McHenry County
Technical Advisory Committee - Public Meeting
AGENDA

February 18, 2025, 9:30 AM
County Board Conference Room
Administration Building, 667 Ware Rd., Woodstock, IL 60098

McHenry County
Technical Advisory Committee - Public Meeting
MINUTES

January 14, 2025, 9:30 AM
County Board Conference Room
Administration Building, 667 Ware Rd., Woodstock, IL 60098

Members Present: Stephen Bicking, Brad Andresen, Spring Duffey, Scott Hajek, Jodi McCarthy, Bruce Meier, Darren Olson, Laurie Ryan, Albert Schmitt, Brian Valleskey, Ernest Varga, Michael Von Bergen, Michael Warner, Dan Ziller Jr.

Full comments on all agenda items are included in the video recording of this meeting.

Also present was Stoyan Kolev and Scott Kuykendall.

1. CALL TO ORDER

The meeting was called to order by Stoyan Kolev at 9:30am

1.1 Roll Call

2. MINUTES APPROVAL

2.1 Minutes of December 10, 2024

Mover: Bruce Meier
Seconder: Jodi McCarthy

To approve the minutes of the December 10, 2024 meeting

Approved by Voice

3. PUBLIC COMMENT

None.

4. ELECTION OF OFFICERS

Ernest Varga came in at 9:33am

4.1 Chairman

Mr. Kolev opened the nominations for Chairman

Mover: Jodi McCarthy

To nominate Steve Bicking for Chairman

There were no other nominations for Chairman.

Mr. Kolev closed the nominations for Chairman

Approved by Voice

4.2 Vice Chairman

Mr. Kolev opened the nominations for Vice Chairman

Mover: Michael Warner

To nominate Jodi McCarthy as Vice Chairman

There were no nominations for Vice Chairman.

Mr. Kolev closed the nominations for Vice Chairman.

Approved by Voice

5. MEMBER'S COMMENT

Mr. Varga brought up inconsistencies on the infiltration facilities section and Environmental Health ordinances. Mr. Kolev will get that in the agenda for next month.

6. OLD BUSINESS

6.1 Post Construction Best Management Practices Revisions

Darren Olson came in at 9:45am

There was much discussion on Table 3's inclusion of "Parking lots and roadway/driveways with vehicle traffic exceeding 10 vehicles per day".

Mover: Michael Warner
Seconder: Darren Olson

Motion to vote for one of four options: vehicles per day average, square footage of impervious area, parking stalls or combination of vehicles per day average and/or parking stalls

The option with the most votes was option 4: combination parking lot above x number either/or roadway/driveways with the x vehicle average per day.

The matter was tabled for a future meeting to further discuss the number of average vehicles per day and

the number of parking stalls.

7. NEW BUSINESS

7.1 Alternate Schedule Dates for February, March and November

Mover: Ernest Varga
Seconder: Albert Schmitt

Motion to accept the meeting schedule

Approved by Voice

7.2 Discuss Article VI, Section B, Paragraph 5, d. Stormwater Management Facilities, Xi

After much discussion, Mr. Kolev will rewrite this section based on the input he received from the TAC. He will then take it to MCSC and will bring it back to the next TAC meeting.

7.3 Wetland Restoration Fund

Mr. Kolev stated the big key elements are to drive no net loss for wetlands, to have wetland mitigation alternatives and water sheds for areas that have army corps approved wetland mitigation banks and maintaining or enhancing the natural systems to reduce flood damage and help improve water quality.

He said they are going to 3 main wetland fund areas: Nippersink Creek, Fox River and Kishwaukee River.

Mr. Kuykendall went over the updated fee table.

Mr. Kolev said this will be presented to MCSC, refined and will be brought back to the TAC.

8. REPORTS

None.

9. FUTURE TOPICS

Mr. Ziller expressed that he would like to discuss reactivating drainage districts. Mr. Kolev assured this matter would be covered as a part of the watershed discussion.

10. ANNOUNCEMENTS

None.

11. ADJOURNMENT

Mover: Darren Olson
Seconder: Michael Von Bergen

To adjourn the meeting at 11:50am

Approved by Voice

~~Exhibit A~~

Wetland Restoration Fund (2025 Update Draft ~~v3~~v4)

The McHenry County Stormwater Management Ordinance (SMO) initiates the wetland mitigation hierarchy and fee-in-lieu mitigation for the wetland restoration fund (WRF). The WRF is administered and implemented for impacts to Isolated Waters of McHenry County (IWMC) in accordance with the provisions of the SMO. The County Board of McHenry County (County Board) has adopted this Ordinance for implementing the WRF:

1. Purpose and Applicability: The purpose of the WRF is to collect fees and disperse funds to compensate for wetland impacts exceeding the mitigation thresholds. The WRF must help McHenry County achieve its goals ~~of~~ for: (1.)"no-net-loss" of wetland acreage, (2) providing wetland mitigation alternatives in watersheds without U.S. Army Corps of Engineers (USACE) approved wetland mitigation banks, (3) maintaining or enhancing natural systems that reduce flood damage, help improve water quality (surface and groundwater), and provide healthy habitat for indigenous wildlife.
   - ~~Two~~ Three WRFs are established for McHenry County.
     - A Nippersink Creek WRF exists to collect fees for wetland impacts and disperse funds for suitable projects in the North Branch Nippersink Creek (HUC 0712000608), Nippersink Creek Watershed (HUC 0712000609),
     - A Fox River WRF exists to collect fees for wetland impacts and disperse funds for suitable projects in the Manitou Creek-Fox River Watershed (HUC0712000610), the Upper Fox River Watershed (HUC0712000611), and the Lower Fox River Watershed (HUC 0712000612).
     - A Kishwaukee River WRF exists to collect fees for wetland impacts and disperse funds for suitable projects in the Kishwaukee River Watershed (HUC 0709000602), the Piscasaw Creek Watershed (HUC 0709000603), and the Coon Creek Watershed (HUC 0709000601).
   - Payment to the WRF may only be used to mitigate impacts to IWMC: (1) after applicants have demonstrated avoidance and minimization of wetland impacts in accordance with the SMO have been properly employed for their project, and (2) if there are no credits available from a USACE approved wetland mitigation bank within the same watershed (Nippersink Creek, Fox River, or Kishwaukee River watersheds as noted above) as the wetland impact is occurring.
   - ~~A permit applicant does not have the option to mitigate a wetland impact by paying into a WRF if the wetland impact is in the same watershed as a mitigation bank in existence at the time the WRF is established, as long as the mitigation bank has available mitigation credits. The four mitigation banks in existence at the time the WRF is established are:~~
     - ~~Sybaquay Girl Scout Camp – Kishwaukee River Watershed~~
     - ~~Kishwaukee Bottoms – Kishwaukee River Watershed~~
     - ~~Marengo – Kishwaukee River Watershed~~
     - ~~Slough Creek – Nippersink Creek Watershed~~

2. Mitigation Ratios: The mitigation acreage to impact acreage ratio is set by the minimum requirements of the SMO and applies to the entire impact acreage once the mitigation threshold is surpassed.

3. Calculation of Fee-in-lieu of Mitigation Fees: The Fee-in-lieu is set by the County Board as a fee (in dollars per acre) for mitigation credit needed. The fee-in-lieu is not specified in the SMO but will be updated periodically by the County Board. The fee-in-lieu is calculated using estimated costs for ~~planning,~~ land acquisition, design, construction, monitoring, maintenance, and administration. Since the value of land varies across McHenry County, separate in-lieu fees are established for ~~each~~ principal watersheds in the county. The fee-in-lieu will not necessarily match fees charged

by mitigation banks, since those fees are ~~often negotiable~~ determined by bank developers based on factors beyond County control.

4. SMO Review Process:
   A. **For Unincorporated Areas and Non-Certified Communities:** Upon written request by a permit applicant, as part of the review process, MCSC shall approve the IWMC impact acreage and inform the applicant of the in-lieu fee amount. The in-lieu fee shall be due prior to permit issuance.
   B. **For Certified Communities:** Upon written request by a permit applicant, as part of the review process, the Certified Community shall approve the IWMC impact acreage and inform MCSC of the IWMC impact location and acreage. The Certified Community shall then direct the permit applicant to pay the in-lieu fee amount to MCSC. MCSC shall provide the permit applicant with a receipt for payment of the in-lieu fee. The permit applicant must submit this receipt to the Certified Community prior to permit issuance.

5. Dispersal of Funds: Fees paid in-lieu of wetland mitigation shall be expended for projects that will restore, create or enhance wetlands.
   - Funds shall only be expended for projects located entirely within McHenry County.
   - Funds shall only be expended for projects that will be managed in perpetuity by a qualified conservation management agency under a conservation easement or as approved by the MCSC. Conservation management agencies desiring to be considered qualified must submit a statement of their qualifications to MCSC for review and consideration. The statement of qualifications must:
     - Demonstrate the technical expertise of the conservation management agency to restore, create, and/or enhance wetlands; and
     - Demonstrate a long-term funding mechanism for the continual monitoring and maintenance of completed projects.
   - The TAC shall establish a WRF sub-committee. The responsibilities of the WRF sub-committee shall be to:
     - Annually make a public call for projects for WRF's that have accumulated a minimum balance of $75,000;
       - If a WRF has a minimum balance that remains below $75,000 for more than five years, the MCSC can opt to combine funds in two or more WRF's to make a public call for projects in the respective watersheds;
     - Evaluate each project application; and
     - Make project recommendations to the TAC.~~; and~~
     - ~~Maintain a list of potential projects.~~

     Conservation management agencies that have submitted a statement of qualifications to MCSC for eligibility to receive funds shall not be considered for membership on the WRF sub-committee.
   - TAC members representing conservation easement management agencies shall abstain from voting on all project recommendations.
   - The TAC shall ~~make~~ provide project recommendations for final approval by the MCSC.
   - Upon approval of a project by the MCSC, the applicant may submit requests for payment to the MCSC. Payments shall be made for work performed after the approval date and for a dollar amount not to exceed that approved by the MCSC.

