

Exhibit A: Amendments to Chapter 151 of the Lake County, Illinois Code of Ordinances

Key: Underline and ~~Strikethrough~~ Staff recommendations

Amendment #01

Amend Section 151.032(A)(17)/ Planning, Building, and Development Director to read as follows.

(c) Adopted basin plans and floodplain studies may be the basis for more specific regulations. These additional or more specific regulations will apply only in the specific study area of the basin plan or floodplain study and supersede those of this Ordinance only upon amendment to the Watershed Development Ordinance and formal adoption of the basin plan or floodplain study by SMC.

Amendment #02

Amend Section 151.032(A)(17)/ Planning, Building, and Development Director to read as follows.

(m) Shall provide the Lake County Stormwater Management Commission an annual report summarizing the FIL50 fees received, project expenditures and status, categorized by watershed.

Amendment #03

Amend Section 151.145(C)(1)/ Site Development Permits to read as follows.

(b) Final plats, planned unit developments, site development permits or current building permits approved between October 18, 1992 and April 13, 2021 ~~October 9, 2012~~, if the approved plans and designs are in conformance with the pre-October 13, 2020 ~~pre-October 9, 2012~~, ordinance provisions. That portion of any final plat, planned unit development, site development permit, or current building permit which is amended after the effective date of this chapter and which affects the stormwater management system is not exempt from the provisions of this chapter.

Amendment #04

Amend Section 151.145(F)(2)(f)1/ Site Development Permits to read as follows.

g. If the soil mapping submitted for the development indicates the presence of soils classified as a hydric soil (USDA/NRCS Soil Classification) ~~the soils listed below~~, then the applicant shall provide site-specific soil mapping performed by a certified soil classifier or geotechnical investigation for the development. No buildings or parking lots shall be constructed on these soils unless appropriate building methods, such as pilings, caissons or removal and replacement of unsuitable soils, as approved by the Planning, Building and Development Director, are used to provide and protect a suitable building foundation. ~~Soils classified as a hydric soil (USDA/NRCS Soil Classification) in its very poorly drained condition or the following three soil classifications in any condition:~~

- ~~(i) Houghton Muck (103A);~~
- ~~(ii) Houghton Peat (1103A); or~~
- ~~(iii) Peotone Silty Clay Loam (330A).~~

Development that is exempted from this requirement is any development activity not resulting in the construction of a building or parking lots.

Amendment #05

Amend Section 151.146(B)/ Performance Standards for All Development to read as follows.

(6) For determination of soil runoff characteristics, areas of the development that are hydrologically disturbed and compacted shall be changed to the next higher hydrologic that soil type's and highest runoff potential/soil group classification e.g., B to C, C to D, or as approved by the Planning, Building and Development Director. Soil groups that are not hydrologically disturbed will retain their current runoff characteristics. ~~Areas that are deed or plat restricted for native planting areas may be determined to have lower runoff characteristics, and may be taken into account when meeting the runoff volume reduction requirements of this chapter.~~

~~(7) Areas that are deed or plat restricted for native planting areas may be determined to have lower runoff characteristics, and may be taken into account when meeting the runoff volume reduction requirements of this Ordinance. The Planning, Building and Development Director may determine these areas can be excluded from the required detention volume calculation.~~

Amendment #06

Amend Section 151.146(E)/ Performance Standards for All Development to read as follows and renumber subsequent sections accordingly.

(16) Fee-In-Lieu of On-Site Stormwater Storage

(a) The Planning, Building and Development Department may require, as part of an adopted basin plan or floodplain study, the payment of a fee-in-lieu of on-site stormwater storage to fulfill all or part of the onsite stormwater storage requirement for a development. The adoption of a floodplain study or basin plan is per Section 151.032 (A)(17)(c) of this Ordinance.

(b) The following fee-in-lieu of on-site stormwater storage procedures apply:

(1) The Planning, Building and Development Director may require, or the applicant may submit, a written request for the payment of a fee-in-lieu of on-site stormwater storage to fulfill all or part of the on-site detention requirement below the detention threshold minimum limit set by this Ordinance in Section 151.145(B)(6) and for compensatory storage requirements for streambank and shoreline restoration fills of less than two hundred (200) cubic yards. A request for fee-in-lieu of on-site stormwater storage shall be either rejected or approved within forty-five (45) days of the written request unless additional engineering studies are required.

