

MS4 General Permit  
City of Derby 2017 Annual Report  
Existing MS4 Permittee  
Permit Number GSM000114  
January 1, 2017 – December 31, 2017

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This report documents the City of Derby's efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2017 to December 31, 2017.

*Part I: Summary of Minimum Control Measure Activities*

**1. PUBLIC EDUCATION AND OUTREACH (Section 6 (a)(1) / page 19)**

**1.1 BMP Summary**

BMP	Status	Activities in current reporting period	Measurable goal	Department/ Person Responsible	Due	Date completed / projected	Additional details
1-1 Implement public education and outreach	In Progress	A link was created for access to the City's Stormwater Management program. Stormwater Management Plan was posted for public comment.	Link to educational resources on City website. Develop and Distribute Material to Public Annually.	Public Works	Jul 1, 2018	On-going	
1-2 Address education/ outreach for pollutants of concern*	In Progress	A link "Help Keep Our Waterways Clean" was added to the Stormwater Management website.	Develop and Distribute Information on Bacteria Pollution, Impervious Area	Public Works	Jul 1, 2018	On-going	

### 1.2 Describe any Public Education and Outreach activities planned for the next year, if applicable.

- Create general stormwater informational fliers to be mailed with sewer bills
- Create pet waste fliers to be distributed with animal licenses
- Coordinate efforts with local schools for presentation on stormwater management
- Provide printed materials and display them in public locations, including City Hall and the public library

### 1.3 Details of activities implemented to educate the community on stormwater

Program Element/Activity	Audience (and number of people reached)	Topic(s) covered	Pollutant of Concern addressed (if applicable)	Responsible dept. or partner org
Stormwater Management website was created	General Public	Stormwater runoff	All	Public Works
Link "Help Keep Our Waterways Clean" added to website	General Public	General stormwater management topics	All	Public Works
Link for information on Household Hazardous Waste was added to the Public Works webpage	General Public	HHW Disposal	All	Public Works

## 2. PUBLIC INVOLVEMENT/PARTICIPATION (Section 6(a)(2) / page 21)

### 2.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department/ Person Responsible	Due	Date completed/ projected	Additional details
2-1 Comply with public notice requirements for the Stormwater Management Plan	Complete	Notice of the draft SMP was posted in the Connecticut Post on _____. The draft SMP was also accessible in City Hall, the library and uploaded to the City's Stormwater Management website.	Notify public of published Stormwater Management Plan and document comments received.	Public Works	Apr 3, 2017		
2-2 Comply with public notice requirements for Annual Reports	Complete	Notice of the draft Annual Report was posted in the Connecticut Post on _____. The draft Annual Report was also accessible in City Hall, the library and uploaded to the City's Stormwater Management website.	Notify public of published Annual Report and document comments received.	Public Works	Feb 15, 2018		

### 2.2 Describe any Public Involvement/Participation activities planned for the next year, if applicable.

- Continue to provide notice of updated SMPs and draft Annual Reports in the Connecticut Post, City Hall, the public library and the Stormwater Management website

### 2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan announced to public	Yes		Connecticut Post, City Hall, the library and <a href="http://www.derbyct.gov/Stormwater-Program">http://www.derbyct.gov/Stormwater-Program</a>
Availability of Annual Report announced to public	Yes		Connecticut Post, City Hall, the library and <a href="http://www.derbyct.gov/Stormwater-Program">http://www.derbyct.gov/Stormwater-Program</a>

## 3. ILLICIT DISCHARGE DETECTION AND ELIMINATION (Section 6(a)(3) and Appendix B / page 22)

### 3.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department/ Person Responsible	Due	Date completed / projected	Additional details
3-1 Develop written IDDE program	In Progress	Reviewing the IDDE Program template	Develop Written Plan	Public Works	Jul 1, 2018	Jul 1, 2018	
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas	In Progress	Most of the City's outfalls have been mapped	Update Existing Outfall Map	Public Works	Jul 1, 2019	Jul 1, 2019	
3-3 Develop citizen reporting program	In Progress	Complaint form, email address and telephone number have been added to the Public Works website for issuing complaints.	Develop Program	Public Works	Jul 1, 2017	Jul 1, 2018	
3-4 Establish legal authority to prohibit illicit discharges	In Progress	Reviewing current City Ordinances, will compare it with Template Ordinance once available	Update City Ordinance	Zoning Department	Jul 1, 2018	Jul 1, 2018	
3-5 Develop record keeping system for IDDE tracking	In Progress	Working on compiling a tracking system and data base for IDDE	Develop SOP	Public Works	Jul 1, 2017	Jul 1, 2018	

