

STORMWATER MANAGEMENT PROGRAM PLAN

A Plan detailing DuPage County's Countywide Water Quality Program for compliance with the Illinois Environmental Protection Agency's General NPDES Permit No. ILR40 effective August 1, 2025

DuPage County Stormwater Management



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Overview

Background

DuPage County Stormwater Management (SWM) strives to ensure all residents are provided with regional stormwater management. SWM's goal is to mitigate the effects of urbanization on stormwater drainage, resulting in the reduction of damaging flood events and an improvement to water quality in the County's waterways.

The purpose of the Stormwater Management Program Plan (SMPP) is to meet the minimum standards required by the United States Environmental Protection Agency (USEPA) under the National Pollutant Discharge Elimination System (NPDES) Phase II program. Federal regulations through the USEPA require that all Municipal Separate Storm Sewer Systems (MS4s), partially or fully in urbanized areas based on the 2000 census, obtain stormwater permits for their discharges into receiving waters. The Illinois Environmental Protection Agency (IEPA) issued NPDES Permit No. ILR40 to discharge stormwater into the municipal separate storm sewer system (MS4). This most recent version of the permit became effective on August 1, 2025, and expires July 31, 2030.

The SMPP describes the procedures and practices implemented by DuPage County and permit partners toward the goal of reducing the discharge of pollutants within stormwater runoff. Compliance with the plan is intended to protect water quality, thus contributing to cleaner lakes and streams with the added co-benefits of improved recreational opportunities and tourism, flood damage reduction, better aesthetics and wildlife habitat, and a safer and healthier environment for the citizens.

The SMPP addresses the following primary program elements:

- Public education and outreach;
- Opportunity for public input and involvement;
- Protecting the receiving waters from illicit discharges;
- Reviewing, permitting and inspecting construction activity to control sediment and protect waterways;
- Ensuring new developments provide water quality BMPs;
- Planning, design and construction of projects to provide a water quality benefit;
- Maintenance of facilities and day-to-day operations;
- Employee training for pollution control; and
- Monitoring and program evaluation.

History

Clean Water Act

- In 1972, the Federal Water Pollution Control Act Amendment began prohibiting pollutant discharge in waters throughout the United States. Any discharge must be authorized by a National Pollutant Discharge Elimination System (NPDES) permit.

- The Clean Water Act of 1977 created a list of toxic pollutants ranked in order of priority. Additionally, it identified industries for technology-based controls.
- The Water Quality Act of 1987 focused on stormwater permitting requirements for municipalities and industrial activity to reduce the discharge of pollutants into Waters of the State. It required large municipalities to take steps to reduce polluted stormwater runoff, setting the groundwork for Phase I of the NPDES permitting in 1990.
- In 1999, Phase II regulations expand the existing NPDES stormwater program (Phase I) by addressing stormwater discharges from small (less than 100,000 population) municipalities and construction sites disturbing between one and five acres.
- The expanded Phase II program began in March 2003 with the issuance of the ILR40 Permit to Discharge Stormwater from Small Municipal Separate Storm Sewer Systems. The Permit required small MS4s in urbanized areas to obtain NPDES permits and implement six (6) minimum control measures. An urbanized area as delineated by the US Census Bureau is defined as a central place or places and the adjacent densely settled surrounding area that together have a residential population of at least 50,000 people and an overall population density of at least 500 people per square mile.

DuPage County Stormwater Management

- The 1983 Winfield Creek Pilot Study began the development of regional stormwater planning within DuPage County.
- As a result of historic floods in the mid-1980s throughout the Chicago Metropolitan Area, the Illinois General Assembly authorized DuPage, Kane, Lake, McHenry and Will Counties to create and fund regional stormwater management programs.
- Following Illinois' legislation in 1986, DuPage County organized a joint committee of County and municipal representatives to address stormwater issues.
- Under the authorization from state legislation, the current Stormwater Management Planning Committee was formed in 1988 to oversee Stormwater Management. The Stormwater Management Planning Committee is comprised of both County and municipal representatives.
- The Stormwater Management Plan (Plan) was adopted by the DuPage County Board in 1989. This Plan established the goals, objectives and policies for developing a successful stormwater management program.