(2) Approval of a request for fee-in-lieu of on-site stormwater storage on a development site below the detention threshold in Section 151.145(B)(6) of this Ordinance and for compensatory storage requirements for streambank and shoreline restoration fills of less than two hundred (200) cubic yards shall be determined by the Planning, Building and Development Director.

(3) Fee-in-lieu of on-site stormwater storage shall be the lesser of:

a. The fee computed for each acre-foot or cubic yard or part thereof of stormwater storage.; or

b. The estimated construction cost. of the applicant's proposed and approved on-site stormwater storage, including land costs.

(4) A fund will be maintained for each of the four major Lake County watersheds for the purpose of identifying and controlling all revenues and expenditures resulting from fee-in-lieu of on-site stormwater storage approvals. All fee-in-lieu of on-site stormwater storage revenues received from each watershed shall be deposited in these funds for use within that watershed.

(5) The following requirements must be met before a fee-in-lieu of on-site stormwater storage will be approved:

a. The downstream stormwater management system has adequate downstream stormwater capacity (see Section 151.271 Terms Defined); and

b. The Planning, Building and Development Department has an adopted fee-in-lieu of on-site stormwater storage program.

(6) Fee-in-lieu of on-site stormwater storage revenues may be used to plan, design, or construct an upgrade to existing or future stormwater management systems if the upgrade is consistent with a basin plan, floodplain study, or stormwater system improvement.

(c) The following fee-in-lieu of on-site stormwater storage procedures shall be authorized for all developments permitted after October 13, 2020.

(1) The Planning, Building and Development Director may require, or the applicant may submit, a written request for the payment of a fee-in-lieu of on-site stormwater storage to fulfill all or part of the on-site detention requirement above the 50-year, 24-hour detention volume using Appendix K: Rainfall Depth Duration Frequency Tables for Lake County. A request for fee-in-lieu of onsite stormwater storage shall be either rejected or approved within forty-five (45) days of the written request unless additional engineering studies are required.

(2) Approval of a request for fee-in-lieu of on-site stormwater storage on a development site above the 50-year, 24-hour detention volume shall be determined by the Lake County Planning, Building and Development Director.

(3) Fee-in-lieu of on-site stormwater storage shall be the fee computed for each acre-foot or part thereof of stormwater storage.

(4) A fund will be maintained for each of the four major Lake County watersheds for the purpose of identifying and controlling all revenues and expenditures resulting from fee-in-lieu of on-site stormwater storage approvals. All fee-in-lieu of on-site stormwater storage revenues received from each watershed shall be deposited in these funds for use within that watershed.

(5) The following requirements must be met before a fee-in-lieu of on-site stormwater storage will be approved:

a. The downstream stormwater management system has adequate downstream stormwater capacity (see Section 151.271 Terms Defined); and

b. The Planning, Building and Development Department has an adopted fee-in-lieu of on-site stormwater storage program.

(6) Fee-in-lieu of on-site stormwater storage revenues shall be used to design, maintain, or construct an upgrade to existing or future stormwater management systems if the upgrade is consistent with a basin plan, floodplain study, or stormwater system improvement.

Amendment #07

Amend Section 151.146(J)/ Performance Standards for All Development to read as follows.

(9) All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization is achieved or after the temporary measures are no longer needed. Trapped sediment and other disturbed soil areas shall be permanently stabilized with a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a minimum density of 70 percent or higher, at the discretion of the Planning, Building and Development Director, on all unpaved areas and areas not covered by permanent structures or equivalent permanent stabilization measures.

Amendment #08

Amend Section 151.146(M)(2)(d)/ Performance Standards for All Development to read as follows.

5. ~~A statement~~ Current documentation on the occurrence of any high-quality aquatic resource on or adjoining the development;

Amendment #09

Amend Section 151.146(M)(3)(b)/ Performance Standards for All Development to read as follows.