3-6 Address IDDE in areas with pollutants of concern	In Progress	Began dry weather screening outfalls throughout the City. Identified several outfalls that will require further investigation	Identify IDDEs	Public Works	Jun 2020	On-going	
3-7 Map MS4 System in Priority Areas	In Progress	Began mapping outfalls in priority areas	Map Priority Areas	Public Works	Jun 2022	On-going	

### 3.2 Describe any IDDE activities planned for the next year, if applicable.

- Develop written IDDE Program
- Post IDDE Program to the Stormwater Management webpage and include link in next year's Annual Report
- Create an Illicit Discharge Reporting link on the Stormwater Management webpage
- Continue updating the MS4 outfall and system mapping
- Establish legal authority to prohibit illicit discharges
- Maintain master IDDE tracking spreadsheet and ensure all employees involved in IDDE program understand the logging process
- Investigate illicit discharges in areas with pollutants of concern

### 3.3 List of citizen reports of suspected illicit discharges received during this reporting period.

Date of Report	Location / suspected source	Response taken
No reports in 2017		

3.4 Provide a record of illicit discharges occurring during the reporting period and SSOs occurring July 2012 through end of reporting period using the following table.

Location (Lat long/ street crossing /address and receiving water)	Date and duration of occurrence	Discharge to MS4 or surface water	Estimated volume discharged	Known or suspected cause / Responsible party	Corrective measures planned and completed (include dates)	Sampling data (if applicable)

3.5 Briefly describe the method used to track illicit discharge reports, responses to those reports, and who was responsible for tracking this information.

- The City will be implementing a database program for tracking illicit discharges. DPW is responsible for tracking the information.

3.6 Provide a summary of actions taken to address septic failures using the table below.

Location and nature of structure with failing septic systems	Actions taken to respond to and address the failures	Impacted waterbody or watershed, if known

### 3.7 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	80
Estimated or actual number of interconnections	5
Outfall mapping complete	75%
Interconnection mapping complete	25%
System-wide mapping complete (detailed MS4 infrastructure)	5%
Outfall assessment and priority ranking	5%
Dry weather screening of all High and Low priority outfalls complete	74
Catchment investigations complete	0
Estimated percentage of MS4 catchment area investigated	0%

### 3.8 Briefly describe the IDDE training for employees involved in carrying out IDDE tasks including what type of training is provided and how often is it given (minimum once per year).

- An MS4 and IDDE training program was developed and implemented for presentation to all City personnel that may come into contact with stormwater or that may review applications and plans that impact stormwater quality. This training is conducted on an annual basis, or as needed when new employees are added. The last training program was conducted for the Public Works Department on 2/13/18.

#### 4. CONSTRUCTION SITE RUNOFF CONTROL (Section 6(a)(4) / page 25)

##### 4.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed/ projected	Additional details
4-1 Implement, upgrade, and enforce land use regulations or other legal authority to meet requirements of MS4 general permit	In Progress	Reviewing current City Ordinances.	Update City Ordinance	Zoning Department	Jul 1, 2019	Jul 1, 2019	Will update ordinances to improve for compliance with MS4 general permit
4-2 Develop/ Implement plan for interdepartmental coordination in site plan review and approval	In Progress	Depending on the proposed project, the following boards and commissions review the development plans: Planning and Zoning Commission, Inland Wetlands Commission and the Board of Alderman.	Document Current Procedure	City Engineer	Jul 1, 2017	Jul 1, 2018 On-going	
4-3 Review site plans for stormwater quality concerns	In Progress	The City conducted _____ site plan reviews during the reporting period.	Document Plans Reviewed	City Engineer	Jul 1, 2017	On-going	Will review current plan and improve for compliance with MS4 general permit
4-4 Conduct site inspections	In Progress	The City conducted _____ site inspections during the reporting period.	Document Inspections Performed	City Engineer	Jul 1, 2017	On-going	Will review current plan and improve for compliance with MS4 general permit



4-5 Implement procedure to allow public comment on site development	Complete	Public comment is during public hearings that accompany the multiple boards and commissions review/approval of development plans. These hearings are publicly noticed. The public can also utilize the City's Citizen Resource Center for submitting comments.	Document Public Comments	Zoning Department	Jul 1, 2017	Jul 1, 2017	
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	In Progress	Currently, the Town verbally notifies developers and contractors of their potential obligations to the Construction Stormwater Permit	Add standard note on all qualifying plans	City Engineer	Jul 1, 2017	Jul 1, 2018	Will review current procedures and improve for compliance with MS4 general permit

#### 4.2 Describe any Construction Site Runoff Control activities planned for the next year, if applicable.

- Begin the process of getting approval for updating the City ordinances to include be able to enforce land use regulations.
- Formalize plan for interdepartmental coordination in site plan review and approval.
- Continue to follow all State public notice and hearing requirements and follow up on all comments and complaints received.
- Add a standard note to all qualifying plans and to the City's website to notifying applications of the requirements pertaining to the Construction Stormwater General Permit.