As outlined in the Plan, the six goals guiding the Stormwater Management Program are:

1. Reduce the existing potential for stormwater damage to public health, safety, life and property.

2. Control future increases in stormwater damage within DuPage County and in areas of adjacent counties affected by DuPage County drainage.
 3. Protect and enhance the quality, quantity and availability of surface and groundwater resources.
 4. Preserve and enhance existing aquatic and riparian environments and encourage restoration of degraded areas.
 5. Control sediment and erosion in and from drainage ways, developments and construction sites.
 6. Promote equitable, acceptable and legal measures for stormwater management.
- In accordance with the Plan, the DuPage County Stormwater and Floodplain Ordinance (Ordinance) was adopted in October of 1991, went into effect in February of 1992, and has since been revised multiple times. The principal purpose of the Ordinance is to promote effective, equitable, acceptable and legal stormwater management, wetland protection and water quality measures. The Plan and the Ordinance set the foundation for the DuPage County Stormwater Management Program.
 - Each community who has adopted the DuPage County Ordinance is required to designate a Stormwater Administrator to execute the Ordinance. In addition, Stormwater Administrators and other municipal engineers provide input in countywide regulations through the Municipal Engineers Group (MEG) and Municipal Engineers Discussion Group (MEDG), which convene monthly.
 - DuPage County continues to update its Stormwater Management Program to comply with new regulations and to better provide all residents with regional stormwater management.

Watersheds

West Branch DuPage River

The West Branch DuPage River is about 34 miles in length and is one of the tributaries to the DuPage River. The headwaters begin in Schaumburg, Cook County before flowing south through western DuPage County, connecting with the East Branch DuPage River in Naperville, Will County. The watershed is approximately 128 square miles. Major tributaries include Klein Creek, Winfield Creek, Kress Creek, and Ferry Creek.

East Branch DuPage River

The East Branch DuPage River is about 25 miles long. It originates in north-central DuPage County, flowing south through DuPage County before meeting the West Branch to form the main stem of the DuPage River in Naperville, Will County. The watershed is approximately

81 square miles in size. Major tributaries include St. Joseph Creek, Lacey Creek, and Prentiss Creek.

Mainstem DuPage River

Two smaller tributaries to the DuPage River (other than the East and West Branches) are located partially within the permit area, Tributary #2 and Lily Cache Creek. They drain to the DuPage River mainstem downstream of the confluence of the East and West Branches.

Salt Creek

Salt Creek is a tributary to the Des Plaines River and originates near Palatine, Cook County. It flows generally south through the northeast side of DuPage County before heading east back into Cook County. The entire river is about 42 miles in length. The watershed is approximately 152 square miles (with about 100 square miles within the permit area). Major tributaries include Addison Creek and Springbrook Creek.

Des Plaines

Several tributaries in the permit area drain directly into the Des Plaines River. These include Sawmill Creek, Flagg Creek, Addison Creek, Silver Creek (Bensenville Ditch), Willow Creek, Crystal Creek, and Black Partridge Creek. The Des Plaines River flows from southeastern Wisconsin through northeastern Illinois to the confluence with the Kankakee River forming the Illinois River.

Fox River

Brewster Creek, Norton Creek, Wabaunsee, and Indian Creek are direct tributaries to the Fox River located in the permit area. The Fox River originates in Wisconsin and flows generally south through Illinois before converging with the Illinois River in Ottawa, IL.