3. A copy of the following maps (most recent) delineating the development boundary;
 - a. U.S. Geological Survey quadrangle map;
 - b. Lake County wetland inventory map (including ADID sites);
 - c. Federal Emergency Management Agency floodplain map;
 - d. Lake County soil survey; and
 - e. Hydrologic atlas (U.S.G.S. Flood of Record map).
4. U.S. Army Corps of Engineers data sheets (March 1992 or most recent version Midwest Region, most recent version) with color photographs provided for representative upland and wetland data points;
5. A written description of the wetland(s) that includes a floristic quality assessment as determined using the Chicago Region Floristic Quality Assessment Calculator (U.S. Army Corps of Engineers, Chicago District, most recent version) by methodology contained in Swink, F. and G. Wilhelm's Plants of the Chicago Region (1994, 4th Edition, The Morton Arboretum, Lisle, Illinois). Floristic quality assessments shall generally be conducted between May 15 and October 1 which approximates the growing season. Non-growing season assessments may require additional sampling during the growing season to satisfy this requirement;

Amendment #10

Amend Section 151.146(M)(6)(b)/ Performance Standards for All Development to read as follows.

1. The applicant shall use a "wetland detention basin" design ~~as provided in the Technical Reference Manual (TRM)~~, and shall reestablish vegetation within the detention basin using the

Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois, NRCS, et al. (as amended) as a minimum standard for the re-vegetation plan.

Amendment #11

Amend Section 151.271/ Terms Defined to read as follows.

DESIGNATED EROSION CONTROL INSPECTOR.

(1) A person responsible for, at a minimum, verifying compliance and ongoing maintenance of the approved soil erosion and sediment control plan measures of a development and who is recommended to meet the minimum qualification requirements of subsections (1)(a), (1)(b), and (1)(c) as follows:

(a) Provide a one-page statement of qualifications in the areas noted below and a request to be included on the Lake County Stormwater Management Commission Designated Erosion Control Inspector qualified listing. The signed statement will be considered as evidence of qualifications.

(b) Pass the Designated Erosion Control Inspector Exam that is administered by the Lake County Stormwater Management Commission.

(c) Complete a Lake County Stormwater Management Commission-approved soil erosion and sediment control course and meet the requirements of one of the following:

1. Have an official designation as a Certified Professional in Erosion and Sediment Control (CPESC) or Certified Erosion, Sediment and Stormwater Inspector (CESSWI);
2. Two years cumulative experience in the Upper Midwest Region on soil erosion and sediment control inspections.

(2) The listing of Designated Erosion Control Inspectors shall be officially updated every three years by the Lake County Stormwater Management Commission. ~~A minimum of 24 work-related professional development hours including Lake County Stormwater Management Commission mandatory training for this designation shall be obtained within the three-year period in order to qualify for re-listing.~~ Continuing education requirements shall be as follows:

(a) Attendance at each annual DECI training seminars shall be sufficient for the three-year listing period.

(b) Alternatively, DECI must attend twenty-four (24) hours of work-related professional development hours within the three-year period for relisting.

(3) Documentation shall be self-monitoring and shall be provided to Lake County Stormwater Management Commission upon application for listing.

ISOLATED WATERS OF LAKE COUNTY. All waters such as ~~lakes~~ wetlands, ponds, streams ~~(including intermittent streams)~~, farmed wetlands, and wetlands that are not under U.S. Army Corps of Engineers jurisdiction. The limits of the ***ISOLATED WATERS OF LAKE COUNTY*** extend to the ordinary high water mark or the delineated wetland boundary.

FEE-IN-LIEU OF ON-SITE STORMWATER STORAGE. A fee assessed to a permit applicant used to contribute to the cost of a basin plan or floodplain study components; or other stormwater system improvements, "in-lieu-of" constructing on-site detention or for compensatory storage requirements for streambank and shoreline restoration fills of less than two hundred (200) cubic yards.