## 5. POST-CONSTRUCTION STORMWATER MANAGEMENT (Section 6(a)(5) / page 27)

### 5.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed/ projected	Additional details
5-1 Establish and/or update legal authority and guidelines regarding LID and runoff reduction in site development planning	Not Started	None	Update City Ordinance	Zoning Department	Jul 1, 2021	Jul 1, 2021	
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	Not Started	None	Document Facilities Specified	City Engineer	Jul 1, 2019	Jul 1, 2019	
5-3 Identify retention and detention ponds in priority areas	In Progress	The City began identifying retention/detention basins under their control.	Inventory City Facilities	Public Works/ City Engineer	Jul 1, 2019	Jul 1, 2019	
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures	In Progress	The City maintains XX sedimentation structures; in 2017 XX structures were inspected and cleaned out.	Development Maintenance Plan	Public Works/ City Engineer	Jul 1, 2019	Jul 1, 2019	

5-5 DCIA mapping	Not Started	None	Calculate DCIA	Public Works	Jul 1, 2020	Jul 1, 2020	
5-6 Address post-construction issues in areas with pollutants of concern	Not Started	None	Document issues identified and addressed	City Engineer	Not specified	On-going	

### 5.2 Describe any Post-Construction Stormwater Management activities planned for the next year, if applicable.

- Review current regulations including site planning requirements, zoning regulations, street design regulations and infrastructure specifications to identify/ reduce/ eliminate existing regulatory barriers to implementation of LID and runoff reduction practices.
- Identify and map all City retention and detention ponds in priority areas.
- Inspect ponds/structures annually. Remove sediment in excess of 50% design capacity.
- Create and start implementing a long-term maintenance plan for ponds and structures.

### 5.3 Post-Construction Stormwater Management reporting metrics

	Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	UNK – Not Started	acres
DCIA disconnected (redevelopment plus retrofits)	UNK – Not Started	acres this year / acres total
Retrofits completed	UNK – Not Started	#
DCIA disconnected	UNK – Not Started	% this year / % total since 2012
Estimated cost of retrofits	UNK – Not Started	\$
Detention or retention ponds identified	UNK – Not Started	# this year /# total

### 5.4 Briefly describe the method to be used to determine baseline DCIA.

- Available mapping will be used to estimate approximate DCIA.

## 6. Pollution Prevention/Good Housekeeping (Section 6(a)(6) / page 31)

### 6.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed/ projected	Additional details
6-1 Develop/ implement formal employee training program	In Progress	Developed training program and completed annual training with Public Works on 2/13/18.	Track employee participation	Public Works	Jul 1, 2017	Feb 13, 2018 On-going	Additional training for other City staff will be conducted in the future.
6-2 Implement MS4 property and operations maintenance	In Progress	Salt piles are stored under cover and on impervious surfaces. City industrial stormwater discharges are monitored. Vehicle maintenance is performed undercover. Completed annual leaf collection program.	Develop written SOP's for operations	Public Works, Parks & Rec, Building Dept	Jul 1, 2018	Jul 1, 2018 On-going	The City is reviewing current practices and looking for areas for optimization.
6-3 Implement coordination with interconnected MS4s	In Progress	Through the outfall identification process, the City has identified several interconnections with the neighboring towns/cities.	Identify interconnections	Public Works	Not specified	On-going	
6-4 Develop/ implement program to control other sources of pollutants to the MS4	Incomplete	None	Identify Sources	Public Works	Not specified		

