

STORMWATER MANAGEMENT PROGRAM



Cook County

Department of Transportation and Highways

**Cook County Department of Transportation and Highways
Stormwater Management Program**

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INTRODUCTION

PURPOSE

The purpose of the Stormwater Management Program (SWMP) is to outline a program within the Cook County Department of Transportation and Highways (CCDOH) that will address the required National Pollutant Discharge Elimination System (NPDES) under Federal Environmental Protection Agency Phase II storm water regulations, promulgated under the Clean Water Act. The purpose of the NPDES Phase II Final Rule is to control polluted storm water runoff, specifically with respect to small Municipal Separate Storm Sewer Systems (MS4s) and small construction sites that ultimately discharge into local waterways without treatment. According to the NPDES Phase II Final Rule, polluted storm water runoff can be controlled by applying Best Management Practices (BMPs) to the six minimum control measures:

- Public Education and Outreach
- Public Participation/involvement
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-Construction runoff control
- Pollution Prevention/Good Housekeeping

EPA's NPDES Storm Water Phase II Rule establishes an MS4 storm water management program that is intended to improve the nation's waterways by reducing the quantity of pollutants that storm water picks up and carries into storm sewer systems during storm events.

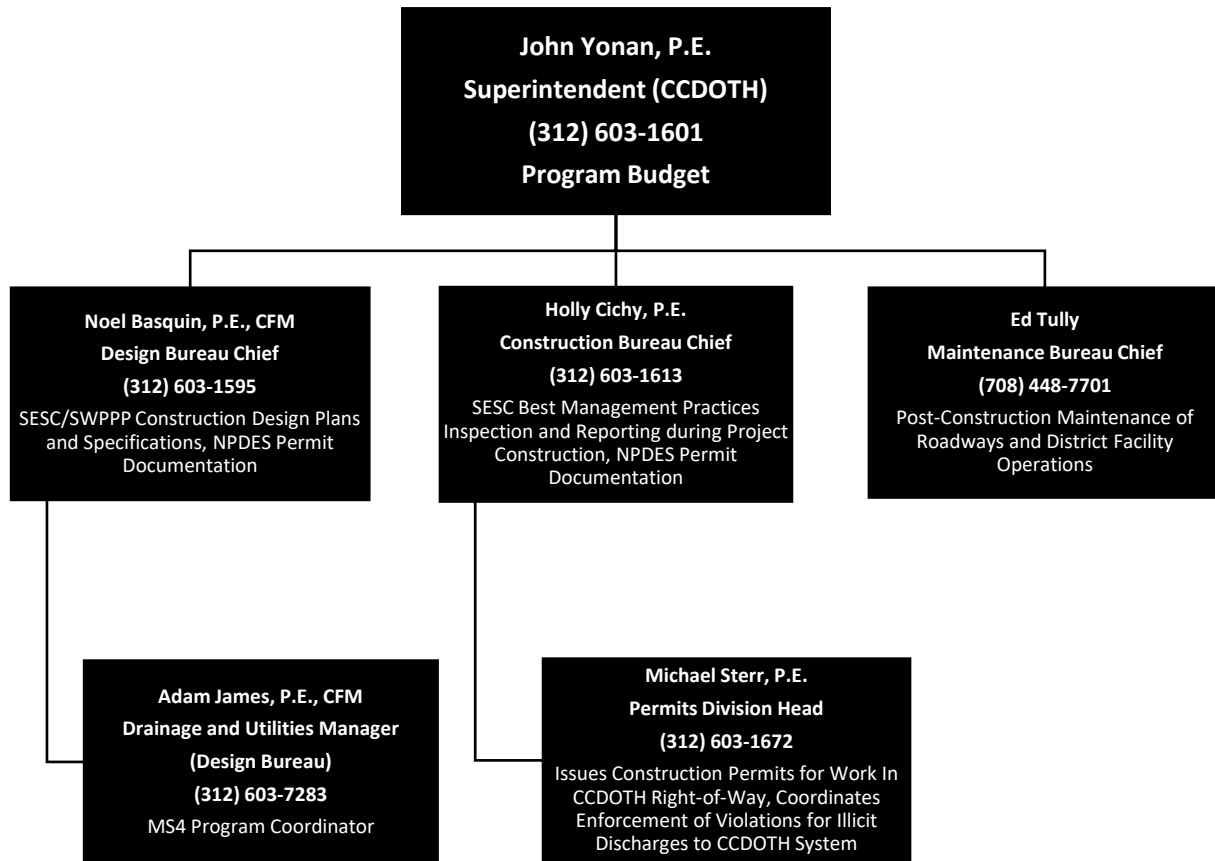
Best Management Practices are the most appropriate ways to control storm water pollution based on current programs and future goals. This guidance document outlines the BMPs that were selected for each of the six minimum control measures.

