

Operation & Maintenance of Facilities Refresher Training
As required by Part I, Section A.3.g.2 of the MS4 NPDES Permit

Facility Specific Stormwater Management




1

Why Am I Taking this Training?

- If you are taking this training, you will learn:
 - What the permit requirements are
 - What a stormwater Standard Operating Procedure (SOP) is
 - Inspection requirements and frequency
 - What is a high, medium, low pollution potential facility
- This training is for municipal and school employees and contractors working for municipalities
- Training is required
 - At least once during the permit cycle (typically 5-years) for existing staff
 - New hires shall receive training within one year of their hire date

2

Definitions

Fleet


- A group of vehicles owned or operated as a unit.

Maintenance (includes but not limited to)

- adding/changing vehicle fluids, fueling, lubrication, painting, mechanical repairs, parts degreasing, and vehicle/equipment washing.

Storage Yard (includes but not limited to)

- areas where vehicles are stored longer than overnight/weekend
- areas where road maintenance materials are stored
- areas where vehicle maintenance materials are stored
- areas where chemicals in bulk are stored
- areas where catch basin cleaning wastes are stored
- and areas where maintenance equipment such as mowers, tractors, tractor trucks, and sweepers is stored.



3

Prioritized Inventory *(Table 3 in the permit application)*

- Submitted with permit application
- Include the location of each facility and estimate of the number of structure stormwater controls
- Prioritized based on the potential to discharge pollutants to surface waters (high, medium or low)

Facility Examples

Administration buildings	Hazardous waste handling / transfer facilities	Public golf courses
Airports	Landfills	Public parking lots
Animal control building	Landscape maintenance facilities	Public schools
Bus stations and garages	Literaries	Public works yards
Cemeteries	Materials storage yards	Recycling facilities
Composting facilities	Mosquito control facility	Salt storage facilities
Equipment storage / maintenance facilities	Outdoor wash areas	Solid waste handling / transfer facilities
Fire stations	Parks	Vacant land and open space
Fuel Farms	Pesticide storage facilities	Vehicle storage and maintenance yards
Hazardous waste disposal facilities	Police stations	Other, describe

4

Genesee County Priority Procedure

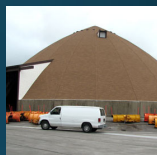
A procedure for assessing the potential discharge pollutants to surface waters of the state was developed. The following factors were considered for assessing facilities in the urbanized area:

1. Amount of urban pollutants stored at the site (e.g., sediment, nutrients, metals, hydrocarbons, pesticides, fertilizers, herbicides, chlorides, trash, bacteria, or other site-specific pollutants)
2. Identification of improperly stored materials
3. The potential for polluting activities to be conducted outside (e.g., vehicle washing)
4. Proximity to waterbodies
5. Poor housekeeping practices
6. Discharge of pollutants of concern to impaired water
7. Did Facilities under 2008 permit have Facilities that were required (per Industrial Program) to have a SWPPP in 2010.


5

Site-Specific Standard Operating Procedure (SOP)

- Required for high priority facilities
- Structural and non-structural stormwater controls
- Identify responsible person
- List of significant materials stored, handling requirements, and potential to be discharged
- List good housekeeping practices implemented. *Good housekeeping practices include keeping the facility neat and orderly, properly storing and covering materials, and minimizing pollutant sources to prevent or reduce pollutant runoff*



6



High Potential for Pollution Facilities Inspections

Schedule

- Routine maintenance and inspections. A biweekly schedule is recommended for routine inspections.
- Comprehensive inspection at least once every six months for all structural and non-structural controls

7

EGLE Industrial Stormwater Program

This is a separate program focused on industrial sites but has many similarities to the municipal facilities program. Good resources are available on EGLE's website.