6-5 Evaluate additional measures for discharges to impaired waters*	Incomplete	None	Identify potential project locations	Public Works	Not specified		
6-6 Track projects that disconnect DCIA	Incomplete	None	Develop tracking procedure and data base	City Engineer	Jul 1, 2017	Jul 1, 2018 On-going	
6-7 Implement infrastructure repair/rehab program	Incomplete	None	Document existing repair projects	Public Works	Jul 1, 2021		
6-8 Develop/ implement plan to identify/prioritize retrofit projects	Incomplete	None	Identify potential retrofit projects	Public Works	Jul 1, 2020		
6-9 Implement retrofit projects to disconnect 2% of DCIA	Incomplete	None	Implement retrofit projects	City Engineer	Jul 1, 2022		
6-10 Develop/ implement street sweeping program	In Progress	City streets are swept annually, concentrating on high priority areas.	Document materials removed annually	Public Works	Jul 1, 2017	On-going	The City is reviewing current practices and looking for areas for optimization.
6-11 Develop/ implement catch basin cleaning program	In Progress	Catch basins were inspected and cleaned out in 2017.	Document materials removed annually	Public Works	Jul 1, 2020	On-going	The City is reviewing current practices and looking for

							areas for optimization.
6-12 Develop/ implement snow management practices	In Progress	Streets & municipal lots were plowed as necessary. Roads were pre-treated with saltwater brine and salted (no sand) as necessary.	Develop written SOP	Public Works	Jul 1, 2018	On-going	The City is reviewing current practices and looking for areas for optimization.

## 6.2 Describe any Pollution Prevention/Good Housekeeping activities planned for the next year, if applicable.

- Continue to conduct annual MS4 training programs.
- Review current MS4 property and operations maintenance practices and look for areas for optimization.
- Develop tracking procedure and data base and track projects that disconnect DCIA.
- Review current practices street sweeping practices and look for areas for optimization.
- Review current snow management practices and look for areas for optimization.
- Identify areas where pet waste receptacles maybe installed.
- Review current leaf management practices and look for areas for optimization.

## 6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	(y/n) / date(s)
Street sweeping	
Curb miles swept	miles
Volume (or mass) of material collected	lbs or tons
Catch basin cleaning	
Total catch basins in priority areas	#
Total catch basins in MS4	#
Catch basins inspected	#
Catch basins cleaned	#
Volume (or mass) of material removed from all catch basins	lbs or tons

Volume removed from catch basins to impaired waters (if known)	lbs or tons
Snow management	
Type(s) of deicing material used	
Total amount of each deicing material applied	lbs or tons
Type(s) of deicing equipment used	
Lane-miles treated	miles
Snow disposal location	
Staff training provided on application methods & equipment	(y/n) / dates(s)
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	lbs or %
Reduction in turf area (since start of permit)	acres
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	\$

#### 6.4 Catch basin cleaning program

Briefly describe the method used to optimize your catch basin inspection and cleaning schedule. [Complete this section for the 2017 Annual Report only]

#### 6.5 Retrofit program

Briefly describe the Retrofit Program identification and prioritization process, the projects selected for implementation, the rationale for the selection of those projects and the total DCIA to be disconnected upon completion of each project. [Provide information if available in 2017 report. Section to be completed for the 2019 Annual Report.]

Describe plans for continuing the Retrofit program and how to achieve a goal of 1% DCIA disconnection in future years. [Provide information if available in 2017 report. Section to be completed for the 2019 Annual Report.]

Describe plans for continuing the Retrofit program beyond this permit term with the goal to disconnect 1% DCIA annually over the next 5 years. [Provide information if available in 2017 report. Section to be completed for the 2019 Annual Report.]



Part II: Impaired waters investigation and monitoring [This section required beginning with 2018 Annual Report]

1. Impaired waters investigation and monitoring program

1.1 Indicate which stormwater pollutant(s) of concern occur(s) in your municipality or institution. This data is available on the MS4 map viewer: <http://s.uconn.edu/ctms4map>.

Nitrogen/ Phosphorus ☐ Bacteria ☒ Mercury ☐ Other Pollutant of Concern ☐

1.2 Describe program status.

Discuss 1) the status of monitoring work completed, 2) a summary of the results and any notable findings, and 3) any changes to the Stormwater Management Plan based on monitoring results.

2. Screening data for outfalls to impaired waterbodies (Section 6(i)(1) / page 41)

2.1 Screening data collected under 2017 permit

Complete the table below for any outfalls screened during the reporting period. Each Annual Report will add on to the previous year's screening data showing a cumulative list of outfall screening data.

Outfall ID	Sample date	Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	Results	Name of Laboratory (if used)	Follow-up required?
Ex. 6-3B	7/30/17	Bacteria	- E. coli 1,000 col/100ml - T Coliform 600 col/100ml	Chemworks	Yes

## 2.2 Credit for screening data collected under 2004 permit

If any outfalls to impaired waters were sampled under the 2004 MS4 permit, that data can count towards the monitoring requirements under the modified 2017 MS4 permit. Complete the table below to record sampling data for any outfalls to impaired waters under the 2004 MS4 permit.