The success of the selected BMPs can be determined through the establishment and monitoring of measurable goals. Measurable goals allow us to monitor the progress of the storm water quality program. This guidance document outlines the measurable goals that were selected for each of the selected BMPs.

An Annual Report must be submitted to the IEPA each year during the permit term. These reports will be used to ensure that the Storm Water Quality Management Program is meeting the requirements of the NPDES Phase II program.

CCDOTH SWMP ORGANIZATIONAL STRUCTURE

Persons responsible for implementation and coordination of the SWMP



Part 1: Public Education and Outreach

PURPOSE

The purpose of Public Education and Outreach as a part of Cook County's Stormwater Management Program is to educate and inform the public about the impact of stormwater runoff on receiving water bodies and the steps that the public can take to lessen these negative impacts on stormwater quality.

PUBLIC EDUCATION AND OUTREACH PROGRAM BMPs

- **BMP: Stormwater Management Program – MWRD website (Shared Service)**

Metropolitan Water Reclamation District of Greater Chicago (MWRD) is the Stormwater Management Agency for Cook County. MWRD provides various educational services and outreach programs for stormwater management within Cook County such as a Rainbarrel program, school speaker program, and stormwater treatment facility tours for groups of people. Also, various educational resources and printed brochures are made available through their website and at Local Watershed Council meetings which are open to the public.

Measurable Goal: Continue to use as a Shared Service. Improve CCDOTH website to promote MWRD services and educational material and provide continual updates.

- **BMP: Cook County Forest Preserve District Events Website (Shared Service)**

The Cook County Forest Preserve District website provides event information regarding seminars, volunteer opportunities, and family activities related to preservation and stewardship of natural areas in Cook County.

Measurable Goal: Continue to use as Shared Service. Add informational material to CCDOTH website and provide continual updates.

- **BMP: Cook County Sheriff's Office / MWRD Drug Take Back Program (Shared Service)**

The Cook County Sheriff's Office along with MWRD provides permanent collection boxes at various locations throughout the County to permit residents to properly dispose of prescription drugs. Without proper disposal these drugs can enter lakes, rivers and streams and cause chemical pollution harmful to fish and plant-life.

Measurable Goal: Continue to use as Shared Service. Add promotional material to CCDOTH website and update continually.

- **BMP: CCDOTH Standard for Storm Drain Grate – Storm Drain Stenciling**

CCDOH specifies a catch basin grate for construction projects where appropriate with information to increase public awareness of what happens to polluted stormwater. “DRAINS TO RIVER” “DUMP NO WASTE” is included lettering on grate flange. CCDOTH Design Bureau is responsible for development of plans.

Measurable Goal: Continue incorporating use of spec within CCDOTH projects.

Part 2: Public Participation and Involvement

PURPOSE

The purpose of the Public Participation and Involvement portion of Cook County's Stormwater Management Program is to involve and engage the County's residents through active participation in stormwater management.

Public Participation and Involvement Program BMPs

- **BMP: Stakeholder Meeting - Local Watershed Councils**

CCDOTH staff attend stakeholder meetings for the five major watershed areas within Cook County. MWRD has partnered with community municipal organizations to create Watershed Planning Councils of which there are currently five: Lower DesPlaines River, Poplar Creek/Upper Salt Creek, Little Calumet River, Cal-Sag Channel and the North Branch of the Chicago River. The councils represent communities within the watersheds and communicate the needs and interests of the members of the public and local governments to MWRD, Cook County's Stormwater Management Agency. CCDOTH staff regularly attend and also participate as a representative for unincorporated Cook County. The meetings are open to the public and educational brochure material is made available as well.