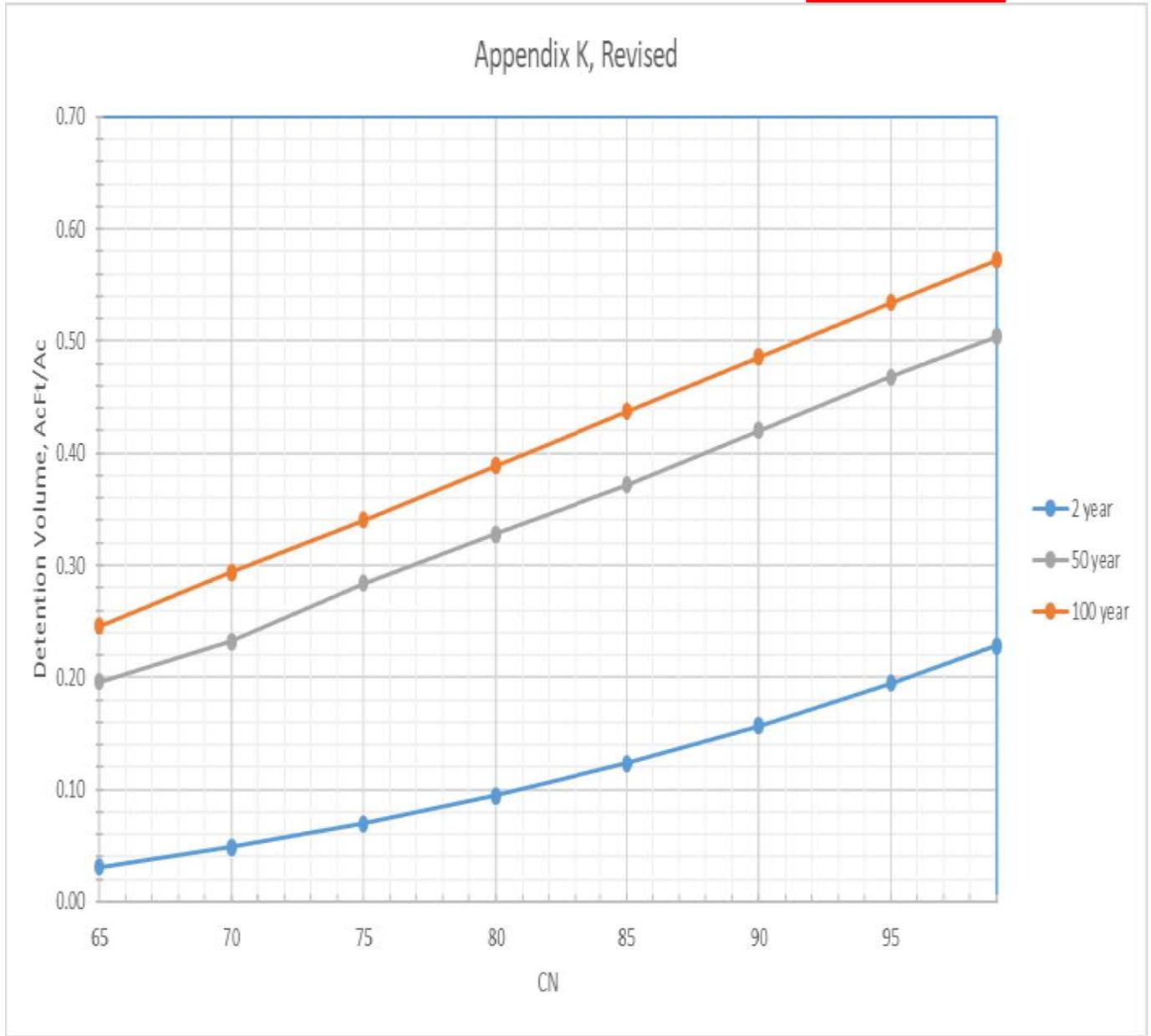
BASIN. A facility which provides temporary or permanent impoundment of water for flood control and other water resource purposes. ***BASINS*** include stormwater infiltration, retention, and detention facilities. Sub-watershed areas within the county that include the Fox River mainstream (including the Chain O'Lakes), Flint Creek, Tower Lake Drain, Slocum Drain,

Mutton Creek, Squaw Manitou Creek, Fish Lake Drain, Sequoit Creek, the Des Plaines River mainstream, South Mill Creek, North Mill Creek, Newport Drainage Ditch, Bull Creek, Indian Creek, Aptakistic Creek, Buffalo Creek, Skokie River, Middle Fork-North Branch Chicago River, West Fork-North Branch Chicago River, Kellogg Creek, Dead River, Waukegan River, Pettibone Creek, and Lake Michigan Bluff/Ravines.

Amendment #12

Amend Appendix J to read as follows.

APPENDIX J: DETENTION VOLUMES VS. PERCENT IMPERVIOUS CURVE NUMBER



(Ord., Appendix J, passed 10-13-2009)

Amendment #14

Note – the tables have changed and must be replaced.

Amend Appendix K: Rainfall Tables to read as follows.

APPENDIX K: RAINFALL TABLES

Rainfall Depth-Duration Frequency Tables for Lake County

Rainfall is in inches

Storm Duration	2-month	3-month	4-month	6-month	9-month	1-year	2-year	5-year	10-year	25-year	50-year	100-year	500-year
5 minutes	0.19	0.22	0.24	0.27	0.31	0.33	0.40	0.52	0.62	0.77	0.90	1.03	1.35
10 minutes	0.35	0.40	0.43	0.49	0.56	0.61	0.73	0.95	1.13	1.42	1.65	1.89	2.47
15 minutes	0.42	0.49	0.53	0.61	0.69	0.75	0.90	1.16	1.39	1.74	2.03	2.32	3.04
30 minutes	0.58	0.66	0.73	0.83	0.94	1.03	1.24	1.59	1.91	2.39	2.78	3.17	4.16
1 hour	0.74	0.84	0.93	1.05	1.20	1.30	1.57	2.02	2.42	3.03	3.53	4.03	5.28
2 hours	0.91	1.04	1.14	1.30	1.48	1.61	1.94	2.49	2.99	3.74	4.35	4.97	6.52
3 hours	1.00	1.15	1.26	1.44	1.63	1.77	2.14	2.75	3.30	4.13	4.80	5.49	7.20
6 hours	1.18	1.35	1.48	1.68	1.91	2.08	2.51	3.23	3.86	4.84	5.63	6.43	8.43
12 hours	1.37	1.56	1.71	1.95	2.21	2.41	2.91	3.74	4.48	5.61	6.53	7.46	9.78
18 hours	1.48	1.69	1.85	2.11	2.39	2.61	3.14	4.04	4.84	6.06	7.05	8.06	10.57
24 hours	1.57	1.80	1.97	2.24	2.55	2.77	3.34	4.30	5.15	6.45	7.50	8.57	11.24
48 hours	1.72	1.97	2.16	2.46	2.79	3.04	3.66	4.71	5.62	6.99	8.13	9.28	12.10
72 hours	1.87	2.14	2.34	2.67	3.03	3.30	3.97	5.08	6.05	7.49	8.64	9.85	12.81
120 hours	2.08	2.38	2.61	2.97	3.37	3.67	4.42	5.63	6.68	8.16	9.39	10.66	13.81
240 hours	2.63	3.01	3.30	3.76	4.27	4.65	5.60	7.09	8.25	9.90	11.26	12.65	16.00

~~References: IDNR/OWR Floodplain Map Revision Manual, March 1996, Bulletin 70 1988~~

~~References: ISWS Bulletin 75 Precipitation Frequency Study for Illinois~~

~~James R. Angel and Momcilo Markus~~

~~Illinois State Water Survey, March 2020~~

Multiplication Factor - Average ratios of X-hour/24-hour rainfall for Illinois, 1989 Bulletin 70

**6 County - A multiplicative factor is not available for these storm events. Therefore, the 6-county Bulletin 70 data is used for regulatory studies.

HUFF RAINFALL DISTRIBUTIONS

The Huff quartiles represent the typical rainfall distribution for four different storm duration ranges. The First quartile applies to storms less than or equal to six hours long. Second is for storms greater than six hours and less than or equal to 12, while the third Huff quartile is for storms greater than 12 hours and less than or equal to 24 hours. Fourth quartile storms apply to storm durations greater than 24 hours.