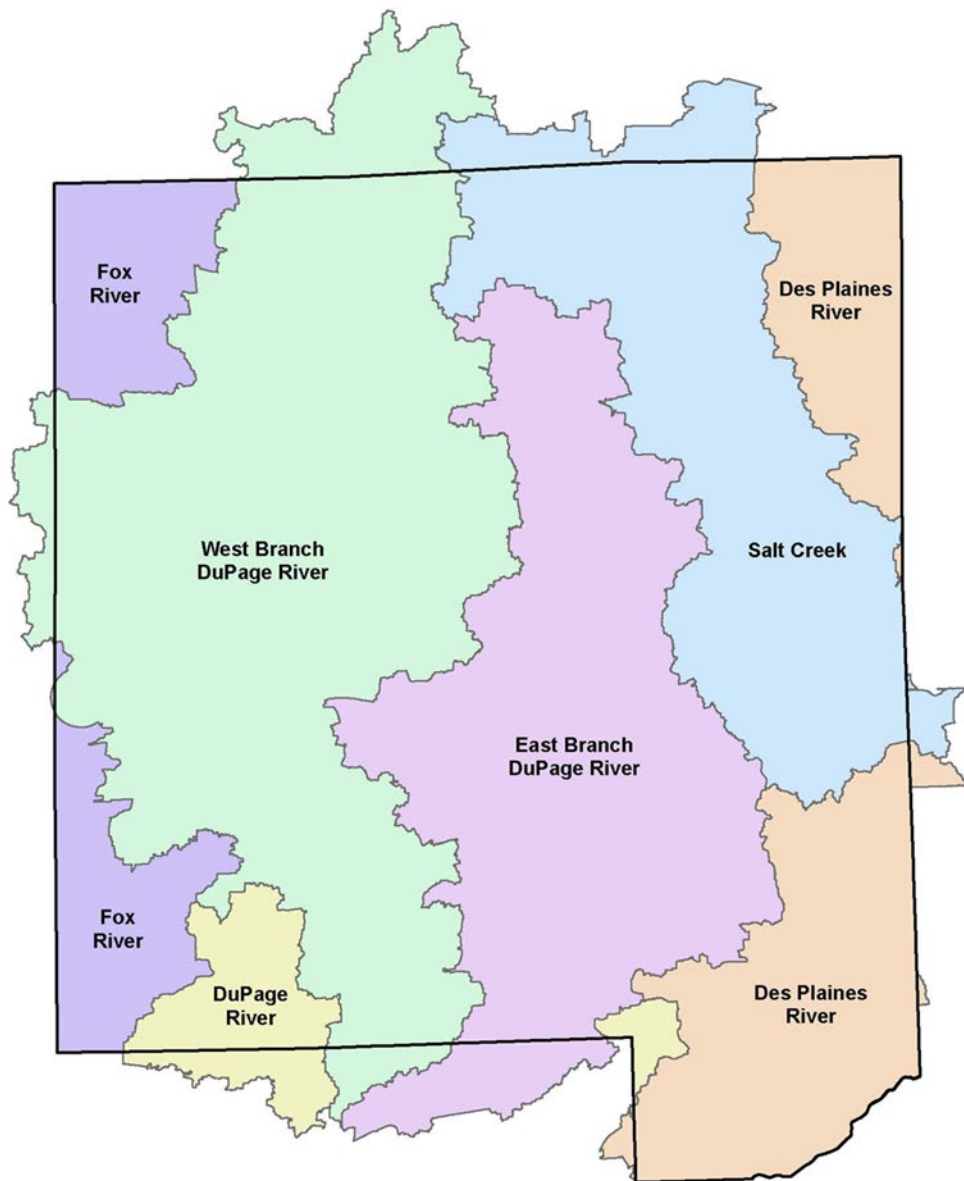


FIGURE 1: DUPAGE COUNTY WATERSHEDS



FIGURE 2: DUPAGE COUNTY STREAMS

Status of Waterways

The EPA's How's My Waterway tool was designed to provide the public with information about the condition of their local waterways. It can be accessed here:

<https://mywaterway.epa.gov/>

Impairment Status

In accordance with Sections 305(b) and 303(d) of the Federal Clean Water Act (CWA), the IEPA must report to the USEPA on the quality of Illinois surface water and provide a list of those waters where their designated uses are deemed impaired. The current list of

impaired waterways is published by the IEPA in the Integrated Water Quality Report and Section 303(d) List.

TMDLs

The Clean Water Act requires that a Total Maximum Daily Load (TMDL) be developed for each pollutant of an impaired water body. A TMDL is an estimation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards. It assesses contributing point and nonpoint sources to identify pollution reductions necessary for designated use attainment. Pollutant reductions are then allocated to contributing sources, thus triggering the need for pollution control and increased management responsibilities amongst sources in the watershed. TMDL reports have been created for the West Branch DuPage River, the East Branch DuPage River, and Salt Creek. More information on TMDLs, including current reports, can be found on the Illinois EPA's [website](#).

Program Management

The Illinois EPA's General NPDES Permit No. ILR40 allows MS4s to partner to implement their stormwater management program. DuPage County partners with the following 41 municipalities and townships under the Water Quality Program allowing us to achieve the goals of the ILR40 in a more cost and time efficient manner. Responsibilities of each entity are outlined in the next sections.

Village of Addison	Township	Milton Township
Addison Township	City of Elmhurst	City of Naperville
Village of Bartlett	Village of Glen Ellyn	Naperville Township
Village of Bensenville	Village of Glendale	Village of Oak Brook
Village of Bloomingdale	Heights	City of Oakbrook Terrace
Bloomingdale Township	Village of Hanover Park	Village of Roselle
Village of Burr Ridge	Village of Hinsdale	Village of Villa Park
Village of Carol Stream	Village of Itasca	City of Warrenville
Village of Clarendon Hills	Village of Lemont	Village of Wayne
City of Darien	Village of Lisle	Wayne Township
Village of Downers Grove	Lisle Township	City of West Chicago
Downers Grove	Village of Lombard	Village of Westmont

City of Wheaton

Winfield Township

York Township

Village of Willowbrook

City of Wood Dale

Village of Winfield

Village of Woodridge

Minimum Control Measures

Public Education and Outreach

SWM conducts public education and outreach activities throughout the region on a variety of topics, such as watershed planning efforts, water quality, and best management practices (BMPs). On staff is a full-time Outreach Coordinator who is responsible for managing stormwater education and outreach. SWM also contracts annually with several organizations that assist in providing additional education and outreach services pertaining to both technical and general education on stormwater topics.