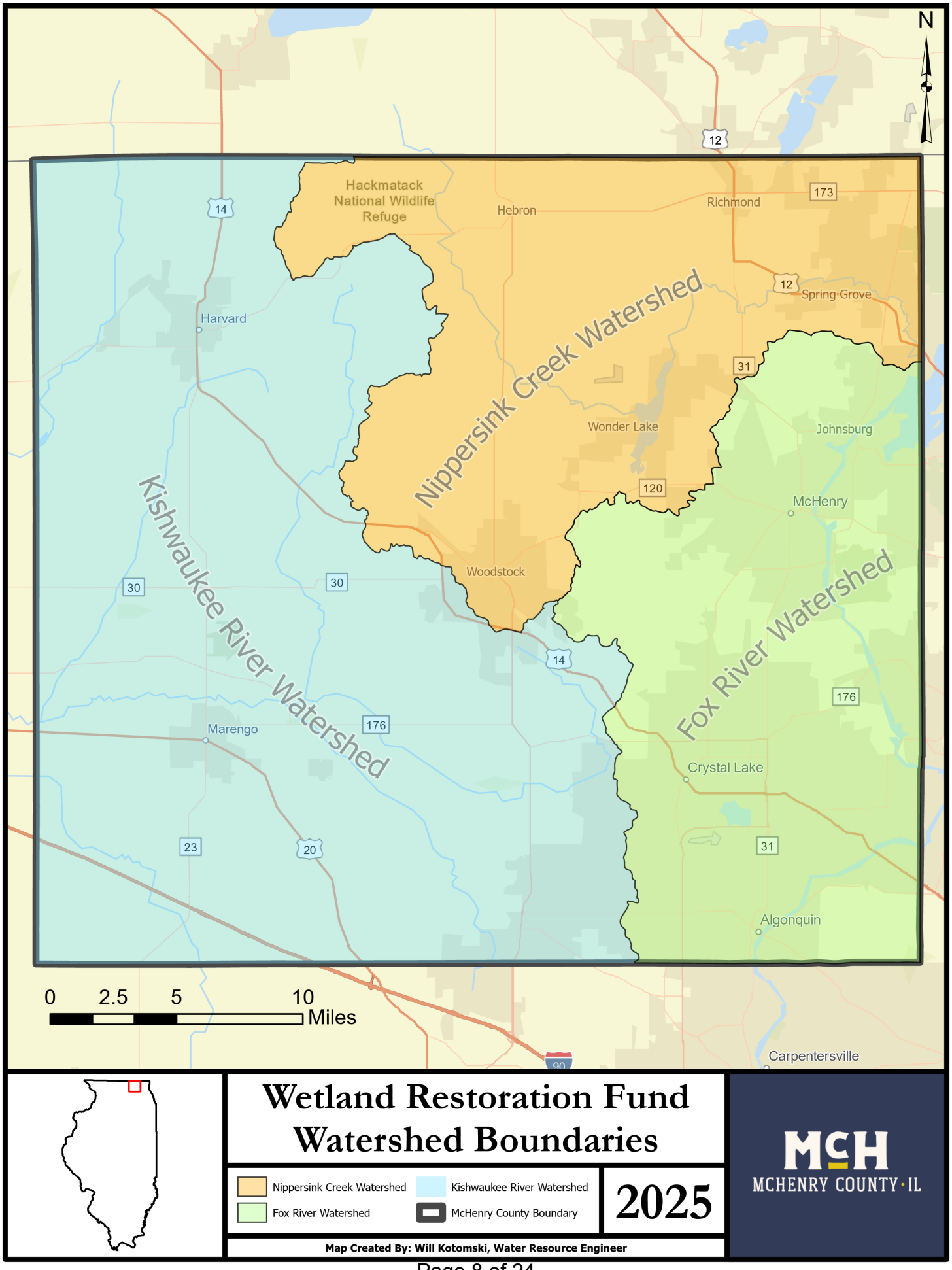
6. Fund Tracking and Accountability: An annual report shall be prepared summarizing deposits to, and disbursements from, each account. The report shall also track the impact acreage in each watershed, along with the restoration, creation, and enhancement acreage in each watershed.

7. Project Schedule and Timing: MCSC shall approve the allocation of monies in the WRF accounts on suitable projects ~~no more than five years~~ after a~~n~~ WRF account has a balance exceeding

$75,000. If a WRF has a minimum balance that remains below $75,000 for more than five years, the MCSC may elect to combine funds in two or more WRF's to make a public call for projects in the respective watersheds. ~~If an account exceeds $75,000, and no suitable project has been identified within five years, MCSC may approve the purchase of mitigation credits from a mitigation bank.~~

If a WRF account has maintained a balance exceeding $75,000 for over five years, and no suitable project has been identified within that five-year time period, the MCSC may elect to:

A. Donate the funds directly to a conservation organization whose primary purpose includes creating, restoring, or protecting wetland habitat in McHenry County. This may include the Hackmatack National Wildlife Refuge (US Fish and Wildlife Service), Friends of Hackmatack, the McHenry County Conservation District (MCCD), the Land Conservancy of McHenry County, or similar organization with a proven track record of wetland creation, enhancement or protection.
B. Make the funds available to fund a nature-based project(s) identified in an IEPA approved watershed-based plan that are designed to provide ecosystem services consistent with wetlands such as water quality treatment, flood mitigation, or wildlife habitat.