Measurable Goal: Continued attendance and meeting with local municipalities, organizations and public. Continue to promote with CCDOTH website.

- **BMP: Stakeholder Meeting – MWRD WMO Technical Advisory Committee Meetings**

CCDOTH staff attend WMO Technical Advisory Committee meetings held by MWRD for discussion of various topics related to proposed changes for Cook County's Watershed Management Ordinance. The committee is composed of representatives from municipalities, government agencies, and non-governmental organizations.

Measurable Goal: Continued participation in MWRD WMO Technical Advisory Committee.

- **BMP: Stakeholder Meeting – IAFSM Annual Conference**

CCDOTH staff attend the annual Illinois Association of Floodplain and Stormwater Managers conference. Conferences such as these provide the opportunity for public agencies, organizations, and individuals with a vested interest in stormwater management and water quality to exchange ideas and goals. They also provide further education and professional development for our staff.

Measurable Goal: Continued attendance of IAFSM conference.

- **BMP: Stakeholder Meeting – MWRD Chloride Initiative**

MWRD has organized a work group to address chloride levels in Cook County area waterways. The workgroup is composed of representatives from major road agencies in Cook County (IDOT, CCDOTH, City of Chicago) and municipality public works managers. Various committees have formed to assess current water conditions, document road deicing activities, develop a pollutant minimization plan, and identify opportunities to reduce road salt runoff while maintaining public safety. CCDOTH's Maintenance Bureau has designated a representative to participate on the data acquisition committee and to attend work group meetings.

Measurable Goal: Continued participation in MWRD Chloride Initiative work group

- **BMP: Stakeholder Meeting – North Branch of the Chicago River Watershed Work Group**

CCDOH is a member of a watershed work group for the North Branch of the Chicago River (which is in both Lake and Cook Counties). The purpose of the workgroup is to update the North Branch watershed plan, implement a water quality monitoring program in the North Branch and its major tributaries, and conduct outreach efforts to educate watershed residents and businesses on ways to reduce their contribution to polluted runoff into the waterway. CCDOTH contributes membership dues which fund water monitoring, the crucial evidence needed for baseline metrics and setting improvement goals for certain pollutants that are impairing the waterway including nutrients and chlorides.

Measurable Goal: Continued participation in North Branch of the Chicago River Watershed Work Group

- **BMP: Stakeholder Meeting – Illinois Road and Transportation Builders Association's, Landscaping and Erosion Control Subcommittee**

CCDOH is a member of this group which is comprised of contractors, regulatory agencies, transportation agencies, and consulting engineers and is a forum to discuss best practices and emerging trends and requirements related to soil erosion and sediment control on construction sites.

Measurable Goal: Continued participation in this subcommittee

Part 3: Illicit Discharge Detection and Elimination

PURPOSE

The purpose of the Illicit Discharge Detection and Elimination portion of the Stormwater Management Program is to identify the source of illicit discharges and eliminate them. Illicit discharges can be through a direct connection to the sewer line or to a County ditch such as an illicit septic tank effluent discharge. Pollutants produced from these discharges can be extremely harmful to water quality.

Illicit Discharge Detection and Elimination BMPs

CCDOTH prohibits un-permitted discharges into the County-owned storm water system. Discovery of illicit connections to County drainage systems are reported by the CCDOTH Permit Office to the States Attorney for legal enforcement of permit requirements and illicit connection/source removal. CCDOTH is in the process of developing a storm sewer system map showing the locations of all outfalls and the locations/names of all receiving waters. CCDOTH continues to issue individual work orders for storm sewer televising for specific locations within CCDOTH highway system as part of future roadway improvement projects. This will enhance inspection efforts of our stormwater infrastructure and help identify potential illicit discharges as well.

- **BMP: Storm Sewer System Map Preparation**

CCDOTH uses archival project plan information to provide information on locations/types of conveyance systems and outfalls. The Department is in negotiations with a consulting firm to provide services to begin data collection of existing storm sewer infrastructure, system outfalls, roadway stream crossings, and watershed identification for inclusion in the GIS mapping of Cook County Highway System.