- [EGLE - Industrial Storm Water Program \(michigan.gov\)](https://www.michigan.gov/egle/0,4570,7-323_7-324_7-325_7-326_7-327_7-328_7-329_7-330_7-331_7-332_7-333_7-334_7-335_7-336_7-337_7-338_7-339_7-340_7-341_7-342_7-343_7-344_7-345_7-346_7-347_7-348_7-349_7-350_7-351_7-352_7-353_7-354_7-355_7-356_7-357_7-358_7-359_7-360_7-361_7-362_7-363_7-364_7-365_7-366_7-367_7-368_7-369_7-370_7-371_7-372_7-373_7-374_7-375_7-376_7-377_7-378_7-379_7-380_7-381_7-382_7-383_7-384_7-385_7-386_7-387_7-388_7-389_7-390_7-391_7-392_7-393_7-394_7-395_7-396_7-397_7-398_7-399_7-400_7-401_7-402_7-403_7-404_7-405_7-406_7-407_7-408_7-409_7-410_7-411_7-412_7-413_7-414_7-415_7-416_7-417_7-418_7-419_7-420_7-421_7-422_7-423_7-424_7-425_7-426_7-427_7-428_7-429_7-430_7-431_7-432_7-433_7-434_7-435_7-436_7-437_7-438_7-439_7-440_7-441_7-442_7-443_7-444_7-445_7-446_7-447_7-448_7-449_7-450_7-451_7-452_7-453_7-454_7-455_7-456_7-457_7-458_7-459_7-460_7-461_7-462_7-463_7-464_7-465_7-466_7-467_7-468_7-469_7-470_7-471_7-472_7-473_7-474_7-475_7-476_7-477_7-478_7-479_7-480_7-481_7-482_7-483_7-484_7-485_7-486_7-487_7-488_7-489_7-490_7-491_7-492_7-493_7-494_7-495_7-496_7-497_7-498_7-499_7-500_7-501_7-502_7-503_7-504_7-505_7-506_7-507_7-508_7-509_7-510_7-511_7-512_7-513_7-514_7-515_7-516_7-517_7-518_7-519_7-520_7-521_7-522_7-523_7-524_7-525_7-526_7-527_7-528_7-529_7-530_7-531_7-532_7-533_7-534_7-535_7-536_7-537_7-538_7-539_7-540_7-541_7-542_7-543_7-544_7-545_7-546_7-547_7-548_7-549_7-550_7-551_7-552_7-553_7-554_7-555_7-556_7-557_7-558_7-559_7-560_7-561_7-562_7-563_7-564_7-565_7-566_7-567_7-568_7-569_7-570_7-571_7-572_7-573_7-574_7-575_7-576_7-577_7-578_7-579_7-580_7-581_7-582_7-583_7-584_7-585_7-586_7-587_7-588_7-589_7-590_7-591_7-592_7-593_7-594_7-595_7-596_7-597_7-598_7-599_7-600_7-601_7-602_7-603_7-604_7-605_7-606_7-607_7-608_7-609_7-610_7-611_7-612_7-613_7-614_7-615_7-616_7-617_7-618_7-619_7-620_7-621_7-622_7-623_7-624_7-625_7-626_7-627_7-628_7-629_7-630_7-631_7-632_7-633_7-634_7-635_7-636_7-637_7-638_7-639_7-640_7-641_7-642_7-643_7-644_7-645_7-646_7-647_7-648_7-649_7-650_7-651_7-652_7-653_7-654_7-655_7-656_7-657_7-658_7-659_7-660_7-661_7-662_7-663_7-664_7-665_7-666_7-667_7-668_7-669_7-670_7-671_7-672_7-673_7-674_7-675_7-676_7-677_7-678_7-679_7-680_7-681_7-682_7-683_7-684_7-685_7-686_7-687_7-688_7-689_7-690_7-691_7-692_7-693_7-694_7-695_7-696_7-697_7-698_7-699_7-700_7-701_7-702_7-703_7-704_7-705_7-706_7-707_7-708_7-709_7-710_7-711_7-712_7-713_7-714_7-715_7-716_7-717_7-718_7-719_7-720_7-721_7-722_7-723_7-724_7-725_7-726_7-727_7-728_7-729_7-730_7-731_7-732_7-733_7-734_7-735_7-736_7-737_7-738_7-739_7-740_7-741_7-742_7-743_7-744_7-745_7-746_7-747_7-748_7-749_7-750_7-751_7-752_7-753_7-754_7-755_7-756_7-757_7-758_7-759_7-760_7-761_7-762_7-763_7-764_7-765_7-766_7-767_7-768_7-769_7-770_7-771_7-772_7-773_7-774_7-775_7-776_7-777_7-778_7-779_7-780_7-781_7-782_7-783_7-784_7-785_7-786_7-787_7-788_7-789_7-790_7-791_7-792_7-793_7-794_7-795_7-796_7-797_7-798_7-799_7-800_7-801_7-802_7-803_7-804_7-805_7-806_7-807_7-808_7-809_7-810_7-811_7-812_7-813_7-814_7-815_7-816_7-817_7-818_7-819_7-820_7-821_7-822_7-823_7-824_7-825_7-826_7-827_7-828_7-829_7-830_7-831_7-832_7-833_7-834_7-835_7-836_7-837_7-838_7-839_7-840_7-841_7-842_7-843_7-844_7-845_7-846_7-847_7-848_7-849_7-850_7-851_7-852_7-853_7-854_7-855_7-856_7-857_7-858_7-859_7-860_7-861_7-862_7-863_7-864_7-865_7-866_7-867_7-868_7-869_7-870_7-871_7-872_7-873_7-874_7-875_7-876_7-877_7-878_7-879_7-880_7-881_7-882_7-883_7-884_7-885_7-886_7-887_7-888_7-889_7-890_7-891_7-892_7-893_7-894_7-895_7-896_7-897_7-898_7-899_7-900_7-901_7-902_7-903_7-904_7-905_7-906_7-907_7-908_7-909_7-910_7-911_7-912_7-913_7-914_7-915_7-916_7-917_7-918_7-919_7-920_7-921_7-922_7-923_7-924_7-925_7-926_7-927_7-928_7-929_7-930_7-931_7-932_7-933_7-934_7-935_7-936_7-937_7-938_7-939_7-940_7-941_7-942_7-943_7-944_7-945_7-946_7-947_7-948_7-949_7-950_7-951_7-952_7-953_7-954_7-955_7-956_7-957_7-958_7-959_7-960_7-961_7-962_7-963_7-964_7-965_7-966_7-967_7-968_7-969_7-970_7-971_7-972_7-973_7-974_7-975_7-976_7-977_7-978_7-979_7-980_7-981_7-982_7-983_7-984_7-985_7-986_7-987_7-988_7-989_7-990_7-991_7-992_7-993_7-994_7-995_7-996_7-997_7-998_7-999_7-1000)
- Industrial Storm Water Certified Operator
- Training
- Reference materials
 - Pollution prevention
 - Compost operations
 - Lidded leak-proof containers and compactors
 - Visual assessment report form, procedures, guidance video
 - SWPPP template (similar to SOP)
 - Activity specific controls (fueling, vehicle maintenance, painting, washing, loading, liquid storage, outside waste, etc.)
- Recommended for municipalities with a DPW yard.