AREA < 10 SM

AREA > 10 & AREA < 50

AREA > 50 & AREA < 400

Portion of the Storm	First Quartile	Second Quartile	Third Quartile	Fourth Quartile	First Quartile	Second Quartile	Third Quartile	Fourth Quartile	First Quartile	Second Quartile	Third Quartile	Fourth Quartile
0/24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/24	8.36	2.29	2.05	2.31	6.41	1.48	1.33	1.48	4.59	0.88	0.72	0.90
2/24	17.73	4.82	4.31	4.79	15.69	3.57	3.02	3.34	13.49	2.38	1.85	2.29
3/24	28.11	7.78	6.67	7.12	27.45	6.39	5.13	5.72	25.94	4.93	3.47	4.36
4/24	38.33	11.33	9.12	9.78	38.91	10.02	7.53	8.56	39.17	8.52	5.57	7.10
5/24	47.45	15.79	11.71	12.53	49.34	14.71	10.01	11.69	51.04	13.19	8.28	9.93
6/24	55.50	21.39	14.36	15.23	58.55	20.89	12.65	14.19	60.79	19.59	10.96	12.84
7/24	62.25	28.41	16.91	17.91	65.88	28.91	15.24	17.19	69.26	27.46	13.79	15.46
8/24	67.22	36.44	19.64	20.33	71.10	37.55	18.17	19.69	74.80	37.17	16.35	17.83
9/24	70.82	45.29	22.78	22.83	74.92	46.86	21.46	22.27	78.74	47.77	19.66	20.12
10/24	74.17	54.35	26.33	25.41	78.30	56.25	25.36	24.81	82.20	58.18	23.46	23.12
11/24	76.97	62.38	30.93	28.35	81.16	64.84	29.90	27.46	85.13	67.64	28.07	25.76
12/24	79.81	69.76	36.35	31.25	83.75	72.90	35.60	30.33	87.38	75.86	34.06	28.26
13/24	82.55	75.48	43.92	33.90	86.20	79.07	43.42	32.42	89.58	82.04	42.30	30.99
14/24	85.18	80.38	52.11	36.33	88.64	83.97	52.18	34.28	91.45	86.92	52.02	33.68
15/24	87.40	84.70	61.02	38.61	90.81	87.58	61.88	36.89	93.35	90.33	62.76	36.12
16/24	89.47	87.81	69.89	41.24	92.58	90.67	71.81	39.73	94.80	93.09	72.80	39.07
17/24	91.17	90.22	78.19	45.08	93.99	92.76	80.43	43.85	95.99	94.82	82.27	42.93
18/24	92.70	92.17	84.92	51.29	95.19	94.59	87.25	49.87	96.94	96.25	89.19	48.98
19/24	94.03	93.81	89.74	59.31	96.35	95.97	92.01	58.93	97.70	97.34	93.60	59.22
20/24	95.36	95.29	93.11	69.19	97.27	97.10	95.04	69.85	98.35	98.21	96.33	71.66
21/24	96.56	96.57	95.34	80.05	98.03	97.99	96.90	82.36	98.86	98.83	97.97	85.18
22/24	97.74	97.74	97.06	89.71	98.74	98.72	98.22	92.59	99.28	99.30	98.98	94.64
23/24	98.85	98.84	98.56	96.04	99.37	99.39	99.21	97.96	99.66	99.67	99.58	98.77
24/24	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Amendment #14

Amend Appendix L/ Watershed-Specific Release Rates to read as follows.

APPENDIX L: WATERSHED-SPECIFIC RELEASE RATES

<i>Appendix L</i>					
<i>WATERSHED</i>			<i>Release Rates (cfc/acre)</i>		<i>Comments</i>
<i>MAJOR TRIBUTARIES</i>		<i>100-Year Storm Event</i>	<i>2-Year Storm Event</i>		
<i>MINOR TRIBUTARIES</i>					
<i>Appendix L</i>					
<i>WATERSHED</i>			<i>Release Rates (cfc/acre)</i>		<i>Comments</i>
<i>MAJOR TRIBUTARIES</i>		<i>100-Year Storm Event</i>	<i>2-Year Storm Event</i>		
<i>MINOR TRIBUTARIES</i>					
FOX RIVER					
Fox River Mainstem			0.150	0.040	WDO Maximum Allowable
Flint Creek			0.150	0.040	WDO Maximum Allowable