Measurable Goal: Continued electronic conversion of archival documents (plans, drainage atlases) along with field survey verification for incorporation of data into complete GIS map of Cook County Highway System.

- **BMP: Outfall Inspection Reporting**

CCDOTH anticipates seeking consultant services to assist CCDOTH Maintenance Bureau with completing outfall inspections.

- **BMP: Periodic Inspection and Reporting – CCDOTH Maintenance Bureau**

The Cook County Maintenance Bureau performs activities related to Illicit Discharge and Elimination. On a day to day basis, Maintenance Bureau personnel patrol County roads inspecting pavement and parkway areas for any issues including impacts to open ditch system. Reports are filed for any illegal discharge to the County storm water system and directed to CCDOTH Permits Division for violation enforcement.

Measurable Goal: Continue filing reports on violations issued for illicit discharges

- **BMP: CCDOTH Website – Hotline Phone Number**

CCDOTH's website provides a hotline for problem reporting. The 24 hour a day number to call to report problems is (708) 448-8006.

Measurable Goal: Continued use of CCDOTH website and hotline number for problem reporting.

Part 4: Construction Site Runoff Control

PURPOSE

The purpose of the Construction Site Runoff Control portion of the SWMP is to control the pollutants commonly discharged from construction sites, such as sediment, solid and sanitary wastes, pesticides and fertilizers, oil and grease, and construction debris. All of these contaminants can be highly detrimental to the chemical, biological, and physical aspects of water quality, with sedimentation being the most common pollutant generated from construction sites.

The Construction Site Runoff Control Program BMPs

- **BMP: Design Plans and Specifications for Soil Erosion and Sediment Control (SESC)**

CCDOTH's Design Bureau is responsible for plans and specs for erosion and sediment control design, installation, and maintenance procedures for all construction projects. SESC plans and specs follow Illinois Department of Transportation (IDOT) Standard Specifications for Road and Bridge Construction and the Illinois Urban Manual. In addition to this, CCDOTH projects are subject to Cook County's Watershed Management Ordinance (WMO) which is the basis for local stormwater regulation in Cook County. Depending on the scope of the project, different regulations apply but include requirements for sediment and erosion control, volume control and detention, and site inspection/enforcement.

Measurable Goal: Continued use of State Standard and Specifications along with compliance to Cook County's WMO. Continued professional development of staff for staying current with fundamentals of best management practices for soil erosion and sediment control design.

- **BMP: Site Plan Review Procedure**

CCDOTH's Construction Bureau is responsible for reviewing CCDOTH project plans with Contractors for SESC practices required by IEPA NPDES permit. The Resident Engineer meets with the Contractor at an on-site pre-construction meeting to discuss implementation of Storm Water Pollution Prevention Plan and ensures that the proposed construction plans is meeting all the rules and regulations of all the governing agencies with respect to possible pollution in construction site runoff. The SESC plan is updated to reflect on-site active BMP's by location and type. Per NPDES requirements, the Contractor signs a Contractor Certification Statement stating that they have read and understand all of the information and requirements stated in SWPPP for the project.

Measurable Goal: Continued SESC plan pre-construction review and documenting of necessary NPDES documentation including Contractor's Certification Statement.

- **BMP: Site Inspections and Reporting**

During CCDOTH's road projects, Resident Engineers inspect SESC BMPs for proper installation and complete inspection reports once a week and after every 1/2 inch or greater rainfall event to comply with NPDES requirements. The resident engineer provides a copy of each report to the Contractor and Subcontractor with instructions to repair or install all necessary SESC BMPs. Incidence of Non-Compliance (ION) forms are filed per NPDES requirements.

Measurable Goal: Continued oversight and reporting by CCDOTH Resident Engineers on all CCDOTH projects per NPDES requirements.

Part 5: Post-Construction Runoff Control

PURPOSE

The purpose of the Post-Construction Runoff Control portion of the SWMP is to minimize the amount of pollutants in stormwater runoff on post-construction sites to the maximum extent possible.

The Post-Construction Runoff Control Program BMPs

- **BMP: Long-Term O&M Procedures**

All Cook County Maintenance Bureau Districts have established operation and maintenance procedures for facilities. Patrol Routes of all Cook County highways by maintenance district personnel, drainage system maintenance/repair, lawn care, and refuse removal are provided on an on-going, seasonal basis.

Measurable Goal: Continued O&M Procedures. Continue to update SWPPP for Maintenance District IV and develop SWPPP's for other district facilities.

- **BMP: Post-Construction Project Documentation**

Per IEPA NPDES requirements, CCDOTH's Construction Bureau Resident Engineer is responsible for completing a Notice of Termination (NOT) form upon completion of the project which certifies that substantial stabilization of any disturbed soils is complete. In addition, CCDOTH projects are subject to Cook County's Watershed Management Ordinance (WMO) which includes requirements for post-construction inspection documentation and perpetual maintenance plans for drainage facilities such as detention ponds, swales, and storm sewers.

Measurable Goal: Continued oversight and reporting by CCDOTH Resident Engineers on all CCDOTH projects per NPDES requirements. Continued compliance with all MWRD WMO inspection and maintenance requirements.

- **BMP: Stormwater Treatment Systems**

CCDOTH Design Bureau continues to incorporate Stormwater Treatment Systems into drainage design plans where feasible to pre-treat storm water discharges. These units treat stormwater runoff by removing suspended solids, free floating oils and debris and provide post-construction treatment to minimize pollution.

Measurable Goal: Continued use of stormwater treatment systems in drainage design where feasible. Continued development of storm sewer system map and drainage structure inventory to improve maintenance of existing treatment units.

Part 6: Pollution Prevention/Good Housekeeping

PURPOSE

The purpose of the Pollution Prevention/Good Housekeeping portion of the SWMP is to improve and/or protect waterways by changing or improving in-house operations. Poor operating procedures can allow polluted runoff that collects on streets, parking lots, open spaces and storage and vehicle maintenance areas to enter into receiving water bodies. Sodium chloride is a particularly harmful pollutant in waterways and best management practices are critical for road salt usage reduction. In addition, pollution can accumulate if stormwater conveyance systems are poorly maintained or if environmentally damaging land development and flood management practices are used.

Pollution Prevention/Good Housekeeping Program BMPs

- **BMP: Operations and Maintenance Procedures of CCDOTH Maintenance District Facilities and District Facility Stormwater Management Plans**

All four CCDOTH Maintenance Districts have established operation and maintenance procedures for District facilities under the direction of each District Supervising Engineer. Procedures include twice a year street sweeping and litter removal from roadways/parkways on a monthly basis. Storm drain system and catch basin cleanings are also performed on an as needed basis. Reports are kept for these activities and recorded into GIS software which allows us to manage, track, and analyze infrastructure maintenance.

Measurable Goal: Continued O&M procedures along with tracking of activities through County's GIS software. CCDOTH anticipates seeking consultant services to assist our Maintenance Bureau to update Stormwater Management Plan for CCDOTH Maintenance District facilities (Districts I, II, IV and V).

- **BMP: CCDOTH Maintenance Bureau Employee Training**

Annual pre-salting season training is provided for all Maintenance Bureau staff on salt usage best practices.

Measurable Goal: Continued annual training procedures

- **BMP: Road Salting Procedures**

CCDOTH's Maintenance Bureau continues to update its truck fleet to allow for better control of salt release. Calcium chloride is used by the districts to increase effectiveness of salt thereby reducing the amount of usage further. Pavement temperature sensors are used to optimize when and where salt is placed.

Measurable Goals: Continued use of BMP's for salt usage and continued investigation into salt additive practices to reduce salt usage.

- **BMP: Hazardous Material Handling-Disposal**

Twice monthly pickup is provided by a disposal company for hazardous material handling. All maintenance districts have a spill response and prevention plan. Spills are thoroughly cleaned up with oil dry absorbent mixture when they occur. Underground fuel tanks are equipped with alarms to prevent spills from overfilling. Any other waste removal such as general waste, catch basin debris, and ditch grading spoils is accomplished through contracted services.

Measurable Goal: Continued use and funding of maintenance contract for waste removal.