MS4s partnering with DuPage County on the ILR40 Permit are responsible for promoting and advertising educational events and workshops within their jurisdictions. MS4s are responsible for distributing educational materials to their residents.

Distributed Paper Material (A.1)

SWM creates handouts and brochures pertaining to sources of pollutants in waterways and water quality BMPs. These, as well as handouts from other entities, are distributed at public events, are available in office, posted online, and sent out in newsletters and through social media. Informational topics include rain barrels, rain gardens, native plants, other green infrastructure techniques, citizen monitoring of waterways and seasonal BMPs for the spring, summer, fall and winter. These materials are updated as needed to incorporate new and updated information, including the effects of climate change on stormwater impacts. Each co-permittee is responsible for making educational materials available to the public within their jurisdictions.

Speaking Engagement (A.2)

SWM coordinates, hosts, and presents at workshops and conferences on topics including water quality efforts for the watersheds, methods for pollutant reduction, during and after construction BMPs, native vegetation, and green infrastructure. These speaking events may target the general public, professionals, or both. Each co-permittee is responsible for promoting and advertising workshops within their jurisdictions.

Public Service Announcement (A.3)

SWM utilizes technology to enhance outreach efforts detailing water quality trends and highlighting practices that can reduce the transport of pollutants into waterways. SWM

shares information through the Stormwater Management monthly e-newsletter, direct media relations, press releases, advisories, and social media to promote seasonal BMPs, events, and other stormwater-related news. Co-permittees are responsible for sharing messages within their jurisdictions.

[Currents Newsletter](#)

[SWM Facebook](#)

[SWM Instagram](#)

[SWM Nextdoor](#)

[SWM YouTube](#)

Community Event (A.4)

SWM coordinates with co-permittees to participate in countywide community events on topics including water quality, pollutant reduction, native vegetation, and green infrastructure. Co-permittees are responsible for advertising these events in their jurisdictions.

Classroom Education Material (A.5)

SWM partners with schools and local educational organizations throughout the co-permittee area on stormwater management and water quality education promoting pollution prevention, BMPs, and environmental efforts. Using several watershed models, students learn how watersheds work, including the transport of pollutants from watershed-wide land uses to waterways via stormwater. The students also learn about green infrastructure, such as rain gardens, permeable pavers, green roofs, native plants, and bioswales. SWM promotes water quality and environmental efforts through the Water Quality Flag program. Schools and other institutions within the area can earn a Water Quality Flag by participating in certain educational trainings, using green infrastructure as a learning opportunity, and participating in a hands-on activity. These opportunities are available to all co-permittee communities.

Public Involvement/ Participation

SWM informs the public on watershed initiatives and engages a broad range of individuals regarding policies and projects related to the control and reduction of pollutants in stormwater runoff through technical trainings, stakeholder groups, volunteer opportunities, and public meetings. SWM has identified environmental justice areas to ensure prioritization of efforts on public involvement and participation initiatives. Participating MS4s are responsible for advertising and promoting meetings, hearings, volunteer opportunities, and events online and within their jurisdictions.

Educational Volunteer (B.2)

SWM sponsors a variety of volunteer opportunities, including:

- Storm Drain Medallion Program
- Adopt-A-Stream
- DuPage River Sweep
- Conservation@Home/Work
- Winter Chloride Watchers

These opportunities are available within all partner communities. More information on these programs and how to volunteer can be found on DuPage County SWM's [website](#).

Stakeholder Meeting (B.3)

SWM hosts regular water quality stakeholder meetings in the form of workshops to address matters pertaining to pollutant reduction on a watershed level. Workshops are held in both in-person and virtual format and are available to all members of the public throughout all watersheds. In addition, watershed stakeholder meetings are held periodically to gather input on water quality impairments or other stormwater issues as part of watershed planning efforts.