Outfall	Sample date	Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	Results	Name of Laboratory (if used)	Follow-up required?
Ex. 1-1A	11/4/16	Nitrogen	TN - 1.5 mg/l	Chemworks	No
Ex. 1-1B	10/15/16	Nitrogen	TN - 5.2 mg/l	Chemworks	Yes

## 3. Follow-up investigations (Section 6(i)(1)(D) / page 43)

Provide the following information for outfalls exceeding the pollutant threshold.

Outfall	Status of drainage area investigation	Control measure implementation to address impairment
Ex. 1-1B	Completed investigation of outfall drainage area – athletic field complex drains into waterbody	Reduce fertilizer use on fields and create 50 foot vegetated buffer.

## 4. Prioritized outfall monitoring (Section 6(i)(1)(D) / page 43)

Once outfall screening has been completed for at least 50% of outfalls to impaired waters, identify 6 of the highest contributors of any pollutants of concern. Begin monitoring these outfalls on an annual basis by July 1, 2020.

Outfall	Sample Date	Parameter(s)	Results	Name of Laboratory (if used)

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Part III: Additional IDDE Program Data [[This section required beginning with 2018 Annual Report](#)]

1. Assessment and Priority Ranking of Catchments data (Appendix B (A)(7)(c) / page 5)

Provide a list of all catchments with ranking results (DEEP basins may be used instead of manual catchment delineations).

1. Catchment ID (DEEP Basin ID)	2. Category	3. Rank
4011-00-2-R3	High Priority	3
4000-33-2-R2	Low Priority	10

2. Outfall and Interconnection Screening and Sampling data (Appendix B (A)(7)(d) / page 7)

2.1 Dry weather screening and sampling data from outfalls and interconnections

Provide sample data for outfalls where flow is observed. Only include Pollutant of concern data for outfalls that discharge into stormwater impaired waterbodies.

Outfall / Interconnection ID	Screening / sample date	Ammonia	Chlorine	Conductivity	Salinity	E. coli or enterococcus	Surfactants	Water Temp	Pollutant of concern	If required, follow-up actions taken
6-4A	3/20/17	0.3 mg/l	Not detected	400 uS/cm	0.4 ppt	E. coli 200 col/100ml	0.2 mg/l	15 C	n/a	No
6-4B	3/20/17	-	-	-	-	-	-	-	-	Evidence of prior dry weather flow – raised priority of catchment investigation



2. Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs.
3. Inadequate sanitary sewer level of service (LOS) resulting in regular surcharging, customer back-ups, or frequent customer complaints.
4. Common or twin-invert manholes serving storm and sanitary sewer alignments.
5. Common trench construction serving both storm and sanitary sewer alignments.
6. Crossings of storm and sanitary sewer alignments.
7. Sanitary sewer alignments known or suspected to have been constructed with an underdrain system;
8. Sanitary sewer infrastructure defects such as leaking service laterals, cracked, broken, or offset sanitary infrastructure, directly piped connections between storm drain and sanitary sewer infrastructure, or other vulnerability factors identified through Inflow/Infiltration Analyses, Sanitary Sewer Evaluation Surveys, or other infrastructure investigations.
9. Areas formerly served by combined sewer systems.
10. Any sanitary sewer and storm drain infrastructure greater than 40 years old in medium and densely developed areas.
11. Widespread code-required septic system upgrades required at property transfers (indicative of inadequate soils, water table separation, or other physical constraints of the area rather than poor owner maintenance).
12. History of multiple local health department or sanitarian actions addressing widespread septic system failures (indicative of inadequate soils, water table separation, or other physical constraints of the area rather than poor owner maintenance).

### 3.2 Key junction manhole dry weather screening and sampling data

Key Junction Manhole ID	Screening / Sample date	Visual/ olfactory evidence of illicit discharge	Ammonia	Chlorine	Surfactants

### 3.3 Wet weather investigation outfall sampling data

Outfall ID	Sample date	Ammonia	Chlorine	Surfactants

### 3.4 Data for each illicit discharge source confirmed through the catchment investigation procedure

Discharge location	Source location	Discharge description	Method of discovery	Date of discovery	Date of elimination	Mitigation or enforcement action	Estimated volume of flow removed

#### Part IV: Certification

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

Chief Elected Official or Principal Executive Officer	Document Prepared by
Print name:	Print name:
Signature / Date:	Signature / Date: