained long in the long term. Therefore, we support enacting the proposed BMP requirements for non-residential developments over one acre and residential subdivisions over three acres at this time as Phase I. After we have implemented and administered the Phase I requirements over the next 1-3 years, we will be in a much better position to evaluate the merits and potential pitfalls of a potential Phase 2 expansion of BMP requirements to single-lot residential developments and urban roadway improvement projects.*

Response E8: Please see response B1.

SECTION 3

**PROPOSED CHANGES TO ORDINANCE – Article 2 Definitions; SECTION 15-47;
SECTION 15-112; SECTION 15-114; SECTION 15-146; SECTION 15-149; SECTION
15-177; SECTION 15-259; SCHEDULE B**

*COUNTY OF DUPAGE,
ILLINOIS*

*COUNTYWIDE STORMWATER
AND FLOOD PLAIN ORDINANCE*

Public Review Draft
June 2007

**Adopted As Appendix F
To The DuPage County Stormwater Management Plan**

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Base Flood Elevation. The height of the base flood in relation to the National Geodetic Vertical Datum of 1929.

Best Management Practices (BMPs). Design, construction, and maintenance practices and criteria for stormwater facilities that minimize the impact of stormwater runoff rates and volume, prevent erosion, and capture pollutants.

Building. A structure that is constructed or erected partially or wholly above ground and is enclosed by walls and a roof. The term "building" includes manufactured homes and includes both the above-ground and the below-ground portions of the structure.

Certify/Certification. A statement that a proposed development meets the requirements of this Ordinance.

Committee. The Stormwater Management Committee of the DuPage County Board, authorized by Public Act 85-905.

Community. Any municipality, or the unincorporated County, within DuPage County acting as a unit of local government.

Compensatory Storage. An excavated hydrologically and hydraulically equivalent volume of storage created to offset the loss of existing flood storage.

CLOMA. A Conditional Letter of Map Amendment. A FEMA comment letter on a development proposed to be located in, and affecting only that portion of, the area of flood plain outside the regulatory floodway and having no impact on the existing regulatory floodway or base flood elevations.

CLOMR. A Conditional Letter of Map Revision. A letter that indicates that FEMA will revise base flood elevations, flood insurance rate zones, flood boundaries, or floodways as shown on an effective FIRM or FBFM, after the record drawings are submitted and approved.

COE. The United States Army Corps of Engineers.

Complete Waiver. The authority granted to a community pursuant to Articles 3, 4, and 5 of this Ordinance whereby a community acquires complete jurisdiction over reviewing applications for and granting Stormwater Management Permits.

County. The County of DuPage, Illinois.

Critical Wetlands. Wetlands of the highest value by virtue of one or more high ranking characteristics that result in a uniquely valuable environment. See Sections 15-134 and 15-135 of this Ordinance.

Dam. Any obstruction, wall embankment, or barrier, together with any abutments and appurtenant works, constructed to store or direct water or to create a pool (not including underground water storage tanks).

Department. The DuPage County Department of Engineering.

Developer. Any person who undertakes development or permits development on such person's behalf.

Development. Any activity, excavation or fill, alteration, subdivision, change in land use, or practice, undertaken by private or public entities that affects the discharge of stormwater; or any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials in a Special Management Areas. The term "development" does not include maintenance of stormwater facilities.

Director. The DuPage County Director of Stormwater Management or his or her designee. The Director Stormwater Management shall be a professional engineer.

Elevation Certificates. A form published by FEMA, or its equivalent, that is used to certify the base flood elevation and the lowest elevation of usable space to which a building has been constructed.

Environmental Scientist. A person with a four-year degree in a life science curriculum in which the emphasis was on ecologic systems, and four years of experience. Examples of such curricula are ecology, botany, or biology.

Existing Manufactured Home Park. A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring on concrete pads) is completed before the effective date of the flood plain management regulations adopted by a community.

Expansion to an Existing Manufactured Home Park. The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of street, and either final site grading or the pouring of concrete pads).

FBFM. A Flood Boundary and Floodway Map. A flood plain management map issued by FEMA that depicts, based on detailed analysis, the boundaries of the base flood, the two tenth percent (0.2%) probability flood, and the floodway.

FEMA. The Federal Emergency Management Agency.

FHBM. A Flood Hazard Boundary Map. An official map of a community, issued by FEMA, on which the boundaries of the flood, mudslide or mudflow, or related erosion areas having special hazards have been designated as Zones A, M, and/or E.

ARTICLE 2. DEFINITIONS.

Sec. 15-16. through 15-17. program. The requirements of the NFIP are codified in Title 44 of the Code of Federal Regulations.

NRCS. The United States Department of Agriculture, Natural Resources Conservation Service.

Oversight Committee. A committee appointed by a waiver community to oversee the implementation and enforcement of the waiver community's ordinance.

OWR. The Illinois Department of Natural Resources, Office of Water Resources.

Parcel. Contiguous land under single ownership or control.

Partial Waiver. Authority granted to a community pursuant to Articles 3, 4, and 5 of this Ordinance whereby the waiver community acquires limited jurisdiction over reviewing applications for, and issuing, Stormwater Management Permits.

Person. Any individual, partnership, firm, school district, company, corporation, association, joint stock company, trust, estate, unit of local government, special taxing district, public utility, political subdivision, state agency, or any other legal entity, or owner, or any legal representative, agent, or assign thereof.

Plan. The DuPage County Stormwater Management Plan, adopted by the DuPage County Board in September 1989, as amended from time to time.

Pollutant. Any substance harmful to the environment that is not authorized for discharge from a storm sewer by an IEPA MS4 permit.

Professional Engineer. A person licensed under the laws of the State of Illinois to practice professional engineering.

Professional Engineering. The application of science to the design of engineering systems and facilities, using the knowledge, skills, ability, and professional judgment developed through professional engineering education, training, and experience.

Professional Engineering Practice. The consultation on, conception, investigation, evaluation, planning, and design of, and selection of materials and methods to be used in, administration of construction contracts for or site observation of an engineering system or facility, when such consultation, conception, investigation, evaluation, planning, design, selection, administration, or observation requires extensive knowledge of engineering laws, formulae, materials, practice, and construction methods.

Public Flood Easement. An easement acceptable to the appropriate jurisdictional body that meets the regulation of the OWR, the Department, and the community, that provides legal assurances that all areas subject to flooding in the created backwater of the development will remain open to allow flooding.

buffers. See Article 10 of this Ordinance.

ARTICLE 2. DEFINITIONS.

Sec. 15-16. through 15-17.

Permit was issued provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement or other improvement was within 180 days of the permit date. The actual start date includes the first day of any land preparation, including clearing, grading, filling, or excavation. For substantial improvements, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building whether or not that alteration affects the external dimensions of the building.

Stormwater Facility. All ditches, channels, conduits, bridges, culverts, levees, ponds, natural and man-made impoundments, wetlands, wetland buffers, riparian environment, tile, swales, sewers, BMPs or other natural or artificial structures or measures which serve as a means of draining surface and subsurface water from land.

Stormwater Management Permit. A permit established by this Ordinance or by a waiver community's Stormwater Ordinance; and issued by the Department or a waiver community signifying acceptance of measures identified for proposed development to comply with this Ordinance and the Plan.

Structure. Anything that is erected or constructed. The term "structure" includes, without limitation: buildings, manufactured homes, tanks, dams, sewers, constructed channels, outfalls, parking lots, driveways, roads, sidewalks, and concrete patios.

Structural Engineer. A person licensed under the laws of the State of Illinois as a structural engineer.

Substantial Damage. Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial Improvement. Any repair, reconstruction, rehabilitation, addition, or other improvement of a building, the cost of which improvement equals or exceeds, individually or in the aggregate, 50 percent of the fair market value of the building, determined from the equalized assessed value of the building, before the start of construction of the improvement or, if the building has been damaged, before the damage occurred. The term "cost of improvement" includes the value of volunteer labor and donated materials. The term "cost of improvement" does not, however, include either (1) any project for improvement of a building to correct existing violations of state or local health, sanitary, or safety code specifications that have been identified by the local code enforcement official and that are the minimum necessary to assure safe living conditions or (2) any alteration of a historic building that will not preclude the building's continued designation as a historic building.

Usable Space. Space used for dwelling, storage, utilities, or other beneficial purposes, including without limitation basements.

Variance. An authorization recommended by the Committee or an Oversight Committee, and

granted by the DuPage County Board or the corporate authorities of a waiver community, that varies certain requirements of this Ordinance or a waiver community ordinance in a manner in harmony

ARTICLE 2. DEFINITIONS.

Sec. 15-16. through 15-17. 's general purpose and intent, which variance shall be granted only in a case where there are practical difficulties or particular hardships.

Violation. Failure of a structure or other development to be fully compliant with the regulations identified by Ordinance.

Waiver Community. A community that has been granted either a partial waiver or a complete waiver from County enforcement of this Ordinance. See Article 4 of this Ordinance.

Waiver Community Ordinance. An approved, valid, and effective stormwater management ordinance of a waiver community. See Articles 3 and 4 of this Ordinance.

Watershed. All land area drained by, or contributing water to, the same stream, lake, or stormwater facility.

Watershed Basin Committee. A technical committee established within a watershed planning area.

Watershed Benefit. A decrease in flood elevations or flood damages or an improvement in water quality, upstream or downstream of the development site.

Watershed Plan. A plan adopted by the County for stormwater management within a watershed consistent with the requirements in Chapter 3 of the Plan.

Watershed Planning Area. That area considered in a specific watershed plan, adopted as part of the Plan, and depicted on the attached Exhibit 1.

Watershed Plan Model. The hydrologic and hydraulic model meeting the standards of the Plan and used in developing a watershed plan.

Waters of DuPage.

1. All waters such as lakes, rivers, streams (including intermittent streams), mudflats, wetlands, sloughs, wet meadows, or natural ponds.
2. All impoundments of waters not otherwise defined as waters of DuPage under the definition.
3. Tributaries of waters identified above.
4. Wetlands adjacent to waters identified above.

For clarification, waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet

ARTICLE 3. WAIVER COMMUNITY ENFORCEMENT.

Sec. 15-31. through 15-35.

ARTICLE 4. COMMITTEE PROCEDURES FOR WAIVER OF ENFORCEMENT.

Sec. 15-46. Committee Consideration of Petition.

The Committee shall consider each properly filed petition for either a partial or a complete waiver of County enforcement of this Ordinance at a regular or special call meeting. The Committee may take comments from interested parties, and the Committee shall have the right by rule to establish procedures for the conduct of such meetings.

Sec. 15-47. Standards for Grant of Petition.

The Committee shall grant a petition for waiver of County enforcement of this Ordinance upon finding that:

1. The community's stormwater ordinance is consistent with, and at least as stringent as, the Plan and this Ordinance, as they may be amended from time to time; and
2. The community has complied with the requirements of Article 3 of this Ordinance; and
3. By the effective date of the community's stormwater ordinance, the community shall provide reasonable assurance that it has available and will utilize experts with the following qualifications:
 - a. In a complete waiver community:
 - (1) A professional engineer with two years experience in stormwater and flood plain management; and
 - (2) A professional engineer with two years experience in the application of continuous hydrology and fully dynamic hydraulic models; and
 - (3) An environmental scientist who has attended at least one course in wetland delineation approved by the Department; and
 - (4) A soil scientist; or,
 - b. In a partial waiver community; ~~a professional engineer with two years experience in stormwater and flood plain management.~~
 - (1) A professional engineer with two years experience in stormwater and flood plain management; and
 - (2) An environmental scientist; or a request for assistance from the Director to review for water quality BMPs.

ARTICLE 8. ADMINISTRATION.
Sec. 15-91. through 15-96.

**ARTICLE 9. REQUIREMENTS FOR STORMWATER AND FLOOD
PLAIN MANAGEMENT.**

Sec. 15-111. General Information.