Public Hearing (B.4)

SWM provides opportunities for public comment to reach interested residents to provide input on the adequacy of its MS4 program, watershed plans, and projects. Meetings are held virtually through an annual online public portal and at regularly held Stormwater Committee and municipal meetings. SWM publicizes public meetings in conjunction with its education and outreach initiatives. Notice of public meetings is also distributed through co-permittee agencies.

Program Involvement (B.6)

SWM coordinates educational and public involvement strategies. To gauge effectiveness of the program, SWM develops and distributes surveys via an email list, webpage, and/or on social media. These surveys gather feedback from recent outreach activities and measure citizen views, behaviors, and concerns pertaining to a variety of topics, including water quality, property management, flood perceptions, and residential pollution control.

Illicit Discharge Detection and Elimination

SWM conducts the screening and tracing of illicit discharges into waterways from MS4 outfalls of all co-permittee agencies. SWM staff perform field inspections of known outfalls on a schedule of one major watershed per year as well as designated priority outfalls annually. If suspicious discharges are observed during dry weather, visual and chemical field tests are conducted. If the discharge tests positive for common pollutants or has a visual indicator, the discharge is traced through the MS4 to its source. Third party lab testing is also utilized when needed.

Illicit source removal procedures are outlined in IDDE Ordinances, which are incorporated into and enforced through applicable County and municipal codes. Each MS4 is responsible for enforcement within their jurisdiction or may elect to have the County enforce. If an MS4 chooses to have the County enforce their IDDE Ordinance, such an arrangement must be established through an intergovernmental agreement. The MS4 is also responsible for promoting use of the DuPage County Citizen Reporter by their residents and promoting education to reduce illicit discharges within their jurisdictions.

Through the spill response program, SWM offers support to municipalities and townships in the event of a fuel or chemical spill that has entered or has the potential to enter nearby waterbodies. Staff can deploy spill kits and absorbent booms as well as coordinate cleanup through an environmental company.

Sewer Map Preparation (C.1)

Using current storm sewer maps provided by MS4 partners, SWM collects, compiles, and field verifies storm sewer data to create a comprehensive countywide storm sewer atlas. The atlas includes the municipal limits of all participating MS4s extending outside of the DuPage County boundaries. Co-permittees are responsible for providing SWM with updated storm sewer maps as needed.

Regulatory Control Program (C.2)

Each co-permittee has enacted an Illicit Discharge Detection and Elimination (IDDE) Ordinance which regulates non-stormwater discharges to the municipal separate storm sewer system. SWM enforces IDDE violations within unincorporated DuPage County. Municipalities are responsible for enforcement within their limits. SWM notifies the municipality when an illicit discharge is detected within municipal limits. SWM informs the municipality of the location of the illicit discharge, the time(s) and date(s) of the discharge, and any additional information that would be necessary or prudent for the municipality to have to carry out enforcement proceedings. SWM provides municipalities with information required for enforcement action and prosecution and produces SWM personnel in court, as necessary and upon adequate notice.

Detection/ Elimination Prioritization Plan (C.3)

SWM compiles information pertaining to the ten-step prioritization plan identified in the DuPage County IDDE Program Technical Guidance. The outfalls in each watershed are inspected according to the established schedule. Dry weather sampling is conducted throughout the watershed to detect any non-stormwater discharges being conveyed through the storm sewer system.

Illicit Discharge Tracing Procedures (C.4)

If an illicit discharge is detected, SWM, in cooperation with MS4 co-permittees, traces illicit discharges through the storm sewer system to identify the source. SWM can use the countywide storm sewer atlas to trace illicit discharges over municipal boundaries.

Illicit Source Removal Procedures (C.5)

SWM maintains a 24-hour phone line for reporting illicit discharges countywide as well as a Citizen Reporter App where the public can report suspicious discharges in addition to other water quality concerns, such as erosion or stream blockages. Publications and notices advertising these resources are created, updated, and distributed regularly. MS4 partners are responsible for receiving and responding to reports within their jurisdictions.

Visual Dry Weather Screening (C.7)

SWM conducts monitoring of outfalls and tracing of illicit discharges throughout all co-permittee areas utilizing SWM personnel and equipment. Visual screening is conducted on MS4 outfalls discharging to waterways during dry weather conditions.

Pollutant Field Testing (C.8)

When a suspicious illicit discharge is located, field testing of pollutants is conducted. Testing parameters may include temperature, surfactants, ammonia, fluoride, specific conductance, and pH. Additional testing can be conducted through third party labs as needed.

Public Notification (C9)

SWM distributes information within the County, to the press, and co-permittees regarding large scale spills or discharge events impacting multiple jurisdictions.