8

Example Site Plan

Inspection Listed in General Permit	Storage Areas/ Activity Areas	Significant Materials	Exposure Method	Exposure Point/ Potential Discharge Point	Inspection Frequency	Inspection Method
1/ Loading, unloading, and other related handling operations	1/ Bulk maintenance area 2/ Fueling area	Oil, battery acid, diesel fuel, gasoline, and other fluids Gasoline, diesel fuel	Spillage during normal handling activities	Stormwater runoff	1	Visual
2/ Outdoor storage including inventory accumulation	1/ Bulk storage area 2/ Equipment storage area 3/ Stock storage	All Hydrocarbons, oil Residue of metal	Spillage during normal handling activities Oil/gas leaks used in the storage area Oil/gas used in the storage area Oil/gas used in the storage area	Stormwater runoff	1	Visual
3/ Outdoor manufacturing or processing activities	All	All	Spillage during normal handling activities	Stormwater runoff	1	Visual
4/ Significant dust or particulate generating processes	1/ Bulk fuel handling	Fuel dust, blowdown dust	Spillage during normal handling activities	Stormwater runoff	1	Visual
5/ Discharge from roofs, decks, and air emission control	1/ Dumpster staging area 2/ Air cleaner storage pump out 3/ Dumpster staging area	General refuse Raw sewage and grey water General refuse	Spillage during normal handling activities	Stormwater runoff	1	Visual

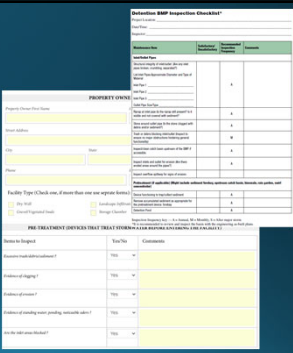


* From EGLE sample SWPPP

9

Example Inspection


- Routine (*examples*)
 - Brief walk through
 - Stains, spills, piles spread-out
 - Dumpster lids, materials covered
 - Stormwater controls ready for rain
 - Document inspection date and comments
- Comprehensive (*examples*)
 - Checklist for each BMP
 - How full are the CBs?
- LID Manual for Michigan - checklists



10

Medium and Low Priority Facilities

- Identify BMPs currently implemented or to be implemented during the permit cycle. For example,
 - CBs - *most common*
 - Detention basins
 - Oil/grit separator
 - Dumpsters
- Have a site map with BMPs and drainage system
- Should be inspecting at least once per year



11

Other Permits and Considerations

- The MS4 program does **not** exonerate other environmental regulations and permits
- For example:
 - Michigan's Part 5 Administrative Rules contain spill prevention, containment, and notification requirements for the storage of salt, oil, and other regulated polluting materials. www.mi.gov/part5
 - Industrial stormwater program www.mi.gov/industrialstormwater
 - Groundwater Program regulates discharge of wastewater to groundwater and the storage of hazardous materials under Part 31. www.mi.gov/groundwaterdischarge



12

Additional Information

- [GCDC Surface Water Management \(gcdcswm.com\)](http://gcdcswm.com)
- www.ClearGeneseeWater.org
- EGLE – Stormwater Program www.mi.gov/eglestormwater
- US EPA Stormwater Discharges from Municipal Sources <https://www.epa.gov/npdes/stormwater-discharges-municipal-sources>

13



Questions?

14

Thank you

Genesee County Drain Commissioner
Surface Water Management
4608 Beecher Road
Flint, MI 48532
Office (810) 732-1590
Fax (810) 732-1474
www.gcdcswm.com

With support from
Tetra Tech
3497 Coolidge Rd
East Lansing, MI 48823
(517) 316-3940
www.tetratetech.com



15