Wetland Restoration Fund Watershed Boundaries

Nippersink Creek Watershed
Kishwaukee River Watershed
Fox River Watershed
McHenry County Boundary

2025

MCH
MCHENRY COUNTY · IL

Map Created By: Will Kotomski, Water Resource Engineer

Wetland Restoration Fund - 2025 Rate Structure Update

2010 WRF Rate Structure

Watershed	Land Cost ($/ac)	Restoration Cost ($/ac)	Fee ($/ac)
Lower Fox River	$ 50,000	$ 45,000	$ 95,000
Upper Fox River	$ 35,000	$ 45,000	$ 80,000
Nippersink Creek East	$ 20,000	$ 45,000	$ 65,000
Nippersink Creek West	$ 12,000	$ 45,000	$ 57,000
Kishwaukee River	$ 15,000	$ 45,000	$ 60,000
Piscasaw Creek	$ 15,000	$ 45,000	$ 60,000
Coon Creek	$ 12,000	$ 45,000	$ 57,000

Used federal multiplyer to update land values https://www.bls.gov/data/inflation_calculator.htm

Updated Restoration Cost using modified estimate from Algonquin

2025 WRF Rate Structure

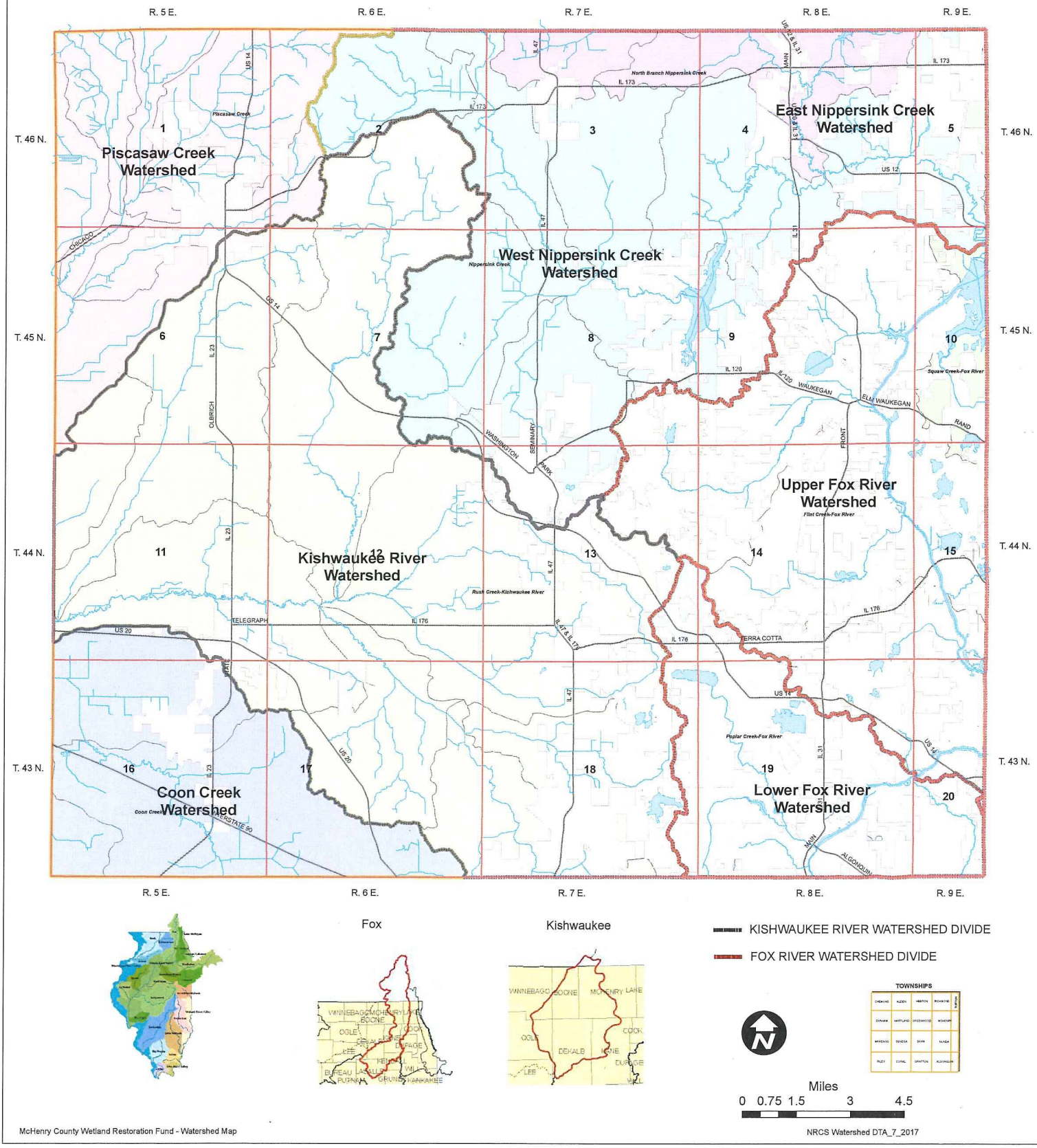
Watershed	Land Cost ($/ac)	Restoration Cost ($/ac)	Fee ($/ac)
Lower Fox River	$ 73,000	$ 85,500	$ 158,500
Upper Fox River	$ 51,000	$ 85,500	$ 136,500
Nippersink Creek East (North Branch)	$ 29,000	$ 85,500	$ 114,500
Nippersink Creek West (Main Stem)	$ 17,500	$ 85,500	$ 103,000
Kishwaukee River	$ 22,000	$ 85,500	$ 107,500
Piscasaw Creek	$ 22,000	$ 85,500	$ 107,500
Coon Creek	$ 17,500	$ 85,500	$ 103,000