Construction Site Storm Water Runoff Control

The Ordinance provides regulatory authority for developments in participating communities and unincorporated DuPage County. These communities may choose to review and process all aspects of the stormwater permit (complete waiver communities), while others may choose to delegate review authority for development in wetlands, floodplain, and buffer (partial waiver communities), or the communities may allow DuPage County to review and process all aspects of the stormwater permit (non-waiver communities). Complete and partial waiver communities are responsible for reviewing sediment erosion control and post construction best management practices, unless they request DuPage County to review them on their behalf. The Ordinance establishes a minimum level of regulatory compliance that a municipality or unincorporated DuPage County must meet. As the Ordinance has been adopted into DuPage County's County Code, it serves as the regulatory mechanism for enforcement of these requirements. The DuPage County Stormwater Management Planning Committee oversees the administration and enforcement of the Ordinance on a countywide basis.

Regulatory Control Program (D.1)

The DuPage County Countywide Stormwater and Flood Plain Ordinance includes provisions for sediment and erosion control. Each site development plan must provide proper sediment and erosion control in order to obtain a permit.

Erosion and Sediment Control BMPs (D.2)

The Ordinance requires that site development plans for any construction site in which ground disturbance is occurring include a sediment and erosion control plan.

Site Plan Review Procedures (D.4)

The DuPage County Countywide Stormwater and Flood Plain Ordinance requires a Stormwater Permit for developments over an established threshold of site disturbance as well as developments in wetlands, buffers, and floodplain. All development permits are reviewed for soil erosion and sediment control.

Public Information Handling Procedures (D.5)

DuPage County Citizen Reporter App allows residents throughout the county to report water quality issues, including soil erosion and sediment control complaints. The County addresses complaints within unincorporated and non-waiver areas. Complaints generated from Complete Waiver or Partial Waiver Communities are forwarded to the Municipality. The County and Municipalities also receive and respond to soil erosion and sediment control concerns sent directly from the public through phone and email reports.

Site Inspection/ Enforcement Procedures (D.6)

All development sites are inspected to ensure the soil erosion and sediment control requirements are being met. Inspections and enforcement are conducted by the agency (county or municipality) that issues the permit.

Post-Construction Stormwater Management in New Development and Redevelopment

The DuPage County Countywide Stormwater and Flood Plain Ordinance promotes effective, equitable, acceptable, and legal stormwater management, water quality, and natural resource protection measures, which include Post-Construction Best Management Practices. Each municipality in DuPage County must enact regulations at least as stringent as those in the Countywide Ordinance or defer to the Ordinance. Municipalities may choose to have DuPage County review development permits or waive the County review and perform these reviews in-house by qualified staff (waiver status). DuPage County reviews all site development permits in unincorporated DuPage County (including Townships). Communities whose jurisdictions extend beyond the DuPage County limits may opt-in entirely to the DuPage County Stormwater Ordinance, opt-out

into the neighboring county's regulations, or enforce both county's regulations. As the Ordinance has been adopted into the County Code, it serves as the regulatory mechanism for enforcement of these requirements. The DuPage County Stormwater Management Committee oversees the administration and enforcement of the Ordinance on a countywide basis.

Regulatory Control Program (E.2)

The post construction runoff rate is restricted through the Countywide Ordinance which requires all developments increasing impervious area by 2,500 square feet or more to include Post Construction Best Management Practices. Infiltration of runoff is allowed and considered to provide both volume and pollution control when sized correctly. The Ordinance provides regulatory authority for developments in participating communities and unincorporated DuPage County. The Ordinance establishes a minimum level of regulatory compliance that a municipality or unincorporated portion of the County must meet.

Long Term O&M Procedures (E.3)

The Ordinance requires a management and monitoring period including performance standards for BMPs utilizing native vegetation to ensure successful establishment of the planted native species. The management and monitoring period is typically 1- 3 years or until performance standards are achieved, depending on the planting plan being implemented. Post-construction inspections are conducted at all development sites utilizing native vegetation as a BMP, as well as for wetland, buffer, or riparian restoration and enhancement. These inspections are conducted by staff at least once per year for the duration of the maintenance and monitoring period or until performance standards are achieved. Long term operations and maintenance will be established in the permit for development sites using native vegetation as a BMP. Development sites proposing to implement mechanical BMPs must also include long term maintenance plans to ensure that they remain functional.

Pre-Construction Review of BMP Designs (E.4)

The Ordinance requires developments to provide post construction BMPs when impervious cover thresholds exceed 2500 square feet. The Ordinance requires that proposed BMP designs are submitted with a development permit application. BMPs are reviewed for compliance with the pollution control requirements, as well as volume control provisions. Each permitting agency reserves the right to inspect the construction site before, during, and after construction to verify proper BMP installation for enforcement purposes.

Site Inspections During Construction (E.5)

The Ordinance requires permitting authorities to utilize a qualified person with expertise in plant ecology for design review and construction observation of Post-Construction BMP

installations which rely on native vegetation for water quality or runoff volume reduction and a soil scientist, geotechnical engineer, or equivalent be utilized for infiltration BMPs. Each permitting agency reserves the right to inspect the construction site before, during, and after construction to verify proper BMP installation for enforcement purposes.

Post-Construction Inspections (E.6)

Post-construction inspections are conducted at sites containing BMPs with a native vegetation component for the duration of the establishment period or until performance standards are met. Reviews of as-built details of treatment trains, infiltration, and mechanical BMPs are conducted to ensure they are installed correctly. Documentation of rock size is provided for infiltration trenches, and catch basins are inspected for mechanical BMP placement. As-built inspections are conducted on all BMP development sites immediately following site development and stabilization to ensure that BMPs have been implemented according to plan.

Pollution Prevention/ Good Housekeeping for Municipal Operations

SWM provides guidance, training, and educational materials to co-permittee staff on minimizing the discharge of pollutants into waterways. In-house compliance of facilities during day-to-day operations is the responsibility each MS4 co-permittee. Each MS4 is also responsible for ensuring staff are trained in pollution prevention and green infrastructure maintenance.

Employee Training Program (F.1)

SWM provides training for all MS4 co-permittee staff and contractors on green infrastructure and practices that will minimize the discharge of pollutants from municipal operations into the storm sewer system. Examples of training topics include automobile maintenance, hazardous material storage, landscaping and lawn care, parking lot and street cleaning, pest control, pet waste collection, road salt application and storage, roadway and bridge maintenance, spill response and prevention, and storm drain stenciling. Co-permittees are responsible for ensuring their own staff attend workshops geared towards municipal staff on green infrastructure, good housekeeping, and other applicable topics to prevent and reduce the discharge of pollutants into waterways. Each co-permittee keeps internal records of staff and contractor training.

Inspection and Maintenance Program (F.2)

SWM provides guidance materials on good housekeeping for municipal operations. Each co-permittee has developed specific inspection and maintenance procedures for equipment and facilities.

Municipal Operations Storm Water Control (F.3)

Each co-permittee is responsible for maintaining the storm sewer systems within their municipal, township, or county boundaries and conducting quarterly inspections.

Municipal Operations Waste Disposal (F.4)

Each MS4 co-permittee is responsible for developing procedures for proper disposal of waste removed from the storm sewers and areas such as dredge spoil, accumulated sediments, floatables and other debris.

Flood Management/ Assess Guidelines (F.5)

SWM ensures that new flood management projects assess the impacts on water quality and examine existing projects for incorporation of additional water quality protection devices or practices.

Other Municipal Operations Controls (F.6)

SWM and co-permittees evaluate and encourage pre-wetting and anti-icing measures to reduce chloride runoff into waterways from roads and public surfaces. Annual training on de-icing and winter BMPs is available to all co-permittee staff.

Monitoring

Co-permittees participate in the DuPage River Salt Creek Workgroup (DRSCW) to partner on monitoring efforts. DRSCW's program includes bioassessment (water column chemical/physical parameters, biological sampling, Qualitative Habitat Evaluation Index (QHEI), and sediment chemistry), continuous DO monitoring, expanded DO monitoring, and continuous chloride monitoring.

In-stream Monitoring

Bioassessment

The DRSCW bioassessment program began in 2007 with sampling in the West Branch DuPage River, East Branch DuPage River and Salt Creek watersheds. From 2009-2016, each watershed was sampled on a 3-year rotation. Beginning in 2017, the watersheds were sampled in a four-year rotation to allow time for the report writing and program assessment. As of 2023, the DRSCW watersheds will be sampled on a six-year rotation. The bioassessment program functions under a quality assurance plan agreed on with the Illinois Environmental Protection Agency.

The DRSCW bioassessment program utilizes standardized biological, chemical, and physical monitoring and assessment techniques employed to meet three major objectives:

1. Determine the extent to which biological assemblages are impaired (using IEPA guidelines);

2. Determine the categorical stressors and sources that are associated with those impairments; and,
3. Add to the broader databases for the DuPage River and Salt Creek watersheds to track and understand changes through time in response to abatement actions or other influences.