- | 1. All developments shall meet the requirements specified for general stormwater and flood plain development (Section 15-112), site runoff (Section 15-113), sediment and erosion control (Section 15-116), and performance security (Article 13).
- | 2. All developments, with consideration given to those developments as noted in Section 15-111.3 of this ordinance, shall comply with the site runoff storage requirements provided in Section 15-114 of this Ordinance in which:
 - | a. The parcels being developed total three acres or greater for single or two family residential subdivision land uses; or
 - | b. The parcels being developed total one acre or greater for multiple family or non-residential subdivision land uses; or
 - | c. The parcels being developed total one acre or greater for multiple family or non-residential developments and the new development totals either individually or in the aggregate after February 15, 1992 to more than 25,000 square feet; or
 - | d. The area being developed totals one acre or greater for road developments in rights-of-way under the ownership or control of a unit of government.
- | 3. The Director or Administrator in a waiver community shall consider granting an exception to Section 15-111.2 of this Ordinance for those developments listed below, if specific requirements are met for such development as listed or required by the Administrator:
 - | a. The development is strictly limited to the grading of pervious area, in which the following specific requirements are met:
 - | (1) The Applicant must demonstrate to the administrator's satisfaction that for all storm events, up to and including the critical duration 100-year event, the grading activity does not:
 - | a) Result in an increase in runoff volume; and,
 - | b) Result in an increase in peak release rate; and,

- c) Result in a time decrease associated with the time of concentration; and,
- d) Contribute to adjacent flood problems; and,
- e) Alter the direction of runoff.

ARTICLE 9. REQUIREMENTS FOR STORMWATER AND FLOOD PLAIN MANAGEMENT

Sec. 15-111. through 15-122.

- b. The development is strictly limited to the reconstruction of an existing parking lot, in which the following specific requirements are met:
 - (1) The Applicant must demonstrate that the reconstruction will remain in the same foot print as the existing parking lot; and,
 - (2) The Applicant must demonstrate to the administrator's satisfaction that for all storm events, up to and including the critical duration 100-year event, the development activity does not:
 - (a) Result in an increase in runoff volume; and,
 - (b) Result in an increase in peak release rate; and,
 - (c) Result in a time decrease associated with the time of concentration; and,
 - (d) Contribute to adjacent flood problems; and,
 - (e) Alter the direction of runoff.
- c. The development is strictly a Regional Stormwater Management Project or a Flood Control project in substantial compliance with either a watershed plan or other said study as reviewed and approved by the DuPage County Stormwater Management Committee.
- d. The development is strictly a Stream Bank Stabilization project.
- e. The development is strictly limited to the construction, or re-construction, of a pedestrian walkway/bike path, in which the following specific requirements are met:
 - (1) The pedestrian walkway/bike path shall not exceed twelve (12) feet in width; and,
 - (2) The pedestrian walkway/bike path must be constructed by a government agency (e.g., DuPage County regional trail system, municipal sidewalk program, etc.)
 - (3) The pedestrian walkway/bike path shall not be constructed in such a manner as to violate Section 15-112 of this Ordinance.
- f. The development is strictly limited to the creation of a DuPage County recognized wetland bank and/or wetland mitigation site.
- g. The development is strictly limited to the modification of an existing stormwater management

facility to incorporate Best Management Practices.

- h. The development is strictly limited to the construction of a single-family residential structure on a parcel of land greater than three (3) acres.

ARTICLE 9. REQUIREMENTS FOR STORMWATER AND FLOOD PLAIN MANAGEMENT.

Sec. 15-111. through 15-122.

- i. The development is greater than one acre and the existing parcel(s) is greater than eighty percent (80%) impervious on March 8, 2005, in which the following specific requirements are met:

- (1) Where there are no known off-site flooding problems that the development is contributory to, sufficient site runoff storage shall be provided in pervious (vegetative) areas such that the probability of the post development release rate exceeding 0.04 cfs/acre of development shall be less than fifty percent (50%) per year (2-yr event), unless the applicant demonstrates to the Administrator why this criteria can't be met and the following specific requirements are met:

- (a) Where detention storage is provided in impervious areas (i.e. underground tanks, parking lots, etc.) best management practices as described in Section 15-113.11 of this Ordinance shall be required and the applicant shall demonstrate that these practices are appropriate and effective for the site conditions

- (b) Where the required site runoff storage cannot be provided on-site, the shorted storage shall be provided off-site or by payment into an approved detention variance fee program as determined in Section 15-115 of this Ordinance.

- (2) The required storage in Section 15-111.3.i.(1) is required for the total project, regardless of phasing.

- (3) Site runoff storage facilities shall meet the requirements of Section 15-114 of this Ordinance.

- (4) Where there are known off-site flooding problems, the Administrator may require additional site runoff storage, best management practices or other measures to reduce the flood potential.

- (5) The post development site runoff storage shall not be less than the existing site runoff storage.

- (6) There shall be no increase in peak release rates up to and including the one percent probability of occurrence (100-yr) per year.

- (7) Additions to an existing site that increase the imperviousness above the eighty (80%) threshold are subject to providing the full storage such that the probability of the release rate exceeding 0.1 cfs/acre of new development is less than one percent (1.0%) per year, providing the new development is greater than 25,000 square feet.

- (8) Approved Stormwater plans or permits that contain more stringent criteria than Section 15-111.3.i will apply.

| 4. Developments shall also meet the more specific requirements of applicable adopted Watershed Plans

or adopted Interim Watershed Plans, set forth in Sections 15-117 through 15-122.

5. All development within special management areas, shall also satisfy the requirements specified in Article 10 of this Ordinance.

ARTICLE 9. REQUIREMENTS FOR STORMWATER AND FLOOD PLAIN MANAGEMENT.

Sec. 15-111. through 15-122.

6. All developers shall submit the documents specified in Article 11 of this Ordinance to verify compliance with these requirements.
7. Facilities constructed under the provisions of this Ordinance or the waiver community ordinance shall be maintained according to the criteria and guidelines established in the Plan. Maintenance is the responsibility of the owner of the land on which the stormwater facilities are constructed unless the responsibility is assigned, pursuant to Section 15-180 of this Ordinance, to an entity acceptable to the governmental unit that has jurisdiction over such land.

Sec. 15-112. General Stormwater and Flood Plain Requirements.

The following general stormwater and flood plain requirements shall apply to all development.

1. Development shall not:
 - a. Result in any new or additional expense to any person other than the developer for flood protection or for lost environmental stream uses and functions; nor
 - b. Increase flood elevations or decrease flood conveyance capacity upstream or downstream of the area under the ownership or control of the developer; nor
 - c. Pose any new or additional increase in flood velocity or impairment of the hydrologic and hydraulic functions of streams and flood plains unless a watershed benefit is realized; nor
 - d. Violate any provision of this Ordinance or any applicable waiver community ordinance either during or after construction; nor
 - e. Unreasonably or unnecessarily degrade surface or ground water quality.
2. Analysis and design of all stormwater and flood plain facilities required for development shall:
 - a. Meet the standards and criteria established in the Plan and, if available, in Watershed Plans or in Interim Watershed Plans; and
 - b. Consider the Technical Guidance for the DuPage Countywide Stormwater and Flood Plain Ordinance for the Plan; and
 - c. Be consistent with techniques specified in the Watershed Plans or the Interim Watershed Plans; and

- d. Consider existing and ultimate watershed and land use conditions, with and without the proposed development.
- 3. Stormwater facilities shall be functional before building permits are issued for residential and non-residential subdivision.

ARTICLE 9. REQUIREMENTS FOR STORMWATER AND FLOOD PLAIN MANAGEMENT.

Sec. 15-111. through 15-122.

- 4. Stormwater facilities shall be functional where practicable for single parcel developments before general construction begins.
- 5. In areas outside the boundary of the regulatory flood plain all usable space in new buildings, or added to existing buildings shall either be elevated, floodproofed, or otherwise protected such that the lowest entry shall be at least one foot above the adjacent base flood elevation to prevent the entry of surface stormwater. Floodproofing devices shall be operational without human intervention. If electricity is required for protection against flood damage, there shall be a backup power source which will activate without human intervention. Floodproofing measures shall be certified by a professional engineer.
- 6. All usable space in new buildings or added to existing buildings adjacent to a major stormwater system, site runoff storage facility overflow path or site runoff storage facility, shall be elevated, floodproofed, or otherwise protected to at least one foot above the design elevation to prevent the entry of surface stormwater. The design elevation is the elevation associated with the design rate as determined in Section 15-114.8.f

Sec. 15-113. Site Runoff Requirements.

- 1. Stormwater facilities shall be required and shall be designed so that runoff exits the site at a point where flows will not damage adjacent property.
- 2. Stormwater facilities shall be designed to conform with the requirements of Illinois law and the applicable Sections 15-117 through 15-122 of this Ordinance.
- 3. Minor stormwater systems shall be sized to convey runoff from the tributary watershed under fully developed conditions consistent with the design requirements of the local jurisdiction.
- 4. Major stormwater systems shall be sized to carry the base flood without causing additional property damage.
- 5. Design runoff rates shall be calculated by using continuous simulation models or by event hydrograph methods. If event hydrograph methods are used, they must be either HEC-1 SCS runoff method, TR-20, or TR-55 tabular method. Event methods must incorporate the following assumptions:
 - a. Antecedent moisture condition = 2; and
 - b. Huff or SCS Type II rainfall distribution.

6. Any design runoff rate method shall use Illinois State Water Survey Bulletin 70 northeast sectional rainfall statistics or the National Oceanic and Atmospheric Administration continuous rainfall record from 1949 to present at the Wheaton gage, and shall calculate flow from all tributary area upstream of the point of design.

ARTICLE 9. REQUIREMENTS FOR STORMWATER AND FLOOD PLAIN MANAGEMENT.

Sec. 15-111. through 15-122.

7. Major and minor stormwater systems shall be located within easements or rights-of-way explicitly providing for public access for maintenance of such facilities.
8. Maximum flow depths on any roadway shall not exceed six inches during the base flood condition.
9. Transfers of waters between watersheds shall be prohibited except when such transfers will not violate the provisions of Subsection 15-112.1 of this Ordinance.
10. Stormwater facilities for runoff upstream of flood protection facilities shall provide for conveyance or storage of flood waters without increased potential for damage to real or personal property during base flood conditions.

11. Developments requiring a Stormwater Management Permit under Section 15-147 of this Ordinance shall treat one hundred per cent (100%) of the developed area for pollutants from the site in accordance with accepted practices and procedures, examples of which are in Appendix E of the DuPage Countywide Stormwater and Flood Plain Ordinance, Part I-Technical Guidance, Water Quality Best Management Practices. The Director or Administrator in a waiver community shall consider granting an exception to this provision for those developments listed in section 15-111.3.b and e., to the extent practicable and necessary, incorporate the following Best Management Practices into the site design to minimize increases in runoff rates, volumes, and pollutant loads:

- ~~i. All runoff from rooftops and parking lots, and discharge from sump pumps, that does not discharge into a site runoff storage facility shall be directed onto vegetated swales or filter strips, for a distance of at least 50 feet.~~
- ~~ii. Vegetated swales shall be utilized, where appropriate, as an alternative to storm sewers to promote the infiltration of stormwater and the filtration of stormwater pollutants.~~
- ~~iii. Effective impervious surface area should be limited by site designs which minimize the area of streets, parking lots, and rooftops and/or utilize permeable paving material such as concrete grids in low traffic areas.~~
- ~~iv. Other Best Management Practices such as infiltration basins and trenches (where permeable soils are present) and filtration basins and sand filters (on highly impervious or industrial developments) shall be utilized where appropriate.~~
- ~~v.a. The practices and procedures established in the Technical Guidance for the DuPage Countywide Stormwater and Flood Plain Ordinance for the Plan and as described in the United States Environmental Protection Agency's "Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters", dated January 1993.~~

12. Developments shall incorporate all best management practices as may be required pursuant to the United States Clean Water Act, 33 U.S.C. §§ 1251 et seq., as amended.

Sec.15-114 (re-number sections from here to 15-130- Page 38) Water Quality BMP Fee-in-Lieu Program.

1. The applicant for single or two family residential land uses may elect to pay a fee in lieu of providing water quality BMPs under the following conditions:

- a. A Stormwater Management Permit is required under section 15-147 of this Ordinance, and
- b. The development is not required to provide site runoff storage per Section 15-111.2, and
- c. Payment into a BMP fee-in-lieu program shall be made prior to the issuance of a Stormwater Management Permit.

2. The applicant for multiple family or non-residential land uses and roadway developments may elect to pay a fee in lieu of providing water quality BMPs under the following conditions:

- a. A Stormwater Management Permit is required under section 15-147 of this Ordinance, and
- b. The development is not required to provide site runoff storage per Section 15-111.2, and
- c. The Director or Administrator in a waiver community has determined that it is not practical to install water quality BMPs.
- d. Payment into a BMP fee-in-lieu program shall be made prior to the issuance of a Stormwater Management Permit.

3. Development in a non-waiver community or in a waiver community that has not adopted a BMP fee-in-lieu program shall participate in the County's program where:

a. BMP fee-in-lieu payment shall be made to the County and is determined by applying the criteria as follows:

(1) The adopted fee schedule, attached to this ordinance as Schedule B and by this reference incorporated into this ordinance, that identifies reasonable and rational cost to construct and maintain similar BMPs for those areas of the development that remain without effective water quality treatment.

b. Funds collected shall be accounted for in watershed planning area accounts. Funds shall be used in the same watershed planning areas as collected solely to design, construct, and maintain water quality improvements. Funds may not be used to fulfill obligations required by the Ordinance.

c. The County Board shall provide accounting on an annual basis of all funds deposited in each watershed planning account and shall account for each fund on a first-in, first-out basis.

d. The Committee may prioritize and allocate funds on an annual basis within each watershed planning area account. Communities may make a request to the Committee by June 30th of each year for funds within the watershed planning accounts for uses as identified in Section 15-114.2.b.

e. All BMP fee-in-lieu payments are refunded to the person who paid the fee, or to that person's successor in interest, whenever the County fails to encumber the fees collected within 10 years of the date on which such fees are collected.

g. Refunds are made provided that the person who paid the fee, or that person's successor in interest, files a petition with the County within one year from the date on which such fees are required to be encumbered.

3. Development in a waiver community shall participate in the waiver community's BMP fee-in-lieu program where the corporate authority has adopted a program that is consistent with Section 15-114. The waiver community may adopt its own fee schedule and designate off-site facilities. Funds may be used in the same community or watershed planning area as collected. All accounting records shall be made available to the Committee upon request.

Sec. 15-114. Site Runoff Storage Requirements (Detention).

1. Maximum site runoff storage requirements shall be consistent with the information, procedures, and requirements of the applicable Sections 15-117 through 15-122 of this Ordinance, except as limited by the provisions of Subsection 15-114.2 of this Ordinance.

ARTICLE 9. REQUIREMENTS FOR STORMWATER AND FLOOD PLAIN MANAGEMENT.

Sec. 15-111. through 15-122.

2. If the release rate, or a greater release rate than identified below, is specified in the applicable Sections 15-117 through 15-122 of this Ordinance, then sufficient storage shall be provided such that the probability of the post development release rate exceeding 0.1 cfs/acre of development shall be less than one percent (1.0%) per year. Design runoff volumes shall be calculated using continuous simulation or event hydrograph methods.

3. If event hydrograph methods are used to calculate design runoff volumes, they must be either HEC-1 SCS runoff method with outlet routing option, TR-20 with outlet control routing option, or TR-55 tabular method with outlet control routing. Event methods shall incorporate the following assumptions:

a. Antecedent moisture condition = 2; and

b. Huff or SCS Type II rainfall distribution; and

c. Twenty-four (24) hour duration storm with a one percent (1.0%) probability of occurrence in any one year as specified by Illinois State Water Survey Bulletin 70 northeast sectional rainfall statistics.

4. If continuous simulation methods are used, design runoff volumes shall be calculated using the

ARTICLE 10. SPECIAL MANAGEMENT AREAS.
Sec. 15-131. through 15-137.

ARTICLE 11. STORMWATER MANAGEMENT PERMITS.

Sec. 15-146. General Requirements.

- | 1. Any person proposing a development shall obtain a Stormwater Management Permit prior to development, as provided in Section 15-147 of this Ordinance.
- | 2. All Stormwater Management Permit review fees shall be paid at the time of application. See Section 15-153 of this Ordinance.
- | 3. All submittals that include the design of stormwater facilities, calculations for the determination of the regulatory flood plain, or calculations of the impacts of development shall meet the standards of the Plan and shall be prepared, signed, and sealed by a professional engineer. Such professional engineer shall provide an opinion that the technical submittal meets the criteria required by the Plan and this Ordinance or the applicable waiver community ordinance.
- | 4. Any structure subject to a differential water pressure head of greater than three feet shall be prepared,

signed, and sealed by a structural engineer.

5. The site topographic map, record drawings, and other required drawings shall be prepared, signed, and sealed by a land surveyor or professional engineer and tied to the DuPage County Survey Control Network (National Geodetic Vertical Datum, 1929 adjustment).
6. Any proposed development shall secure all appropriate stormwater management related approvals, including without limitation a OWR Dam Safety permit if required, and other appropriate federal, state, and regional approvals prior to the issuance of a Stormwater Management Permit.
7. All development undertaken by a unit of local government in the regulatory flood plain where no regulatory floodway has been designated shall obtain a permit from OWR or its designee prior to issuance of a Stormwater Management Permit.
8. Within the regulatory floodway, the following calculations or analyses shall be submitted to and approved by OWR or its designee prior to the issuance of a Stormwater Management Permit:
 - a. Flood damage analyses for the replacement or modification of existing bridges or culverts; and
 - b. Hydraulic analyses of new, modified, or replacement bridges or culverts; and
 - c. Analyses of alternative transition sections as required in Subsection 15-133.23 of this Ordinance; and
 - d. Analyses of hydrologically and hydraulically equivalent compensatory storage.
9. Any and all proposed development not in a Special Management Area shall be reviewed under the supervision of a professional engineer and; where applicable, an environmental scientist, meeting the requirements in Section 15-47.3.b.

ARTICLE 11. STORMWATER MANAGEMENT PERMITS.

Sec. 15-146. through 15-154.

10. Any and all proposed development within the regulatory flood plain shall be reviewed under the supervision of a professional engineer meeting the requirements in Section 15-47.3.a. and, in the case of floodway development, certified by that professional engineer that the proposed development meets the minimum requirements of this Ordinance.
11. Any and all proposed development in or near a wetland shall be reviewed under the supervision of an environmental scientist meeting the requirements in Section 15-47.3.a (3). and certified by that environmental scientist that the proposed development meets the minimum requirements of this Ordinance.

Sec. 15-147. Applicability; Required Submittals.

1. A Stormwater Management Permit shall be required if:
 - a. The development involves one or more Special Management Areas; or

- b. The development involves a substantial improvement in the regulatory flood plain; or
 - c. The development disturbs more than 5,000 square feet of ground cover, unless the development solely involves one or more of the following:
 - (1) Cultivation, conservation measures, or gardening; or
 - (2) Installation, renovation, or replacement of a septic system, potable water service line, or other utility to serve an existing structure; or
 - (3) Excavation or removal of vegetation in rights-of-way or public utility easements for the purpose of installing or maintaining utilities; or
 - (4) Maintenance, repair, or at grade replacement of existing lawn areas not otherwise requiring a stormwater permit under Ordinance.
2. In addition to the application requirements provided in Sections 15-146 and 15-148 of this Ordinance, the following submittals shall be required:
- a. The Stormwater Submittal provided in Section 15-149 of this Ordinance shall be required for all development requiring a stormwater permit.
 - b. The Flood Plain Submittal provided in Section 15-150 of this Ordinance shall be required for all development proposed within any regulatory flood plain designated in Section 15-132 of this Ordinance.
 - c. The Wetland Submittal provided in Section 15-151 of this Ordinance shall be required for any development proposed within a wetland designated in Section 15-134 of this Ordinance.

ARTICLE 11. STORMWATER MANAGEMENT PERMITS.

Sec. 15-146. through 15-154.

Sec. 15-148. Stormwater Management Permit Application.

The Stormwater Management Permit application shall include all of the following:

- 1. The name and legal address of the applicant and of the owner of the land; and
- 2. The common address and legal description of the site where the development will take place; and
- 3. A general narrative description of the development, including submittals required pursuant to Subsection 15-147.2 of this Ordinance; and
- 4. Affidavits signed by the land owner and the developer attesting to their understanding of the requirements of this Ordinance or the applicable waiver community ordinance and their intent to comply therewith; and
- 5. A statement of opinion by a qualified person either denying or acknowledging the presence of Special Management Areas on the development site, and the appropriate submittals if the statement

acknowledges the presence of Special Management Areas; and

6. Copies of other permits or permit applications as required; and
7. A stormwater submittal; and
8. A flood plain submittal, if development is proposed in a flood plain; and
9. A wetland submittal, if development is proposed in a wetland; and
10. A riparian environment submittal, if development is proposed in a riparian environment; and
11. An engineer's estimate of probable construction cost of the stormwater facilities.

Sec. 15-149. Stormwater Submittal.

1. The stormwater submittal shall include:
 - a. A site stormwater plan; and
 - b. Site runoff calculations; and
 - c. Site runoff storage calculations if site runoff storage is required in Section 15-111.2; and
 - d. Information describing off-site conditions; and
 - e. A sediment and erosion control plan; and
 - f. Description on how Best Management Practices are incorporated in the development.

ARTICLE 11. STORMWATER MANAGEMENT PERMITS.

Sec. 15-146. through 15-154.

2. The site stormwater plan shall include:
 - a. A site topographic map depicting both existing and proposed contours of the entire site to be disturbed during development and all areas 100 feet beyond the site or as required by the Director or the Administrator at a scale of at least one inch equals 100 feet or less (e.g., one inch to 50 feet), with a minimum contour interval of one foot with accuracy equal to 0.5 foot of elevation; and
 - b. A plan view drawing of all existing and proposed stormwater facilities features, at the same scale as the site topographic map, including all of the following:
 - (1) Boundaries for watersheds tributary to all significant stormwater facilities (i.e., channels, bridges, inlets, and the like), along with the location of such facilities; and
 - (2) Major and minor stormwater systems (i.e., storm water pipes, culverts, inlets, and storage and infiltration facilities, and flooding limits under base flood conditions for the major stormwater system); and

(3) Roadways, structures, parking lots, driveways, sidewalks, and other impervious surfaces; and

(4) The nearest base flood elevations; and

(5) A planting plan for all vegetated areas which shall include:

(a) Planting locations, specifications, methodology; and

(b) A schedule for installation; and

(c) Management, monitoring, and maintenance provisions; and

(d) Performance standards; and

(e) An opinion of probable cost

c. Design details for all proposed stormwater facilities (i.e., major and minor stormwater systems, storage basins, and outlet works, and the like); and

d. A scheduled maintenance program for the stormwater facilities, including:

(1) Planned maintenance tasks; and

(2) Identification of the person or persons responsible for performing the maintenance tasks as required by Section 15-180 of this Ordinance; and

(3) A description of the permanent public access maintenance easements granted or dedicated to, and accepted by, a governmental entity; and

e. A schedule of implementation of the site stormwater plan; and

f. Upon completion of development, record drawings of the site stormwater plan shall be submitted to the Director or the Administrator. Such drawings shall be prepared, signed, and sealed by a land surveyor or professional engineer and shall include calculations showing the "as-built" volume of compensatory and site-runoff storage.

3. The site runoff calculations shall include:

a. Profile drawings of the major and minor stormwater systems, including cross section data for open channels, showing the hydraulic grade line and water surface elevation under the design and base flood condition; and

ARTICLE 11. STORMWATER MANAGEMENT PERMITS.

Sec. 15-146. through 15-154.

b. Documentation identifying the procedures, assumptions, and data used to calculate hydrologic and hydraulic conditions for sizing both major and minor stormwater systems.

4. The site runoff storage calculations shall include:

a. Documentation identifying the procedures, assumptions, and data used to calculate hydrologic and hydraulic conditions and to determine the allowable release rate and related storage volume; and

ARTICLE 13. PERFORMANCE SECURITY.

Sec. 15-176. General Security Requirements.

1. As security to the County or the waiver community for the performance by the developer of the developer's obligations to complete the construction of any stormwater facilities required by the Stormwater Management Permit, to pay all costs, fees, and charges due from the developer pursuant to this Ordinance or the applicable waiver community ordinance, and to otherwise faithfully perform the developer's undertakings pursuant to this Ordinance or the applicable waiver community ordinance, the developer shall, prior to issuance of a Stormwater Management Permit:
 - a. Post a development security as provided in Section 15-177 of this Ordinance; and
 - b. Post an erosion and sediment control security as provided in Section 15-178 of this Ordinance, if a erosion and sediment control plan is required pursuant to Section 15-149 of this Ordinance.
2. The developer shall bear the full cost of securing and maintaining the securities required by this Section 15-176.

Sec. 15-177. Development Security.

1. A development security shall be posted and shall include:
 - a. A schedule, agreed upon by the developer and the Director or the Administrator, for the completion of the construction of any stormwater facilities required by the permit; and
 - b. An irrevocable letter of credit, or such other adequate security as the Director or the Administrator may approve, in an amount equal to not less than one hundred ten percent (110%) of the estimated probable cost to complete the construction of any stormwater facilities required by the Stormwater Management Permit, which estimated probable cost shall be approved by the Director or the Administrator; and
 - c. A statement signed by the applicant granting the Director or the Administrator the right to draw on the security and the right to enter the development site to complete required work in the event that work is not completed according to the work schedule; and
 - d. A statement signed by the applicant that the applicant shall indemnify the community and the Department for any additional costs incurred attributable to concurrent activities of or conflicts between the applicant's contractor and the community's or Department's remedial contractor at the site.
2. The security required by this Section 15-177 shall be maintained and renewed by the applicant, and shall be held in escrow by the Director or the Administrator until the conditions set forth in this Section 15-177 or other applicable provision are satisfied.

ARTICLE 13. PERFORMANCE SECURITY.

Sec. 15-176. through 15-180.

3. At a minimum, the security required for this Section 15-177, in an amount equal to not less than one hundred ten percent (110%) of the estimated probable cost to plant, maintain and monitor all vegetated areas as required by the permit, may be held until all conditions or other applicable provisions are satisfied. The vegetated areas security may be reduced at the discretion of the Director or Administrator as conditions are met, but must not be less than one hundred ten (110%) of the estimated probable cost to continue to meet all conditions or other applicable provisions.
4. After approval of record drawings and final inspection by the Director or the Administrator, not more than ninety percent (90%) of the security provided for in this Section 15-177 or other applicable provision may be released. A minimum of ten percent (10%) of the security shall be retained for a period of time not less than one year after completion of construction.
- ~~4. After approval of record drawings and final inspection by the Director or the Administrator, not more than ninety percent (90%) of the security provided for in this Section 15-177 or other applicable provision may be released. A minimum of ten percent (10%) of the security shall be retained for a period of time not to exceed:~~
 - ~~a. One year after completion of construction of all stormwater facilities required by the permit if the development involves no wetland mitigation; or~~
 - ~~b. Five years after completion of construction of all stormwater facilities required by the permit if the development involves wetland mitigation.~~

Sec. 15-178. Erosion and Sediment Control Security.

1. If an erosion and sediment control plan is required pursuant to Section 15-149 of this Ordinance, then an erosion and sediment control security shall be required. Such a security shall include:
 - a. An irrevocable letter of credit, or such other adequate security as the Director or the Administrator shall approve, in an amount equal to not less than one hundred ten percent (110%) of the estimated probable cost to install and maintain the erosion and sediment control measures, which estimated probable cost shall be approved by the Director or the Administrator; and
 - b. A statement signed by the applicant granting the Director or the Administrator, as applicable, the right to draw on the security and the right to enter the development site to complete erosion and sediment control measures in the event that such measures are not installed and maintained according to the established schedule.
2. The security required by this Section 15-178 shall be maintained and renewed by the applicant, and shall be held in escrow by the Director or the Administrator, as applicable, until the conditions set forth in this Section 15-178 are satisfied.
3. After establishment of vegetation, removal of all sediment from stormwater facilities, and final inspection and approval by the Director or the Administrator, as applicable, one hundred percent (100%) of the erosion and sediment control security shall be released.

Sec. 15-179. Letters of Credit.

This Ordinance is intended to repeal the original ordinance or resolution which was adopted to meet the National Flood Insurance Program regulations, but is not intended to repeal any resolution which the applicable governmental entity passed in order to establish initial eligibility for the National Flood Insurance Program.

ARTICLE 17. MISCELLANEOUS PROVISIONS.

Sec. 15-256. through 15-260.

Sec. 15-259. Amendments.

This Ordinance may be amended in accordance with the adopted rules of the Committee and the DuPage County Board. Amendments to this Ordinance shall only take effect after a public hearing is held before the Committee and the amendment is adopted by the DuPage County Board.- Unless otherwise noted, complete Stormwater Permit Applications that are accepted prior to the effective date of an amendment will not be subject to that amendment.

Sec. 15-260. Effective Date.

This Ordinance shall take effect for all purposes, and its effective date shall be, February 15, 1992.

Sec. 15-261. through 15-265. Reserved.

SCHEDULE B
DETENTION VARIANCE and BMP FEE SCHEDULE
9/1/99 1/1/08

Detention Variance Fee

Salt Creek	\$133,000 per acre-foot
East Branch DuPage River	\$106,000 per acre-foot
West Branch DuPage River	\$94,000 per acre-foot
Sawmill Creek	\$87,000 per acre-foot
Des Plain River Tributaries	\$133,000 per acre-foot
Fox River Tributaries	\$81,000 per acre-foot

The fee is calculated by multiplying the varied storage amount by the cost per acre-foot for the watershed planning area where the development is located.

BMP Fee

<u>Single or two family residential land uses</u>	<u>\$3,000 per acre</u>
<u>Multiple family or non-residential land uses</u>	<u>\$15,000 per acre</u>
<u>Roadway developments</u>	<u>\$30,000 per acre</u>

SECTION 4

Water Quality Best Management Practices Guidance, for inclusion into Appendix E- Technical Guidance for the DuPage County Stormwater Ordinance

Due to the size of this document, please view it online at:

<http://ec.dupageco.org/bmp/>

The Water Quality Best Management Practices Guidance (BMP Manual) can be found at the following link:

<http://www.dupageco.org/emplibrary/Final%209-19-07.pdf>

To view the document, cut and past the link into your web browser or type the full address into the web browser manually.

*COUNTY OF DUPAGE,
ILLINOIS*

*COUNTYWIDE STORMWATER
AND FLOOD PLAIN ORDINANCE*

**Adopted As Appendix F
To The DuPage County Stormwater Management Plan**

*DuPage County
Countywide Stormwater
And Flood Plain Ordinance*

Adopted by the County Board of the County of DuPage, Illinois on the 24th day of September 1991.

Revised by the County Board on the 14th day of June 1994. Revisions effective the 1st day of September 1994.

Revised by the County Board on the 23rd day of April 1996. Revisions effective the 23rd day of April 1996.

Revised by the County Board on the 12th day of November 1997. Revisions effective the 1st day of February 1998.

Revised by County Board on the 22nd day of June 1999. Revisions effective the 1st day of September 1999.

Revised by County Board on the 13th day of June 2000. Revisions effective the 13th day of June 2000.

Revised by County Board on the 25th day of March 2003. Revisions effective the 25th day of March 2003.

Revised by County Board on the 27th day of January 2004. Revisions effective the 27th day of January 2004.

Revised by County Board on the 8th day of June 2004. Revisions effective the 1st day of July 2004.

Revised by County Board on the 8th day of March 2005. Revisions effective the 8th day of March 2005.

Revised by County Board on the 28th day of February 2006. Revisions effective the 28th day of February 2006.

Revised by County Board on the 8th day of April 2008. Revisions effective the 1st day of August 2008.

Base Flood Elevation. The height of the base flood in relation to the National Geodetic Vertical Datum of 1929.

Best Management Practices (BMPS). Design, construction, and maintenance practices and criteria for stormwater facilities that minimize the impact of stormwater runoff rates and volume, prevent erosion, and capture pollutants.

Building. A structure that is constructed or erected partially or wholly above ground and is enclosed by walls and a roof. The term "building" includes manufactured homes and includes both the above-ground and the below-ground portions of the structure.

Certify/Certification. A statement that a proposed development meets the requirements of this Ordinance.

Committee. The Stormwater Management Committee of the DuPage County Board, authorized by Public Act 85-905.

Community. Any municipality, or the unincorporated County, within DuPage County acting as a unit of local government.

Compensatory Storage. An excavated hydrologically and hydraulically equivalent volume of storage created to offset the loss of existing flood storage.

CLOMA. A Conditional Letter of Map Amendment. A FEMA comment letter on a development proposed to be located in, and affecting only that portion of, the area of flood plain outside the regulatory floodway and having no impact on the existing regulatory floodway or base flood elevations.

CLOMR. A Conditional Letter of Map Revision. A letter that indicates that FEMA will revise base flood elevations, flood insurance rate zones, flood boundaries, or floodways as shown on an effective FIRM or FBFM, after the record drawings are submitted and approved.

COE. The United States Army Corps of Engineers.

Complete Waiver. The authority granted to a community pursuant to Articles 3, 4, and 5 of this Ordinance whereby a community acquires complete jurisdiction over reviewing applications for and granting Stormwater Management Permits.

County. The County of DuPage, Illinois.

Critical Wetlands. Wetlands of the highest value by virtue of one or more high ranking characteristics that result in a uniquely valuable environment. See Sections 15-134 and 15-135 of this Ordinance.

Dam. Any obstruction, wall embankment, or barrier, together with any abutments and appurtenant works, constructed to store or direct water or to create a pool (not including underground water storage tanks).

Department. The DuPage County Department of Engineering.

Developer. Any person who undertakes development or permits development on such person's behalf.

Development. Any activity, excavation or fill, alteration, subdivision, change in land use, or practice, undertaken by private or public entities that affects the discharge of stormwater; or any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials in a Special Management Areas. The term "development" does not include maintenance of stormwater facilities.

Director. The DuPage County Director of Stormwater Management or his or her designee. The Director Stormwater Management shall be a professional engineer.

Elevation Certificates. A form published by FEMA, or its equivalent, that is used to certify the base flood elevation and the lowest elevation of usable space to which a building has been constructed.

Environmental Scientist. A person with a four-year degree in a life science curriculum in which the emphasis was on ecologic systems or equivalent education, and four years of experience. Examples of such curricula are ecology, botany, or biology.

Existing Manufactured Home Park. A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring on concrete pads) is completed before the effective date of the flood plain management regulations adopted by a community.

Expansion to an Existing Manufactured Home Park. The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of street, and either final site grading or the pouring of concrete pads).

FBFM. A Flood Boundary and Floodway Map. A flood plain management map issued by FEMA that depicts, based on detailed analysis, the boundaries of the base flood, the two tenth percent (0.2%) probability flood, and the floodway.

FEMA. The Federal Emergency Management Agency.

FHBM. A Flood Hazard Boundary Map. An official map of a community, issued by FEMA, on which the boundaries of the flood, mudslide or mudflow, or related erosion areas having special hazards have been designated as Zones A, M, and/or E.

NFIP. The National Flood Insurance Program. The requirements of the NFIP are codified in Title 44 of the Code of Federal Regulations.

NRCS. The United States Department of Agriculture, Natural Resources Conservation Service.

Oversight Committee. A committee appointed by a waiver community to oversee the implementation and enforcement of the waiver community's ordinance.

OWR. The Illinois Department of Natural Resources, Office of Water Resources.

Parcel. Contiguous land under single ownership or control.

Partial Waiver. Authority granted to a community pursuant to Articles 3, 4, and 5 of this Ordinance whereby the waiver community acquires limited jurisdiction over reviewing applications for, and issuing, Stormwater Management Permits.

Person. Any individual, partnership, firm, school district, company, corporation, association, joint stock company, trust, estate, unit of local government, special taxing district, public utility, political subdivision, state agency, or any other legal entity, or owner, or any legal representative, agent, or assign thereof.

Plan. The DuPage County Stormwater Management Plan, adopted by the DuPage County Board in September 1989, as amended from time to time.

Pollutant. Any substance harmful to the environment that is not authorized for discharge from a storm sewer by an Illinois Environmental Protection Agency General NPDES Permit.

Professional Engineer. A person licensed under the laws of the State of Illinois to practice professional engineering.

Professional Engineering. The application of science to the design of engineering systems and facilities, using the knowledge, skills, ability, and professional judgment developed through professional engineering education, training, and experience.

Professional Engineering Practice. The consultation on, conception, investigation, evaluation, planning, and design of, and selection of materials and methods to be used in, administration of construction contracts for or site observation of an engineering system or facility, when such consultation, conception, investigation, evaluation, planning, design, selection, administration, or observation requires extensive knowledge of engineering laws, formulae, materials, practice, and construction methods.

Public Flood Easement. An easement acceptable to the appropriate jurisdictional body that meets the regulation of the OWR, the Department, and the community, that provides legal assurances that all areas subject to flooding in the created backwater of the development will remain open to allow flooding.

Special Management Areas. Regulatory flood plains, riparian environment, wetlands, or wetland buffers. See Article 10 of this Ordinance.

Start of Construction. The date the permit was issued provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement or other improvement was within 180 days of the permit date. The actual start date includes the first day of any land preparation, including clearing, grading, filling, or excavation. For substantial improvements, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building whether or not that alteration affects the external dimensions of the building.

Stormwater Facility. All ditches, channels, conduits, bridges, culverts, levees, ponds, natural and man-made impoundments, wetlands, wetland buffers, riparian environment, tile, swales, sewers, BMPS or other natural or artificial structures or measures which serve as a means of draining surface and subsurface water from land.

Stormwater Management Permit. A permit established by this Ordinance or by a waiver community's Stormwater Ordinance; and issued by the Department or a waiver community signifying acceptance of measures identified for proposed development to comply with this Ordinance and the Plan.

Structure. Anything that is erected or constructed. The term "structure" includes, without limitation: buildings, manufactured homes, tanks, dams, sewers, constructed channels, outfalls, parking lots, driveways, roads, sidewalks, and concrete patios.

Structural Engineer. A person licensed under the laws of the State of Illinois as a structural engineer.

Substantial Damage. Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial Improvement. Any repair, reconstruction, rehabilitation, addition, or other improvement of a building, the cost of which improvement equals or exceeds, individually or in the aggregate, 50 percent of the fair market value of the building, determined from the equalized assessed value of the building, before the start of construction of the improvement or, if the building has been damaged, before the damage occurred. The term "cost of improvement" includes the value of volunteer labor and donated materials. The term "cost of improvement" does not, however, include either (1) any project for improvement of a building to correct existing violations of state or local health, sanitary, or safety code specifications that have been identified by the local code enforcement official and that are the minimum necessary to assure safe living conditions or (2) any alteration of a historic building that will not preclude the building's continued designation as a historic building.

Usable Space. Space used for dwelling, storage, utilities, or other beneficial purposes, including without limitation basements.

Variance. An authorization recommended by the Committee or an Oversight Committee, and granted by the DuPage County Board or the corporate authorities of a waiver community, that varies certain requirements of this Ordinance or a waiver community ordinance in a manner in harmony with the application of such ordinance's general purpose and intent, which variance shall be granted only in a case where there are practical difficulties or particular hardships.

Violation. Failure of a structure or other development to be fully compliant with the regulations identified by Ordinance.

Waiver Community. A community that has been granted either a partial waiver or a complete waiver from County enforcement of this Ordinance. See Article 4 of this Ordinance.

Waiver Community Ordinance. An approved, valid, and effective stormwater management ordinance of a waiver community. See Articles 3 and 4 of this Ordinance.

Watershed. All land area drained by, or contributing water to, the same stream, lake, or stormwater facility.

Watershed Basin Committee. A technical committee established within a watershed planning area.

Watershed Benefit. A decrease in flood elevations or flood damages or an improvement in water quality, upstream or downstream of the development site.

Watershed Plan. A plan adopted by the County for stormwater management within a watershed consistent with the requirements in Chapter 3 of the Plan.

Watershed Planning Area. That area considered in a specific watershed plan, adopted as part of the Plan, and depicted on the attached Exhibit 1.

Watershed Plan Model. The hydrologic and hydraulic model meeting the standards of the Plan and used in developing a watershed plan.

Waters of DuPage.

1. All waters such as lakes, rivers, streams (including intermittent streams), mudflats, wetlands, sloughs, wet meadows, or natural ponds.
2. All impoundments of waters not otherwise defined as waters of DuPage under the definition.
3. Tributaries of waters identified above.
4. Wetlands adjacent to waters identified above.

For clarification, waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of DuPage. It should also be noted that the following

At least once every three years the Department shall review the implementation and enforcement of each waiver community's stormwater program.

Sec. 15-36. through 15-45. Reserved.

ARTICLE 4. COMMITTEE PROCEDURES FOR WAIVER OF ENFORCEMENT.

Sec. 15-46. Committee Consideration of Petition.

The Committee shall consider each properly filed petition for either a partial or a complete waiver of County enforcement of this Ordinance at a regular or special call meeting. The Committee may take comments from interested parties, and the Committee shall have the right by rule to establish procedures for the conduct of such meetings.

Sec. 15-47. Standards for Grant of Petition.

The Committee shall grant a petition for waiver of County enforcement of this Ordinance upon finding that:

1. The community's stormwater ordinance is consistent with, and at least as stringent as, the Plan and this Ordinance, as they may be amended from time to time; and
2. The community has complied with the requirements of Article 3 of this Ordinance; and
3. By the effective date of the community's stormwater ordinance, the community shall provide reasonable assurance that it has available and will utilize experts with the following qualifications:
 - a. In a complete waiver community:
 - (1) A professional engineer with two years experience in stormwater and flood plain management; and
 - (2) A professional engineer with two years experience in the application of continuous hydrology and fully dynamic hydraulic models; and
 - (3) An environmental scientist who has attended at least one course in wetland delineation approved by the Department; and
 - (4) A soil scientist; or,
 - b. In a partial waiver community; ~~a professional engineer with two years experience in stormwater and flood plain management;~~

ARTICLE 4. COMMITTEE PROCEDURES FOR WAIVER OF ENFORCEMENT.

Sec. 15-46. through 15-49.

**ARTICLE 9. REQUIREMENTS FOR STORMWATER AND FLOOD
PLAIN MANAGEMENT.**

Sec. 15-111. General Information.

1. All developments shall meet the requirements specified for general stormwater and flood plain development (Section 15-112), site runoff (Section 15-113), sediment and erosion control (Section 15-117), and performance security (Article 13).
2. All developments, with consideration given to those developments as noted in Section 15-111.3 of this ordinance, shall comply with the site runoff storage requirements provided in Section 15-114 of this Ordinance in which:
 - a. The parcels being developed total three acres or greater for single or two family residential subdivision land uses; or
 - b. The parcels being developed total one acre or greater for multiple family or non-residential subdivision land uses; or
 - c. The parcels being developed total one acre or greater for multiple family or non-residential developments and the new development totals either individually or in the aggregate after February 15, 1992 to more than 25,000 square feet; or
 - d. The area being developed totals one acre or greater for road developments in rights-of-way under the ownership or control of a unit of government.
3. The Director or Administrator in a waiver community shall consider granting an exception to Section 15-111.2 of this Ordinance for those developments listed below, if specific requirements are met for such development as listed or required by the Administrator:
 - a. The development is strictly limited to the grading of pervious area, in which the following specific requirements are met:
 - (1) The Applicant must demonstrate to the administrator's satisfaction that for all storm events, up to and including the critical duration 100-year event, the grading activity does not:
 - a) Result in an increase in runoff volume; and,
 - b) Result in an increase in peak release rate; and,
 - c) Result in a time decrease associated with the time of concentration; and,
 - d) Contribute to adjacent flood problems; and,
 - e) Alter the direction of runoff.

- b. The development is strictly limited to the reconstruction of an existing parking lot, in which the following specific requirements are met:
 - (1) The Applicant must demonstrate that the reconstruction will remain in the same foot print as the existing parking lot; and,
 - (2) The Applicant must demonstrate to the administrator's satisfaction that for all storm events, up to and including the critical duration 100-year event, the development activity does not:
 - (a) Result in an increase in runoff volume; and,
 - (b) Result in an increase in peak release rate; and,
 - (c) Result in a time decrease associated with the time of concentration; and,
 - (d) Contribute to adjacent flood problems; and,
 - (e) Alter the direction of runoff.
- c. The development is strictly a Regional Stormwater Management Project or a Flood Control project in substantial compliance with either a watershed plan or other said study as reviewed and approved by the DuPage County Stormwater Management Committee.
- d. The development is strictly a Stream Bank Stabilization project.
- e. The development is strictly limited to the construction, or re-construction, of a pedestrian walkway/bike path, in which the following specific requirements are met:
 - (1) The pedestrian walkway/bike path shall not exceed twelve (12) feet in width; and,
 - (2) The pedestrian walkway/bike path must be constructed by a government agency (e.g., DuPage County regional trail system, municipal sidewalk program, etc.)
 - (3) The pedestrian walkway/bike path shall not be constructed in such a manner as to violate Section 15-112 of this Ordinance.
- f. The development is strictly limited to the creation of a DuPage County recognized wetland bank and/or wetland mitigation site.
- g. The development is strictly limited to the modification of an existing stormwater management facility to incorporate Best Management Practices.
- h. The development is strictly limited to the construction of a single-family residential structure on a parcel of land greater than three (3) acres.

ARTICLE 9. REQUIREMENTS FOR STORMWATER AND FLOOD PLAIN MANAGEMENT.

- i. The development is greater than one acre and the existing parcel(s) is greater than eighty percent (80%) impervious on March 8, 2005, in which the following specific requirements are met:
 - (1) Where there are no known off-site flooding problems that the development is contributory to, sufficient site runoff storage shall be provided in pervious (vegetative) areas such that the probability of the post development release rate exceeding 0.04 cfs/acre of development shall be less than fifty percent (50%) per year (2-yr event), unless the applicant demonstrates to the Administrator why this criteria can't be met and the following specific requirements are met:
 - (a) Where detention storage is provided in impervious areas (i.e. underground tanks, parking lots, etc.) best management practices as described in Section 15-113.11 of this Ordinance shall be required and the applicant shall demonstrate that these practices are appropriate and effective for the site conditions
 - (b) Where the required site runoff storage cannot be provided on-site, the shorted storage shall be provided off-site or by payment into an approved detention variance fee program as determined in Section 15-115 of this Ordinance.
 - (2) The required storage in Section 15-111.3.i.(1) is required for the total project, regardless of phasing.
 - (3) Site runoff storage facilities shall meet the requirements of Section 15-114 of this Ordinance.
 - (4) Where there are known off-site flooding problems, the Administrator may require additional site runoff storage, best management practices or other measures to reduce the flood potential.
 - (5) The post development site runoff storage shall not be less than the existing site runoff storage.
 - (6) There shall be no increase in peak release rates up to and including the one percent probability of occurrence (100-yr) per year.
 - (7) Additions to an existing site that increase the imperviousness above the eighty (80%) threshold are subject to providing the full storage such that the probability of the release rate exceeding 0.1 cfs/acre of new development is less than one percent (1.0%) per year, providing the new development is greater than 25,000 square feet.
 - (8) Approved Stormwater plans or permits that contain more stringent criteria than Section 15-111.3.i will apply.
- 4. Developments shall also meet the more specific requirements of applicable adopted Watershed Plans or adopted Interim Watershed Plans, set forth in Sections 15-117 through 15-122.
- 5. All development within special management areas, shall also satisfy the requirements specified in Article 10 of this Ordinance.

ARTICLE 9. REQUIREMENTS FOR STORMWATER AND FLOOD PLAIN MANAGEMENT.

6. All developers shall submit the documents specified in Article 11 of this Ordinance to verify compliance with these requirements.
7. Facilities constructed under the provisions of this Ordinance or the waiver community ordinance shall be maintained according to the criteria and guidelines established in the Plan. Maintenance is the responsibility of the owner of the land on which the stormwater facilities are constructed unless the responsibility is assigned, pursuant to Section 15-180 of this Ordinance, to an entity acceptable to the governmental unit that has jurisdiction over such land.

Sec. 15-112. General Stormwater and Flood Plain Requirements.

The following general stormwater and flood plain requirements shall apply to all development.

1. Development shall not:
 - a. Result in any new or additional expense to any person other than the developer for flood protection or for lost environmental stream uses and functions; nor
 - b. Increase flood elevations or decrease flood conveyance capacity upstream or downstream of the area under the ownership or control of the developer; nor
 - c. Pose any new or additional increase in flood velocity or impairment of the hydrologic and hydraulic functions of streams and flood plains unless a watershed benefit is realized; nor
 - d. Violate any provision of this Ordinance or any applicable waiver community ordinance either during or after construction; nor
 - e. Unreasonably or unnecessarily degrade surface or ground water quality.
2. Analysis and design of all stormwater and flood plain facilities required for development shall:
 - a. Meet the standards and criteria established in the Plan and, if available, in Watershed Plans or in Interim Watershed Plans; and
 - b. Consider the Technical Guidance for the DuPage Countywide Stormwater and Flood Plain Ordinance for the Plan; and
 - c. Be consistent with techniques specified in the Watershed Plans or the Interim Watershed Plans; and
 - d. Consider existing and ultimate watershed and land use conditions, with and without the proposed development.
3. Stormwater facilities shall be functional before building permits are issued for residential and non-residential subdivision.

ARTICLE 9. REQUIREMENTS FOR STORMWATER AND FLOOD PLAIN MANAGEMENT.

4. Stormwater facilities shall be functional where practicable for single parcel developments before general construction begins.
5. In areas outside the boundary of the regulatory flood plain all usable space in new buildings, or added to existing buildings shall either be elevated, floodproofed, or otherwise protected such that the lowest entry shall be at least one foot above the adjacent base flood elevation to prevent the entry of surface stormwater. Floodproofing devices shall be operational without human intervention. If electricity is required for protection against flood damage, there shall be a backup power source which will activate without human intervention. Floodproofing measures shall be certified by a professional engineer.
6. All usable space in new buildings or added to existing buildings adjacent to a major stormwater system, site runoff storage facility overflow path or site runoff storage facility, shall be elevated, floodproofed, or otherwise protected to at least one foot above the design elevation to prevent the entry of surface stormwater. The design elevation is the elevation associated with the design rate as determined in Section 15-114.8.f

Sec. 15-113. Site Runoff Requirements.

1. Stormwater facilities shall be required and shall be designed so that runoff exits the site at a point where flows will not damage adjacent property.
2. Stormwater facilities shall be designed to conform with the requirements of Illinois law and the applicable Sections 15-117 through 15-122 of this Ordinance.
3. Minor stormwater systems shall be sized to convey runoff from the tributary watershed under fully developed conditions consistent with the design requirements of the local jurisdiction.
4. Major stormwater systems shall be sized to carry the base flood without causing additional property damage.
5. Design runoff rates shall be calculated by using continuous simulation models or by event hydrograph methods. If event hydrograph methods are used, they must be either HEC-1 SCS runoff method, TR-20, or TR-55 tabular method. Event methods must incorporate the following assumptions:
 - a. Antecedent moisture condition = 2; and
 - b. Huff or SCS Type II rainfall distribution.
6. Any design runoff rate method shall use Illinois State Water Survey Bulletin 70 northeast sectional rainfall statistics or the National Oceanic and Atmospheric Administration continuous rainfall record from 1949 to present at the Wheaton gage, and shall calculate flow from all tributary area upstream of the point of design.

ARTICLE 9. REQUIREMENTS FOR STORMWATER AND FLOOD PLAIN MANAGEMENT.

7. Major and minor stormwater systems shall be located within easements or rights-of-way explicitly providing for public access for maintenance of such facilities.
8. Maximum flow depths on any roadway shall not exceed six inches during the base flood condition.
9. Transfers of waters between watersheds shall be prohibited except when such transfers will not violate the provisions of Subsection 15-112.1 of this Ordinance.
10. Stormwater facilities for runoff upstream of flood protection facilities shall provide for conveyance or storage of flood waters without increased potential for damage to real or personal property during base flood conditions.
11. Developments requiring a Stormwater Management Permit under Section 15-147 of this Ordinance shall treat the developed area for pollutants from the site in accordance with accepted practices and procedures, examples of which are in Appendix E of the DuPage Countywide Stormwater and Flood Plain Ordinance, Part I-Technical Guidance, Water Quality Best Management Practices, with the following exceptions:
 - a. The parcels being developed total less than one acre for single or two family land uses.
 - b. The Director or Administrator in a waiver community shall consider granting an exception to section 15-113.11, for those developments listed in section 15-111.3.b and e.
12. Developments requiring a Stormwater Management Permit under Section 15-147 of this Ordinance shall, to the extent practical practicable and necessary, incorporate the following Best Management Practices into the site design to minimize increases in runoff rates, volumes, and pollutant loads:
 - a. All runoff from rooftops and parking lots, and discharge from sump pumps, that does not discharge into a site runoff storage facility shall be directed onto vegetated swales or filter strips, for a distance of at least 50 feet.
 - b. Vegetated swales shall be utilized, where appropriate, as an alternative to storm sewers to promote the infiltration of stormwater and the filtration of stormwater pollutants.
 - c. Effective impervious surface area should be limited by site designs which minimize the area of streets, parking lots, and rooftops and/or utilize permeable paving material such as concrete grids in low traffic areas.
 - d. Other Best Management Practices such as infiltration basins and trenches (where permeable soils are present) and filtration basins and sand filters (on highly impervious or industrial developments) shall be utilized where appropriate.
 - e. The practices and procedures established in the Technical Guidance for the DuPage Countywide Stormwater and Flood Plain Ordinance for the Plan and as described in the United States Environmental Protection Agency's "Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters", dated January 1993.

13. Developments shall incorporate all ~~best~~ Best management ~~Management~~ practices ~~Practices~~ as may be required pursuant to the United States Clean Water Act, 33 U.S.C. §§ 1251 et seq., as amended.

Sec. 15-114. Site Runoff Storage Requirements (Detention).

1. Maximum site runoff storage requirements shall be consistent with the information, procedures, and requirements of the applicable Sections 15-117 through 15-122 of this Ordinance, except as limited by the provisions of Subsection 15-114.2 of this Ordinance.
2. If no release rate, or a greater release rate than identified below, is specified in the applicable Sections ~~15-117-118~~ 15-118 through 15-122 of this Ordinance, then sufficient storage shall be provided such that the probability of the post development release rate exceeding 0.1 cfs/acre of development shall be less than one percent (1.0%) per year. Design runoff volumes shall be calculated using continuous simulation or event hydrograph methods.
3. If event hydrograph methods are used to calculate design runoff volumes, they must be either HEC-1 SCS runoff method with outlet routing option, TR-20 with outlet control routing option, or TR-55 tabular method with outlet control routing. Event methods shall incorporate the following assumptions:
 - a. Antecedent moisture condition = 2; and
 - b. Huff or SCS Type II rainfall distribution; and
 - c. Twenty-four (24) hour duration storm with a one percent (1.0%) probability of occurrence in any one year as specified by Illinois State Water Survey Bulletin 70 northeast sectional rainfall statistics.
4. If continuous simulation methods are used, design runoff volumes shall be calculated using the Wheaton National Oceanic and Atmospheric Administration rainfall record from 1949 to present.
5. For sites where the undeveloped release rate is less than the maximum release rate in Subsection 15-114.2 of this Ordinance, the developed release rate and corresponding site runoff storage volume shall be based on the existing undeveloped release rate for the development site.
6. All hydrologic and hydraulic computations must be verified under the full range of expected downstream water surface elevations, from low flow through the base flood elevation.
7. Responsibility for maintenance of all storage facilities shall be designated on the plat of subdivision or other recorded documents.
8. Storage facilities shall be designed and constructed with the following characteristics:
 - a. Water surface depths two feet above the base flood elevation will not damage the storage facility.
 - b. The storage facilities shall be accessible and easily maintained.
 - c. All outlet works shall function without human intervention or outside power and shall operate with minimum maintenance.

ARTICLE 9. REQUIREMENTS FOR STORMWATER AND FLOOD PLAIN MANAGEMENT.

Sec. 15-111. through 15-122.

- d. Storage facilities shall facilitate sedimentation and catchment of floating material.
 - e. Storage facilities shall minimize impacts of stormwater runoff on water quality by incorporating Best Management Practices.
 - f. Storage facilities shall provide an overflow structure and overflow path that can safely pass excess flows through the development site. The minimum design rate shall be 1.0 cfs/acre of area tributary to the storage facility.
9. Storage facilities located within the regulatory flood plain shall:
- a. Conform to all applicable requirements specified in Article 10 of this Ordinance; and
 - b. Store the required site runoff under all stream flow and backwater conditions up to the base flood elevation; and
 - c. Not allow design release rates to be exceeded under any stream elevation less than the base flood elevation.
10. Storage facilities located within the regulatory floodway shall:
- a. Meet the requirements for locating storage facilities in the regulatory flood plain; and
 - b. Be evaluated by performing hydrologic and hydraulic analysis consistent with the standards and requirements for Watershed Plans; and
 - c. Provide a watershed benefit.
11. Developments with storage facilities that have off-site flow tributary to the site either shall provide storage sufficient to accommodate runoff from the off-site tributary watershed and the site, or shall store the site runoff and convey off-site flows through the development while preserving the existing flow and storage of the site.
12. Storage facilities may be located off-site if the following conditions are met:
- a. The off-site storage facility meets all of the requirements of this Article 9; and
 - b. Adequate storage capacity in the off-site facility is dedicated to the development; and
 - c. The development includes provisions to convey stormwater to the off-site storage facility.

Sec. 15-115. Detention Variance Fee Program.

- 1. Where a variance to the site runoff storage requirements of Section 15-114 is granted, payment into a detention variance fee program shall be made prior to the issuance of a Stormwater Management Permit as a condition of the variance.
- 2. Development in a non-waiver community or in a waiver community that has not adopted a detention variance fee program shall participate in the County's program where:

ARTICLE 9. REQUIREMENTS FOR STORMWATER AND FLOOD PLAIN MANAGEMENT.

- a. Payment of a detention variance fee for the varied storage shall be made to the County and is determined by applying the first applicable criteria as follows:
 - (1) A fee calculated by multiplying the per acre-foot cost of the closest off-site storage facility times the varied storage where:
 - (a) A design concept plan for the facility has been approved by the Committee and the County Board containing an estimate of the per acre-foot cost of constructing the storage, including operation and maintenance costs; and
 - (b) A formula has been developed to determine that any investment in the facility shall be at least equal to the cost of planning, acquiring of lands, constructing, operating, and maintaining the facility; and
 - (c) The facility is located in the same watershed planning area as the variance.
 - (2) An adopted fee schedule, attached to this Ordinance as Schedule B and by this reference incorporated into this Ordinance, that identifies reasonable and rational cost to provide site runoff storage in the same watershed planning area as the variance. The fee shall include the cost of planning, acquiring land, construction, operation, and maintenance.
 - b. Funds collected shall be accounted for in separate project or watershed planning area accounts. Funds shall be used in the same community or watershed planning areas as collected to enhance existing site runoff storage facilities and related components, construct off-site facilities and related components, provide maintenance of stormwater facilities, or undertake other development that provides a watershed benefit.
 - c. The County Board shall provide accounting on an annual basis of all funds deposited in each project or watershed planning accounts and shall account for each fund on a first-in, first-out basis.
 - d. The Committee may prioritize and allocate funds on an annual basis within each watershed planning area account. Communities may make a request to the Committee by June 30th of each year for funds within the watershed planning accounts for uses identified in Section 15-115.2.b.
 - e. All detention variance fees are refunded to the person who paid the fee, or to that person's successor in interest, whenever the County fails to encumber the fees collected within 10 years of the date on which such fees are collected.
 - f. Refunds are made provided that the person who paid the fee, or that person's successor in interest, files a petition with the County within one year from the date on which such fees are required to be encumbered.
3. Development in a waiver community shall participate in the waiver community's detention variance fee program where the corporate authority has adopted a program that is consistent with Section 15-115.2. The waiver community may adopt its own fee schedule and designate off-site facilities.

Funds may be used in the same community or watershed planning area as collected. All accounting records shall be made available to the Committee upon request.

ARTICLE 9. REQUIREMENTS FOR STORMWATER AND FLOOD PLAIN MANAGEMENT.

Sec.15-116 (re-number sections from here to 15-130- Page 38) Water Quality BMP Fee-in-Lieu Program.

1. The applicant for single or two family residential land uses that are not specifically exempted by 15-113.11 may elect to pay a fee in lieu of providing water quality BMPS under the following conditions:

- a. A Stormwater Management Permit is required under section 15-147 of this Ordinance, and
- b. The development is not required to provide site runoff storage per Section 15-111.2, and
- c. Payment into a BMP fee-in-lieu program shall be made prior to the issuance of a Stormwater Management Permit.

2. The applicant for multiple family or non-residential land uses and roadway developments may elect to pay a fee in lieu of providing water quality BMPS under the following conditions:

- a. A Stormwater Management Permit is required under section 15-147 of this Ordinance, and
- b. The development is not required to provide site runoff storage per Section 15-111.2, and
- c. The Director or Administrator in a waiver community has determined that it is not practical to install water quality BMPS, and
- d. Payment into a BMP fee-in-lieu program shall be made prior to the issuance of a Stormwater Management Permit.

3. Development in a non-waiver community or in a waiver community that has not adopted a BMP fee-in-lieu program shall participate in the County's program where:

- a. BMP fee-in-lieu payment shall be made to the County and is determined by applying the criteria as follows:

(1) The adopted fee schedule, attached to this ordinance as Schedule B and by this reference incorporated into this ordinance, that identifies reasonable and rational cost to construct and maintain similar BMPS for those areas of the development that remain without effective water quality treatment.

- b. Funds collected shall be accounted for in watershed planning area accounts. Funds shall be used in the same watershed planning areas as collected solely to design, construct, and maintain water quality improvements. Funds may not be used to fulfill obligations required by the Ordinance.
- c. The County Board shall provide accounting on an annual basis of all funds deposited in each watershed planning account and shall account for each fund on a first-in, first-out basis.
- d. The Committee may prioritize and allocate funds on an annual basis within each watershed planning area account. Communities may make a request to the Committee by June 30th of each year for funds within the watershed planning accounts for uses as identified in Section 15-116.3.b.

ARTICLE 9. REQUIREMENTS FOR STORMWATER AND FLOOD PLAIN MANAGEMENT.

- e. All BMP fee-in-lieu payments are refunded to the person who paid the fee, or to that person's successor in interest, whenever the County fails to encumber the fees collected within ten (10) years of the date on which such fees are collected.
- g. Refunds are made provided that the person who paid the fee, or that person's successor in interest, files a petition with the County within one year from the date on which such fees are required to be encumbered.
- 4. Development in a waiver community shall participate in the waiver community's BMP fee- in-lieu program where the corporate authority has adopted a program that is consistent with Section 15-116. The waiver community may adopt its own fee schedule and designate off-site facilities. Funds may be used in the same community or watershed planning area as collected. All accounting records shall be made available to the Committee upon request.

Sec. 15-116117, Erosion and Sediment Control Requirements.

1. Erosion and sediment control features shall be considered as part of any development's initial site planning process. The developer's engineer should consider the following factors in the overall site design:
 - a. The susceptibility of the existing soils to erosion.
 - b. The natural contours of the land.
 - c. Existing native and mature vegetation.
 - d. Existing natural or established drainageways.
 - e. Emphasize erosion controls first then address sediment control.
2. All developments, whether a permit is required or not, shall incorporate stormwater management measures that control and manage runoff from such developments, as provided in this section. Temporary erosion and sediment control measures shall be functional and consistent with the information and requirements of this entire section before land is otherwise disturbed on the site. These measures shall be maintained during both the construction season and any construction shutdown periods until permanent erosion and sediment control measures are operational.
3. Soil erosion and sediment control measures shall be appropriate with regard to the amount of tributary drainage area as follows:
 - a. Disturbed areas draining less than 1 acre shall, at a minimum, be protected by a filter barrier or equivalent to control all runoff leaving the site. The use of straw bales for this purpose is prohibited.
 - b. Disturbed areas draining more than 1 but fewer than 5 acres shall, at a minimum, be protected by a sediment trap or equivalent control measure.
 - c. Disturbed areas draining more than 5 acres shall, at a minimum, be protected by a sediment basin or equivalent control measure.

ARTICLE 9. REQUIREMENTS FOR STORMWATER AND FLOOD PLAIN MANAGEMENT.

state, and regional approvals prior to the issuance of a Stormwater Management Permit.

7. All development undertaken by a unit of local government in the regulatory flood plain where no regulatory floodway has been designated shall obtain a permit from OWR or its designee prior to issuance of a Stormwater Management Permit.
8. Within the regulatory floodway, the following calculations or analyses shall be submitted to and approved by OWR or its designee prior to the issuance of a Stormwater Management Permit:
 - a. Flood damage analyses for the replacement or modification of existing bridges or culverts; and
 - b. Hydraulic analyses of new, modified, or replacement bridges or culverts; and
 - c. Analyses of alternative transition sections as required in Subsection 15-133.23 of this Ordinance; and
 - d. Analyses of hydrologically and hydraulically equivalent compensatory storage.
9. Any and all proposed development not in a Special Management Area shall be reviewed under the supervision of a professional engineer and, where applicable, an environmental scientist, meeting the requirements in Section 15-47.3.b.
10. Any and all proposed development within the regulatory flood plain shall be reviewed under the supervision of a professional engineer meeting the requirements in Section 15-47.3.a. and, in the case of floodway development, certified by that professional engineer that the proposed development meets the minimum requirements of this Ordinance.
11. Any and all proposed development in or near a wetland shall be reviewed under the supervision of an environmental scientist meeting the requirements in Section 15-47.3.a (3), and certified by that environmental scientist that the proposed development meets the minimum requirements of this Ordinance.

Sec. 15-147. Applicability; Required Submittals.

1. A Stormwater Management Permit shall be required if:
 - a. The development involves one or more Special Management Areas; or
 - b. The development involves a substantial improvement in the regulatory flood plain; or
 - c. The development disturbs more than 5,000 square feet of ground cover, unless the development solely involves one or more of the following:
 - (1) Cultivation, conservation measures, or gardening; or
 - (2) Installation, renovation, or replacement of a septic system, potable water service line, or other utility to serve an existing structure; or
 - (3) Excavation or removal of vegetation in rights-of-way or public utility easements for the purpose of installing or maintaining utilities; or

- (4) Maintenance, repair, or at grade replacement of existing lawn areas not otherwise requiring a stormwater permit under Ordinance.
2. In addition to the application requirements provided in Sections 15-146 and 15-148 of this Ordinance, the following submittals shall be required:
 - a. The Stormwater Submittal provided in Section 15-149 of this Ordinance shall be required for all development requiring a stormwater permit.
 - b. The Flood Plain Submittal provided in Section 15-150 of this Ordinance shall be required for all development proposed within any regulatory flood plain designated in Section 15-132 of this Ordinance.
 - c. The Wetland Submittal provided in Section 15-151 of this Ordinance shall be required for any development proposed within a wetland designated in Section 15-134 of this Ordinance.

Sec. 15-148. Stormwater Management Permit Application.

The Stormwater Management Permit application shall include all of the following:

1. The name and legal address of the applicant and of the owner of the land; and
2. The common address and legal description of the site where the development will take place; and
3. A general narrative description of the development, including submittals required pursuant to Subsection 15-147.2 of this Ordinance; and
4. Affidavits signed by the land owner and the developer attesting to their understanding of the requirements of this Ordinance or the applicable waiver community ordinance and their intent to comply therewith; and
5. A statement of opinion by a qualified person either denying or acknowledging the presence of Special Management Areas on the development site, and the appropriate submittals if the statement acknowledges the presence of Special Management Areas; and
6. Copies of other permits or permit applications as required; and
7. A stormwater submittal; and
8. A flood plain submittal, if development is proposed in a flood plain; and
9. A wetland submittal, if development is proposed in a wetland; and
10. A riparian environment submittal, if development is proposed in a riparian environment; and
11. An engineer's estimate of probable construction cost of the stormwater facilities.

Sec. 15-149. Stormwater Submittal.

1. The stormwater submittal shall include:
 - a. A site stormwater plan; and
 - b. Site runoff calculations; and
 - c. Site runoff storage calculations if site runoff storage is required in Section 15-111.2; and
 - d. Information describing off-site conditions; and
 - e. A sediment and erosion control plan; and
 - f. Description on how Best Management Practices are incorporated in the development.