2025 Restoration Costs

Restoration Task	Per Acre Costs
Mobilization	$ 2,000
SESC Measures	$ 1,000
Veg Clearing or Water Control Stucture	$ 7,000
Broadcast Herbicide Application	$ 1,500
Seedbed Preparation	$ 2,500
Native Seed Mix and Installation	$ 6,000
Erosion Control Blanket (S75 or similar)	$ 12,000
Supplemental Wetland Plugs (3,000 plugs per acre)	$ 21,000
Maintenance (5 years of M&M)	$ 25,000
Monitoring	$ 7,500
	$ 85,500

APPENDIX A

McHenry County Wetland Restoration Fund - Watershed Map



Fox

Kishwaukee

KISHWAUKEE RIVER WATERSHED DIVIDE

FOX RIVER WATERSHED DIVIDE

TOWNSHIPS

Miles

0 0.75 1.5 3 4.5

McHenry County Wetland Restoration Fund - Watershed Map

NRCS Watershed DTA_7_2017

k. Minor modification of culverts, storm sewers, and drain tiles – To be authorized by this General Permit Number 1, minor modification of culverts, storm sewers and drain tiles shall meet the following criteria.

(1) This General Permit Number 1 does not authorize modifications to the size, shape, and material of culverts within a floodway.

(2) This General Permit Number 1 does not authorize modifications to the size, shape, and material of culverts where a building within 500 feet upstream of the culvert is located within a mapped Zone AE, A, AH, or AO floodplain on the FEMA FIRM.

(3) This General Permit Number 1 does not authorize modifications to the size, shape, and material of culverts where a building within 500 feet upstream of the culvert is located within a mapped Flood of Record area on the USGS-Hydrologic Investigation Atlas Flood of Record Map.

(4) This General Permit Number 1 does not authorize culvert extensions within a designated floodway.

(5) Modifications to the size, shape, and material of a culvert, storm sewer, or drain tile shall maintain 90-125% of the capacity of the existing culvert, storm sewer, or drain tile. ~~Minor adjustment of pipe invert elevations to correct an adverse slope shall be allowed without consideration of the resulting increase in pipe capacity. Calculations prepared by a licensed professional engineer shall be submitted demonstrating compliance with this condition.~~

(6) Culvert extensions shall not exceed the lesser of 40 feet or 100% of the original pipe length and shall not result in a change in alignment or a reduction in pipe size.

C. Exempted Development

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

d. Other maintenance activity;

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

E. Repair ~~or in-kind replacement~~or replace ~~-~~of existing culverts, storm sewers, or drain tiles, provided the culverts, storm sewers, or drain tiles are outside flood hazard areas~~the designated floodway, and~~ have a cross-sectional area less than 12.6 square feet, and shall maintain 90-125% of the capacity of the existing culvert, storm sewer, or drain tile;

q. Dredging – To be authorized by this General Permit Number 1, dredging shall meet the following criteria.

(1) This General Permit Number 1 applies to dredging channels and ponds.

(2) This General Permit Number 1 does not apply to the construction of a new channel or water body; ~~all work shall be for the purpose of re-establishing the natural or original designed condition.~~

(3) Spoil materials shall be spread thinly (less than 0.1 foot) and incorporated into existing cultivated areas, or shall be hauled away from the development site.

(4) ~~Temporary stockpiles greater than 100 cubic yards and t~~Temporary stockpiles remaining in place more than 7 days ~~shall not be located in flood hazard areas and~~ shall be non-obstructive to flood flows and have appropriate soil erosion control protection measures installed. ~~Temporary stockpile areas shall not occupy more than 20,000 square feet in total.~~

(5) ~~Channel dredging projects shall not exceed 0.5 mile. The hydrologic disturbance limit of 20,000 square feet is waived for the area of channel dredging.~~

C. Exempted Development

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

d. Other maintenance activity;

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

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

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

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

d. Maintenance of existing roads and bridges – To be authorized by this General Permit Number 1, maintenance of existing roads and bridges shall meet the following criteria.

(1) Rehabilitative maintenance, such as milling and overlaying, that does not increase the impervious area and does not increase the surface elevation.

~~Maintenance also includes increasing the surface elevation with the following limitations:~~

~~i. Resurfacing outside flood hazard areas;~~

~~ii. Resurfacing within flood prone areas;~~

~~iii. Resurfacing within the flood fringe, provided the difference between the elevation of the road or bridge surface after resurfacing and the elevation of the road or bridge surface on the effective date of this Ordinance is not more than two inches.~~

(2) ~~Repair, not including~~ in-kind replacement, of an existing bridge, or portion thereof, outside the ~~designated~~ floodway.

C. Exempted Development

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

c. Maintenance of existing roads and trails;

maintenance of existing roads and trails: Rehabilitative maintenance outside of flood hazard areas, such as milling and overlaying, that does not increase the impervious area, and has been reviewed and approved by a professional engineer or the McHenry County Planning and Development Stormwater Division ~~.does not increase the surface elevation. Maintenance of existing roads and trails also includes increasing the surface elevation with the following limitations:~~

~~A. Resurfacing outside flood hazard areas;~~

~~B. Resurfacing within flood prone areas;~~

~~C. Resurfacing within the flood fringe, provided the difference between the elevation of the road surface after resurfacing and the elevation of the road surface on the effective date of this Ordinance is not more than two inches.~~

6. Post Construction Best Management Practices (PCBMP)
In addition to other applicable Runoff Control Performance Standards, the following requirements apply to all regulated development, except regulated development authorized by a General Permit.

~~6. Runoff Volume Reduction Hierarchy~~

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

a. PCBMPs are required to treat the stormwater runoff for pollutants of concern and reduce runoff volume for all regulated development. Regulated development with site limitations such as roadway development, shall provide PCBMPs to the maximum extent possible. The applicant shall provide the following information for the development site:
   (1) A narrative description of the proposed use and activities of the development site and adjacent areas. Potential activities of concern include, but are not limited to, the following:
      i. Vehicle traffic areas for commercial or industrial sites;
      ii. Outdoor storage of items including, but not limited to, landscaping materials, fuel, dump sites, and salt storage;
      iii. Agricultural uses and practices. If the agricultural use or practice maintains agricultural best management practices in accordance with the USDA or other Federal, State or local guidelines and standards, the Enforcement Officer shall exempt the agricultural use or practice from needing a PCBMP;
      iv. Maintenance facilities;
      v. Gas or fueling tank stations.
   (2) A narrative description identifying potential pollutants of concern that may be generated by the proposed development. Potential pollutants of concern include, but are not limited to the following:
      i. Total suspended solids (TSS);
      ii. Metals and Oils;
      iii. Nutrients consisting of nitrogen and phosphorous.
   (3) Identification of PCBMPs for the treatment of the identified pollutants with supporting data and calculations used to size, locate, design, and maintain the PCBMPs. The supporting data and calculations shall meet the requirements under item c below. Table 3 can be used as a general guide to help identify potential pollutants according to the potential sources and choose an appropriate PCBMP. The potential pollutant sources and PCBMP treatment options are not limited to those shown in Table 3;
   (4) Published studies may be submitted to the Enforcement Officer for review and acceptance for a proposed PCBMP that demonstrates reduction efficacy for the identified pollutants;
   (5) For Major Developments, the PCBMP shall include infiltration of the first 1-inch of runoff where the soils and site features are feasible for this practice as determined by Article

VI.B.5.d.(5) of the SMO and in accordance with the Crystal Lake Watershed Stormwater Management Design Manual;

(6) A recorded maintenance plan for any proposed PCBMPs with signature from the Enforcement Officer;

(7) If the applicant can demonstrate that the proposed development would not generate any deleterious loading, or the development contains an existing PCBMP that can provide treatment for the potential pollutant of concern, the Enforcement Officer may waive the PCBMP requirement.

Table 3

Potential Sources	Pollutant	PCBMP Treatment Option
• Parking lots and roadway/driveways with vehicle traffic exceeding 10 vehicles per day or greater than 25 parking stalls • Exposed soils (streambanks or cleared vegetation) • Animal waste • Material storage (salt, gravel, soil, mulch, etc.)	Total Suspended Solids	• Detention basin • Wet bottom basin • Vegetated swale • Vegetated strip • Porous/permeable pavement • Rain garden
• Parking lots and roadway/driveways with vehicle traffic exceeding 10 vehicles per day or greater than 25 parking stalls • Storage of materials (paints, pesticides, etc.)	Metals	• Detention basin • Wet bottom basin • Vegetated swale • Vegetated strip • Bioretention • Rain garden • Porous/permeable pavement
• Parking lots and roadway/driveways with vehicle traffic exceeding 10 vehicles per day or greater than 25 parking stalls • Gas stations • Service areas • Industrial processes	Oils	• Detention basin • Wet bottom basin • Vegetated swale • Vegetated strip • Rain garden
• Storage of fertilizers or other nutrient enriching products • Yard waste disposal	Nutrients	• Wet bottom basin • Bioretention

• Exposed soil (cleared vegetation) • Animal waste		

~~a.~~b. For Major Development, Public Road Development, and Mining Development disturbing 1 acre or more, ~~T~~the applicant shall choose one or more strategy from the following hierarchy to minimize the increase in runoff volume from the development site:

(1) Preservation of natural features of the development site (e.g. natural storage and infiltration characteristics, floodplains, wetlands, prairies and woodlands);
(2) Preservation of the existing natural streams, channels and drainageways;
(3) Minimization of impervious surfaces created at the development site (e.g. narrowing road width, minimizing driveway length and width, clustering homes and shared driveways);
(4) Conveyance of stormwater in open vegetated channels;
(5) Natural landscaping as an alternative to turf grass;
(6) Structural measures that provide water quality and quantity control;
(7) Structural measures that provide only quantity control.

c. PCBMP Design Requirements

(1) All PCBMP design and calculations shall meet the minimum requirements of the Illinois Urban Manual and/or the Crystal Lake Watershed Stormwater Management Design Manual;
(2) The PCBMP specific requirements under Table 4, shown below, shall be incorporated into the design:
   i. Infiltration designs shall utilize a sediment forebay or similar BMP to remove sediment and other fine particles;
   ii. Dry bottom detention basins shall maximize inlet to outlet travel distance to the extent possible and have a minimum slope of 1.5% across the bottom.

~~(7)~~

~~7. Water Quality Protection~~

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

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

~~(1) All sites shall provide water quality treatment using existing or proposed best management practices or green infrastructure methods specifically designed for water quality treatment.~~
~~(2) On highly impervious development sites, such as multi-family residential and non-residential developments, water quality treatment devices shall be designed to remove both floatable and settleable pollutants from as much of the stormwater runoff from increased impervious areas as possible. This requirement may be met by directing as much stormwater runoff from increased impervious areas as possible through a hydrodynamic separator, or into a catch basin fitted with a hooded outlet cover.~~

~~Alternate treatment methods providing a similar or higher level of water quality treatment may be approved by the Enforcement Officer.~~

~~(3)~~d. In Public Road Developments, the stormwater management system shall be designed to direct as much stormwater runoff from existing and increased impervious areas as possible through a vegetated swale, across a vegetated filter strip, or into a catch basin before being discharged from the development site. Alternate treatment methods providing a similar or higher level of water quality treatment may be approved by the Enforcement Officer.

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

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

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

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

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

d. Stormwater Management Facilities

(1) Basic Requirements

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

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

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

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

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

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

vi. Stormwater management facilities serving more than one property shall be located in a deed or plat restriction with access to the stormwater management facility from the public right-of-way. The Enforcement Officer may waive the requirement for a deed or plat restriction where an increase in flood heights on upstream properties is unlikely to result from the lack of maintenance of the stormwater management facility.

vii. The applicant shall notify adjoining downstream property owner(s) via certified mail return receipt of any proposed stormwater management facility outlet location and design. Notification shall occur prior to preliminary Planned Unit Development or Plat of

Subdivision or shall be provided at the first permit application submittal, whichever is earlier.

viii. The applicant shall notify any drainage district within the watershed where the development site is located via certified mail return receipt of any proposed stormwater management facility outlet location and design. Notification shall occur prior to preliminary Planned Unit Development or Plat of Subdivision or shall be provided at the first permit application submittal, whichever is earlier.

ix. Concentrated discharges from a development site shall be connected to an existing drain tile, where possible; however, the primary outlet from the development site should be a surface discharge and the drain tile connection shall be designed as a secondary, low flow outlet. When no reasonable alternative exists, the Enforcement Officer may approve the connection of a concentrated discharge from a development site to an existing drain tile as the primary outlet, provided the existing drain tile has adequate hydraulic capacity and structural integrity and is located within a recorded deed or plat restriction to the point it discharges into a channel. The deed or plat restriction must be approved by the Enforcement Officer prior to issuance of a stormwater management permit.

x. Stormwater management facility discharges onto adjoining properties shall be designed to release as sheet flow using a level spreader, or other energy dissipation device, approved by the Enforcement Officer.

xi. An off-site outfall shall be constructed to convey the release from a stormwater management facility if an analysis demonstrates that adequate downstream stormwater capacity cannot be achieved or if land damage to an agricultural swale may occur.

(a) The off-site outfall shall be evaluated to the nearest open channel. If the outfall is located within a publicly owned storm drainage system, it shall be evaluated to the downstream location directed by the Enforcement Officer.

(b) Stormwater management facility discharges to downstream agricultural surface drainage systems with no base flow must be conveyed 100% underground within forty-eight (48) hours after a storm event up to and including the 100 year, 24 hour storm event.

(c) Off-site outfalls shall be located within a public right-of-way or deed or plat restricted area and marked on the as-built plans. The deed or plat restriction language shall clearly define the individual or entity responsible for perpetual maintenance.

(d) If an off-site outfall is required to be constructed and the downstream property owner(s) refuse(s) to grant access across his or her property, and construction within a right-of-way or alternate route is not feasible or reasonable, the applicant shall provide the Enforcement Officer a two (2) year post-

development security for the engineer's estimate of probable construction cost for the off-site outfall plus a ten percent (10%) contingency. If the downstream property owner has not granted access for construction of the improvements within two (2) years following completion of the development, the Enforcement Officer shall release the security.

(2) Detention Facilities

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

i. Single pipe outlets shall have a minimum inside diameter of 12 inches. Control structures such as orifices, weirs, and perforated risers may be used to meet the allowable release rates. Outlet pipes and control structures shall be designed to minimize the need for maintenance and prevent tampering.

ii. Control structures shall have a minimum diameter of 4 inches when a single pipe outlet or an orifice plate is used to restrict the outflow from a detention facility. If a smaller diameter is necessary to meet the allowable release rates, the control structure shall be designed to prevent clogging.

iii. Detention facilities shall be designed with appropriate tailwater conditions, as approved by the Enforcement Officer.

iv. Inlets to the detention facility shall be located as far from the outlet as possible. Paved low flow channels shall not be allowed between inlets and the outlet.

v. The side slopes at the shoreline of wet bottom and wetland detention facilities (from at least 6 inches below to at least 6 inches above normal water level) shall be no steeper than 10:1 to prevent shoreline erosion due to wave action and fluctuating water levels. Above shoreline areas, or in dry detention facilities, the maximum side slope shall be 4:1.

vi. Wet bottom detention facilities with a permanent pool depth greater than 3 feet shall include a safety shelf with a minimum 8 foot width that is no more than 1 foot below normal water level.

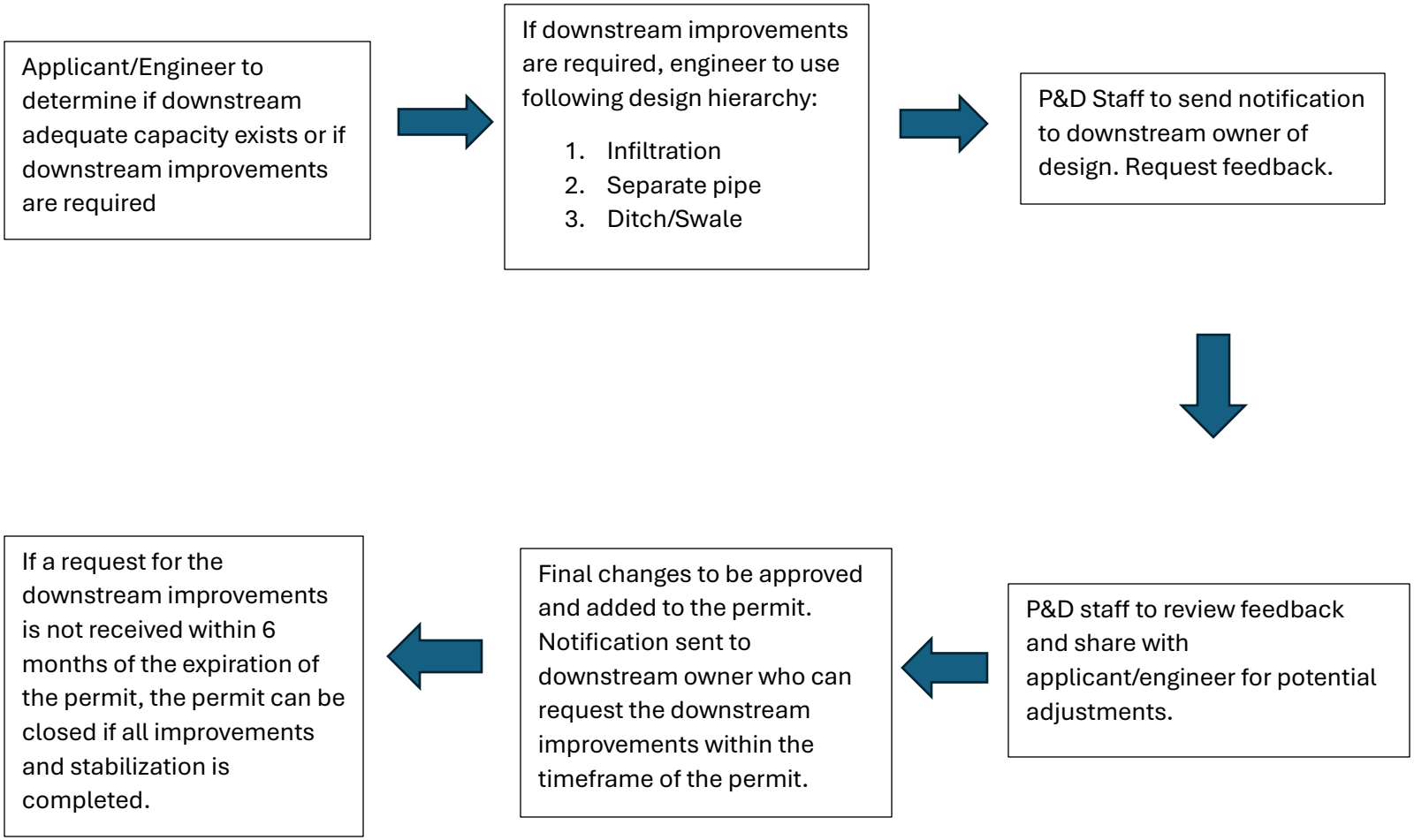
(3) Online Detention

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

i. Online detention shall not be allowed on perennial streams.

ii. Online detention shall not be allowed in HQAR.

iii. Online detention shall not be allowed where the offsite to onsite tributary area ratio is greater than 10:1, except for regulated


Applicant/Engineer to determine if downstream adequate capacity exists or if downstream improvements are required
If downstream improvements are required, engineer to use following design hierarchy:
1. Infiltration
2. Separate pipe
3. Ditch/Swale
P&D Staff to send notification to downstream owner of design. Request feedback.
P&D staff to review feedback and share with applicant/engineer for potential adjustments.
Final changes to be approved and added to the permit. Notification sent to downstream owner who can request the downstream improvements within the timeframe of the permit.
If a request for the downstream improvements is not received within 6 months of the expiration of the permit, the permit can be closed if all improvements and stabilization is completed.

where an increase in flood heights on upstream adjoining properties is unlikely to result from the lack of maintenance of the storm sewer.

5. Runoff Rate Reduction

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

a. Stormwater Storage Requirements

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

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

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

(b) The applicant demonstrates to the satisfaction of the Enforcement Officer that there is adequate downstream stormwater capacity and the development shall not result in flood damage; or

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

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

(b) The applicant demonstrates to the satisfaction of the Enforcement Officer that there is adequate downstream stormwater capacity and the development shall not result in flood damage; or

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

(2) Linear impervious areas, such as a widened road, driveways and public recreational trails, which are less than 12.4 feet wide (1.5 acres per lineal mile) may be excluded when calculating the new impervious area to determine whether stormwater storage is required. This exclusion shall apply only when determining whether stormwater storage is required and not to the design of a stormwater management facility in cases where stormwater storage is required.

(d) Open water that is not HQAR.

(5) Infiltration Facilities

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

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

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

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

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

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

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

(a) Areas subject to frequent winter deicing; and

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

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

6. Runoff Volume Reduction Hierarchy

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

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

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

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

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

(4) Conveyance of stormwater in open vegetated channels;

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