The data collected under the bioassessment is processed, evaluated, and synthesized as a biological and water quality assessment of aquatic life use status. These assessments are directly comparable to previously conducted bioassessments such that trends in status can be examined and causes and sources of impairment can be confirmed, amended, or removed. A final report containing a summary of major findings and recommendations for future monitoring, follow-up investigations, and any immediate actions that are needed to resolve readily diagnosed impairments is prepared following each bioassessment. The bioassessment reports are included in the annual report submitted to IEPA and posted on the websites of SWM and all MS4 co-permittees.

Water Column Monitoring

Water column monitoring parameters included in the DRSCW monitoring program are: dissolved oxygen (DO), chlorides, 5-day biological oxygen demand, sulfate, conductivity, pH, total suspended solids, total dissolved solids, ammonia, nitrogen/ nitrate, total kjeldahl nitrogen, total phosphorus, chlorophyll-A, cadmium, calcium, copper, iron, lead, magnesium, zinc, hardness, PCBs, pesticides, semi volatile organics, volatile organics, and fecal coliform.

Sediment Monitoring

Along with the in-stream sampling program, DRSCW also conducts sediment monitoring. The following parameters are included: sediment metals- arsenic, barium, cadmium, chromium, copper, iron, lead, manganese, nickel, potassium, silver, zinc. Sediment organics- organochlorine pesticides, polychlorinated biphenyls, percent moisture, semi volatile organics, volatile organic compounds

QHEI

Physical habitat is evaluated using the Qualitative Habitat Evaluation Index (QHEI). Attributes of habitat are scored based on the overall importance of each to the maintenance of viable, diverse, and functional aquatic fauna. The type and quality of substrate, amount and quality of instream cover, channel morphology, extent and quality of riparian vegetation, pool, run, and riffle development and quality, and gradient used to determine the QHEI score generally ranges from 20 to less than 100.

Biological Sampling

Biological sampling consists of utilizing two assemblages, fish and macroinvertebrates. The biological assessment plan specifies the methods and equipment that will be used in

different sizes of streams in the study area. Biological sampling for fish and macroinvertebrate assemblage data follows established protocols of the IDNR and IEPA.

Fish and macroinvertebrate results are presented as Illinois EPA Index of Biotic Integrity (IBI) scores. IBI is an evaluation of a waterbody's biological community in a manner that allows the identification, classification and ranking of water pollution and other stressors. IBI's allow the statistical association of various anthropogenic influences on a waterbody with the observed biological activity in said waterbody and in turn the evaluation of management interventions in a process of adaptive management. Chemical testing of water samples produces only a snapshot of chemical concentrations while an IBI allows an evaluation of the net impact of chemical, physical and flow variables on a biological community structure.

Continuous Monitoring

Continuous Chloride Monitoring

Year-round conductivity monitoring is carried out to understand and track chloride levels in the watershed. Ambient conductivity monitoring is conducted at six (6) locations. All conductivity sites were originally installed to collect continuous DO and are situated for that effort rather than for chlorides. DRSCW chloride sites are positioned in the upper and lower sections of each watershed. Conductivity concentrations are used to calculate chloride concentrations based on a linear relationship established by the DRSCW.

Continuous Dissolved Oxygen (DO) Monitoring

Following listing on the 303 (d) list two DO TMDLs were prepared by the IEPA for Salt Creek and the East Branch of the DuPage River in 2004 and two (2) DO TMDLs were prepared for the West Branch DuPage River and Spring Brook #1 in 2019. In response to the TMDLs, the DRSCW committed to develop and manage a continuous long-term DO monitoring plan to assess the nature and extent of the DO impairment.

The DRSCW in collaboration with SWM gathers continuous DO data via water quality sondes at four (4) sites on Salt Creek, five (5) sites on the East Branch DuPage River, and five (5) sites on the West Branch DuPage River. All sondes are deployed from May through October and collected DO, temperature, conductivity, and pH on an hourly basis. The continuous DO monitoring program functions under a quality assurance plan agreed on with the IEPA.

Reporting

Each participating MS4 submits information to SWM on an annual basis to be compiled into a countywide annual report and submitted to IEPA. This annual report is posted on the websites of SWM and all partner MS4s.

Program Evaluation

This SWMP will be evaluated annually as part of the annual monitoring report to ensure compliance with the ILR40 Permit, measurable goals, and overall compliance with the Clean Water Act.