2. The site stormwater plan shall include:
 - a. A site topographic map depicting both existing and proposed contours of the entire site to be disturbed during development and all areas 100 feet beyond the site or as required by the Director or the Administrator at a scale of at least one inch equals 100 feet or less (e.g., one inch to 50 feet), with a minimum contour interval of one foot with accuracy equal to 0.5 foot of elevation; and
 - b. A plan view drawing of all existing and proposed stormwater facilities features, at the same scale as the site topographic map, including all of the following:
 - (1) Boundaries for watersheds tributary to all significant stormwater facilities (i.e., channels, bridges, inlets, and the like), along with the location of such facilities; and
 - (2) Major and minor stormwater systems (i.e., storm water pipes, culverts, inlets, and storage and infiltration facilities, and flooding limits under base flood conditions for the major stormwater system); and
 - (3) Roadways, structures, parking lots, driveways, sidewalks, and other impervious surfaces; and
 - (4) The nearest base flood elevations; and
 - (5) A planting plan for all vegetated areas which shall include:
 - (a) Planting locations, specifications, methodology; and
 - (b) A schedule for installation; and
 - (c) Management, monitoring, and maintenance provisions; and
 - (d) Performance standards; and
 - (e) An opinion of probable cost

- (1) Design details for all proposed stormwater facilities (i.e., major and minor stormwater systems, storage basins, and outlet works, and the like); and
- (2) A scheduled maintenance program for the stormwater facilities, including:

- (3) Planned maintenance tasks; and
 - (4) Identification of the person or persons responsible for performing the maintenance tasks as required by Section 15-180 of this Ordinance; and
 - (5) A description of the permanent public access maintenance easements granted or dedicated to, and accepted by, a governmental entity; and
- e. A schedule of implementation of the site stormwater plan; and
 - f. Upon completion of development, record drawings of the site stormwater plan shall be submitted to the Director or the Administrator. Such drawings shall be prepared, signed, and sealed by a land surveyor or professional engineer and shall include calculations showing the "as-built" volume of compensatory and site-runoff storage.
3. The site runoff calculations shall include:
 - a. Profile drawings of the major and minor stormwater systems, including cross section data for open channels, showing the hydraulic grade line and water surface elevation under the design and base flood condition; and
 - b. Documentation identifying the procedures, assumptions, and data used to calculate hydrologic and hydraulic conditions for sizing both major and minor stormwater systems.
 4. The site runoff storage calculations shall include:
 - a. Documentation identifying the procedures, assumptions, and data used to calculate hydrologic and hydraulic conditions and to determine the allowable release rate and related storage volume; and
 - b. Elevation-area-storage and elevation-discharge data for storage systems.
 5. Information describing the off-site conditions shall include sufficient information to allow evaluation of off-site impacts to and resulting from the proposed development. Such information shall include:
 - a. A vicinity topographic map covering the entire upstream watershed that drains to or through the site and the entire watershed downstream to the point of known or assumed discharge and water surface elevation; and
 - b. A plan view drawing of existing and proposed stormwater facilities, at the same scale as the vicinity topographic map, including:
 - (1) Watershed boundaries for areas draining through or from the development; and
 - (2) The location of the development within the watershed planning area; and
 - (3) Soil types, vegetation, and land cover conditions affecting runoff upstream of the development site for any area draining through or to the site.
 6. The erosion and sediment control plan shall conform to the requirements of Section 15-~~116~~117 of this Ordinance. The erosion and sediment control plan shall include:

- a. A plan and schedule for construction, including site clearing and grading, construction waste disposal and stockpile locations, placement and maintenance of all soil stabilization controls, and sediment trapping facilities; and
 - b. A description of the development, including existing site land cover and hydrologic conditions, adjacent areas, soil types including a soils report and/or survey, permanent and temporary erosion and sediment control measures, and maintenance requirements; and
 - c. All data and calculations used to size, locate, design and maintain any soil erosion and sediment control measures.
 - d. Plan view drawings of existing and proposed site conditions, at the same scale as the site stormwater plan, including:
 - (1) Existing contours with drainage patterns and watershed boundaries; and
 - (2) Soil types, vegetation, and land cover conditions; and
 - (3) Limits of clearing and grading; and
 - (4) Final contours with locations of drainageways and erosion and sediment control measures with the drainage area tributary to each sediment control measure delineated on the drawings; and
 - (5) A sediment control quantity table including: total project area, total disturbed area, total existing and proposed impervious area, and total number of units for each sediment control measure.
 - e. Design details for proposed erosion and sediment control facilities; and
 - f. A copy of the written opinion, when applicable, of the Soil and Water Conservation District required under 70 ILCS 405/22.02 (1992); and
 - g. Evidence that the sediment and erosion control installation and maintenance requirements, including both a list of maintenance tasks and a performance schedule, are identified and required in the plans and specifications.
7. Information describing how Best Management Practices are incorporated into the site design. Such information shall include:
- a. A description of Best Management Practices that are incorporated into the site design and how they will function. Include applicable design criteria such as soil type, vegetation, and land cover conditions draining to the Best Management Practice along with appropriate calculations; and
 - b. A description of the maintenance requirements.

Sec. 15-150. Flood Plain Submittal.

The flood plain submittal shall include:

2. The security required by this Section 15-177 shall be maintained and renewed by the applicant, and shall be held in escrow by the Director or the Administrator until the conditions set forth in this Section 15-177 or other applicable provision are satisfied.

At a minimum, the security required for this Section 15-177, in an amount equal to not less than one hundred ten percent (110%) of the estimated probable cost to plant, maintain and monitor all vegetated areas as required by the permit, may be held until all conditions or other applicable provisions are satisfied. The vegetated areas security may be reduced at the discretion of the Director or Administrator as conditions are met, but must not be less than one hundred ten (110%) of the estimated probable cost to continue to meet all conditions or other applicable provisions.

3. After approval of record drawings and final inspection by the Director or the Administrator, not more than ninety percent (90%) of the security provided for in this Section 15-177 or other applicable provision may be released. A minimum of ten percent (10%) of the security shall be retained for a period of time ~~not to exceed~~ not less than one (1) year after completion of construction.

~~a. One year after completion of construction of all stormwater facilities required by the permit if the development involves no wetland mitigation; or~~

~~b. Five years after completion of construction of all stormwater facilities required by the permit if the development involves wetland mitigation.~~

Sec. 15-178. Erosion and Sediment Control Security.

1. If an erosion and sediment control plan is required pursuant to Section 15-149 of this Ordinance, then an erosion and sediment control security shall be required. Such a security shall include:
 - a. An irrevocable letter of credit, or such other adequate security as the Director or the Administrator shall approve, in an amount equal to not less than one hundred ten percent (110%) of the estimated probable cost to install and maintain the erosion and sediment control measures, which estimated probable cost shall be approved by the Director or the Administrator; and
 - b. A statement signed by the applicant granting the Director or the Administrator, as applicable, the right to draw on the security and the right to enter the development site to complete erosion and sediment control measures in the event that such measures are not installed and maintained according to the established schedule.
2. The security required by this Section 15-178 shall be maintained and renewed by the applicant, and shall be held in escrow by the Director or the Administrator, as applicable, until the conditions set forth in this Section 15-178 are satisfied.
3. After establishment of vegetation, removal of all sediment from stormwater facilities, and final inspection and approval by the Director or the Administrator, as applicable, one hundred percent (100%) of the erosion and sediment control security shall be released.

Sec. 15-179. Letters of Credit.

1. Letters of credit posted pursuant to Sections 15-176, 15-177, and 15-178 of this Ordinance shall be in a form satisfactory to the Director or the Administrator, as applicable.
2. Each letter of credit shall be from a lending institution: (a) acceptable to the Director or the Administrator, as applicable; (b) having capital resources of at least ten million dollars (\$10,000,000), or such other amount acceptable to the Director or the Administrator; (c) with an office in the Chicago Metropolitan Area; and, (d) insured by the Federal Deposit Insurance Corporation.
3. Each letter of credit shall, at a minimum, provide that:
 - a. It shall not be canceled without the prior written consent of the Director or the Administrator; and
 - b. It shall not require the consent of the developer prior to any draw on it by the Director or the Administrator; and
 - c. If at any time it will expire within 45 or any lesser number of days, and if it has not been renewed, and if any applicable obligation of the developer for which its security remains uncompleted or is unsatisfactory, then the Director or the Administrator may, without notice and without being required to take any further action of any nature whatsoever, call and draw down the letter of credit and thereafter either hold all proceeds as security for the satisfactory completion of all such obligations or employ the proceeds to complete all such obligations and reimburse the County or the waiver community for any and all costs and expenses, including legal fees and administrative costs, incurred by the County or the waiver community, as the Director or the Administrator shall determine.
4. If at any time the Director or the Administrator determines that the funds remaining in the letter of credit are not, or may not be, sufficient to pay in full the remaining unpaid cost of all stormwater facility construction or erosion and sediment control measures, then, within ten (10) days following a demand by the Director or the Administrator, the developer shall increase the amount of the letter of credit to an amount determined by the Director or the Administrator to be sufficient to pay such unpaid costs. Failure to so increase the amount of the security shall be grounds for the Director or the Administrator to draw down the entire remaining balance of the letter of credit.
5. If at any time the Director or the Administrator determines that the bank issuing the letter of credit is without capital resources of at least ten million dollars (\$10,000,000), is unable to meet any federal or state requirement for reserves, is insolvent, is in danger of becoming any of the foregoing, or is otherwise in danger of being unable to honor such letter of credit at any time during its term, or if the Director or the Administrator otherwise reasonably deems the bank to be insecure, then the Director or the Administrator shall have the right to demand that the developer provide a replacement letter of credit from a bank satisfactory to the Director or the Administrator. Such replacement letter of credit shall be deposited with the Director or the Administrator not later than ten (10) days following such demand. Upon such deposit, the Director or the Administrator shall surrender the original letter of credit to the developer.
6. If the developer fails or refuses to meet fully any of its obligations under this Ordinance or the applicable waiver community ordinance, then the Director or the Administrator may, in his or her discretion, draw on and retain all or any of the funds remaining in the letter of credit. The Director or the Administrator thereafter shall have the right to take any action he or she deems reasonable and appropriate to mitigate the effects of such failure or refusal, and to reimburse the County or the waiver community from the proceeds of the letter of credit for all of its costs and expenses, including legal fees and administrative expenses, resulting from or incurred as a result of the developer's failure or

Sec. 15-259. Amendments.

This Ordinance may be amended in accordance with the adopted rules of the Committee and the DuPage County Board. Amendments to this Ordinance shall only take effect after a public hearing is held before the Committee and the amendment is adopted by the DuPage County Board. Unless otherwise noted, complete Stormwater Permit Applications that are accepted prior to the effective date of an amendment will not be subject to that amendment.

Sec. 15-260. Effective Date.

This Ordinance shall take effect for all purposes, and its effective date shall be, February 15, 1992.

Sec. 15-261. through 15-265. Reserved.

SCHEDULE B
 DETENTION VARIANCE FEE AND BMP FEE IN LIEU SCHEDULE
 9-1-998/1-08

Detention Variance Fee

Salt Creek	\$133,000 per acre-foot
East Branch DuPage River	\$106,000 per acre-foot
West Branch DuPage River	\$94,000 per acre-foot
Sawmill Creek	\$87,000 per acre-foot
Des Plain River Tributaries	\$133,000 per acre-foot
Fox River Tributaries	\$81,000 per acre-foot

The fee is calculated by multiplying the varied storage amount by the cost per acre-foot for the watershed planning area where the development is located.

BMP Fee in lieu

<u>Single or two family residential land uses</u>	<u>\$3,000 per acre</u>
<u>Religious institutions defined under Sec. 15-40 of the Illinois Property Tax Code and governmental entities, not to include roadways and parking lots</u>	<u>\$3,000 per acre</u>
<u>Multiple family or non-residential land uses</u>	<u>\$15,000 per acre</u>
<u>Roadway developments</u>	<u>\$30,000 per acre</u>


STATE OF ILLINOIS)
)SS
COUNTY OF DU PAGE)

I, GARY A. KING, COUNTY CLERK AND CLERK OF THE
COUNTY BOARD IN THE COUNTY AND STATE AFORESAID, AND
KEEPER OF THE RECORDS AND FILES THEREOF, DO HEREBY
CERTIFY THE FOREGOING TO BE A TRUE AND CORRECT COPY OF
AN ORDINANCE.

ADOPTED BY THE COUNTY BOARD AT A MEETING HELD AT THE
DU PAGE CENTER, 421 NORTH COUNTY FARM ROAD, WHEATON,
ILLINOIS, ON THE 25TH DAY OF MARCH, A.D. 20 08.

ALL OF WHICH APPEARS FROM THE RECORDS OF THE
PROCEEDINGS OF SAID COUNTY BOARD NOW IN MY OFFICE
REMAINING.

GIVEN UNDER MY HAND AND OFFICIAL SEAL AT WHEATON,
ILLINOIS, THIS 26TH DAY OF MARCH, A.D. 20 08.



COUNTY CLERK AND CLERK
OF THE COUNTY BOARD OF
DU PAGE COUNTY, ILLINOIS