	Honey Lake Drain	0.150	0.040	WDO Maximum Allowable
	Mutton Creek	0.150	0.040	WDO Maximum Allowable
	Sequoit Creek	0.150	0.040	WDO Maximum Allowable
	Slocum Lake Drain	0.150	0.040	WDO Maximum Allowable
	Bang's Lake Drain	0.150	0.040	WDO Maximum Allowable
	Squaw Manitou Creek Mainstem	0.090	0.020	Watershed Average Rate Based on 8/1/96 LCSMC adoption of the 11/3/82 FIS flow rate analysis.
	Eagle Creek	0.090	0.020	Watershed Average Rate Based on 8/1/96 LCSMC adoption of the 11/3/82 FIS flow rate analysis.
	Fish Lake Drain	0.090	0.020	Watershed Average Rate Based on 8/1/96 LCSMC adoption of the 11/3/82 FIS flow rate analysis.

Amendment #15

Amend Appendix N/ High Quality Aquatic Resources to read as follows.

12. Wetlands with a native mean coefficient of conservatism value (native mean C value) of greater than or equal to 3.5 or a native floristic quality index value (FQI) of greater than or equal to 20 as determined using the Chicago Region Floristic Quality Assessment Calculator (U.S. Army Corps of Engineers, Chicago District, most recent version). Floristic Quality Index of 20 or greater or a mean C-value of 3.5 or greater: Reference Plants of the Chicago Region (F. Swink and G. Wilhelm, 4th Edition, Indianapolis: Indiana Academy of Science, 1994).

Amendment #16

Amend Appendix S(H.2)/ Unified Development Ordinance Mitigation Requirements and Guidelines for Isolated Waters of Lake County Impacts to read as follows.

a. *Floristic Quality.* By the end of the performance period, a native mean coefficient of conservatism value (native mean C value) of greater than or equal to 3.5 and a native floristic quality index value (FQI) of greater than or equal to 20 shall be achieved for each wetland community as determined using the Chicago Region Floristic Quality Assessment Calculator (U.S. Army Corps of Engineers, Chicago District, most recent version). Native plant species coefficients of conservatism and the methods for calculating the native mean C-value and FQI are included in Swink, Floyd and Gerould Wilhelm, Plants of the Chicago Region (Indianapolis: Indiana Academy of Science, 4th Edition, 1994).

b. *Mean Wetness Coefficient.* By the end of the performance period, the mean wetness coefficient (mean W) shall be less than or equal to 0 in each wetland community. Wetness

coefficients are listed below, based on the ~~National Wetland C~~category of each plant species designated in ~~the National Wetland Plant List – Midwest Regional Plant List (U.S. Army Corps of Engineers, most recent version). Reed, Porter B., National List of Plant Species that Occur in Wetlands: North Central (Region 3). U.S. Fish Wildlife Service. Rep. 88(26.3, 1988).~~ The mean W for each wetland community is calculated by the following equation: Sum of wetness coefficients for all species/number of species.

Wetness Coefficients	
National Wetland Category	Wetness Coefficient
Obligate (OBL)	-5 <u>-2</u>
Facultative Wetland + (FACW+)	-4
Facultative Wetland (FACW)	-3 <u>-1</u>
Facultative Wetland - (FACW-)	-2
Facultative + (FAC+)	-1
Facultative (FAC)	0
Facultative - (FAC-)	1
Facultative Upland - (FACU-)	2
Facultative Upland (FACU)	3 <u>1</u>
Facultative Upland + (FACU+)	-4
Upland (UPL)	5 <u>2</u>

Amendment #17

Amend Appendix S(H.3)/ Unified Development Ordinance Mitigation Requirements and Guidelines for Isolated Waters of Lake County Impacts to read as follows.

a. *Floristic Quality*. By the end of the performance period, a native mean coefficient of conservatism value (native mean C value) of greater than or equal to 2.5 and a native floristic quality index value (FQI) of greater than or equal to 15 shall be achieved for the buffer as determined using the Chicago Region Floristic Quality Assessment Calculator (U.S. Army Corps of Engineers, Chicago District, most recent version).