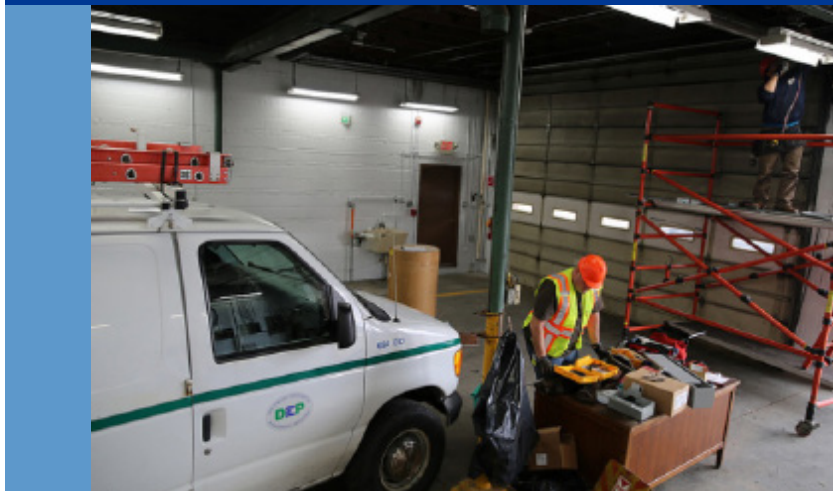


Vehicle/Equipment Operations



Issue Date: August 2018

VEHICLE/EQUIPMENT MAINTENANCE & REPAIR SCM-PP/GH-1



Description

Maintenance and repair operations are required for most municipally-owned vehicles and equipment. These activities have the potential to introduce hydrocarbons, metals and other pollutants into stormwater runoff.

NYC MS4 SPDES Permit Requirement(s)	IV.E. Construction Site Controls IV.G. Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities IV.H. Industrial/Commercial Sources
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KEY SELECTION CRITERIA

Targeted Activities	<ul style="list-style-type: none"> • Engine repair and service • Disposal of fluids and materials • Removal, cleaning, washing & replacement of parts
Performance Goals	<ul style="list-style-type: none"> • Minimize pollutants entering storm sewers and waterways • Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> • Perform work indoors or under cover • Capture and properly dispose of wastes • Use dry cleaning methods

RELATED CONTROL MEASURES AND REGULATIONS

Related SCMs	<ul style="list-style-type: none"> • SCM-PP/GH-5 • SCM-PP/GH-19 	<ul style="list-style-type: none"> • SCM-PP/GH-26
Other Regulatory Requirements	<ul style="list-style-type: none"> • 3 RCNY Chapter 22 Section 2211-01 • 15 RCNY Chapter 19 and Chapter 41 • 6 NYCRR Part 613-2.2 	<ul style="list-style-type: none"> • 40 CFR Part 110 & 280 • 40 CFR 355 & 370 • 6 NYCRR Part 374.2 and NYCPC 1003.4.2.2

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

	Floatables
✓	Sediments
	Nitrogen
	Phosphorus
	Pathogens
	Oxygen Demand
✓	PCBs
✓✓	Metals
✓✓	Petroleum Products/PAHs
✓✓ = Good ✓ = Fair = Poor	

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose
✓ = Yes	

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules & Regulations; NYCPC: New York City Plumbing Code
CFR: Code of Federal Regulations, EPCRA: Emergency Planning & Community Right-to-Know Act

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Vehicle/Equipment Operations



Issue Date: August 2018

VEHICLE/EQUIPMENT CLEANING

SCM-PP/GH-2



Description

Vehicle and equipment washing can introduce sediment, metals, hydrocarbons, trash, and nutrients to stormwater runoff. Use of control measures can help minimize the potential introduction of pollutants into the stormwater system and local waterways.

NYC MS4 SPDES Permit Requirement(s)

- IV.E. Construction Site Controls
- IV.G. Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities
- IV.H. Industrial/Commercial Sources

KEY SELECTION CRITERIA

Targeted Activities	<ul style="list-style-type: none"> • Vehicle and equipment cleaning • Vehicle washing outside of commercial car wash facilities or municipal wash bay
Performance Goals	<ul style="list-style-type: none"> • Minimize pollutants entering storm sewers or waterways • Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> • Use properly designed commercial car wash facilities or municipal wash bays • Use designated washing area with sanitary drain

RELATED CONTROL MEASURES AND REGULATIONS

Related SCMs	<ul style="list-style-type: none"> • SCM-PP/GH-19 • SCM-PP/GH-26
Other Regulatory Requirements*	<ul style="list-style-type: none"> • 15 RCNY Chapter 19 Sections 19-01 to 19-04 • 40 CFR 122.26 (8) • NYCPC 1003.4.2.2

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

✓	Floatables
✓✓	Sediments
✓	Nitrogen
✓	Phosphorus
	Pathogens
✓	Oxygen Demand
	PCBs
✓✓	Metals
✓✓	Petroleum Products/PAHs
✓✓ = Good ✓ = Fair = Poor	

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose
✓ = Yes	

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules & Regulations; NYCPC: New York City Plumbing Code
CFR: Code of Federal Regulations, EPCRA: Emergency Planning & Community Right-to-Know Act

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Use properly designed commercial car washes or provide on-site wash bays, whenever possible.
- When car wash / wash bay use is not possible, wash vehicles and equipment under cover where drains discharge to the sanitary sewer or combined sewer system.[†]
- If washing must be done outdoors, perform within a containment pad or place berms around vehicle/equipment being washed to capture the wash water for proper disposal on site or off site.[†]

CLEAN UP

- Inspect and clean wash bays and wash areas regularly, including sumps, catch basins and/or oil/water separators receiving wastewater.
- Before washing, dispose solid waste in trash containers placed in or near the wash area.

REDUCE/MINIMIZE

- Use minimal amounts of soap or detergent.
- Use dry cleaning methods, such as sweeping or cleaning with a dry towel, where possible.

PRODUCT SUBSTITUTION

- Use water-based, phosphate-free biodegradable/environmentally friendly detergent.

MANAGE RUNOFF

- Use hoses with automatic shutoff devices and spray nozzles to control flow and discourage generation of excess runoff.
- Wash single vehicle/piece of equipment in area where runoff will not enter receiving water body or storm drain.
- Small amounts of wash water without detergent and solvents may be allowed to infiltrate into the soil if a single vehicle/piece of equipment is washed.

CAPTURE/TREAT/DISPOSE

- Discharge equipment wash water to the sanitary or combined sewer system, a holding tank, process treatment system, or an enclosed recycling system. Dispose of wash water on site or off site.[†]
- Wash waters collected from degreasing operations should be treated through an oil water separator prior to discharge to a sanitary or combined sewer.[†]
- Perform regular inspections to identify maintenance and repair needs of installed pretreatment systems. Perform maintenance and repair in accordance with manufacturer recommendations.
- Install monitoring and alarms for pretreatment systems, for notification when maintenance and repair should occur.

[†] Facility needs to ensure that all discharges to the sewer system comply with DEP regulations, as well as applicable DOB regulations.

References

1. NYSDEC SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity, Permit No. GP-0-17-004, March 2018
2. USEPA Potential Pollutants Likely Associated with Specific Municipal Facilities and Activities, November 2011
3. USEPA, Pollution Prevention/Good Housekeeping for Municipal Operations, National Menu of Best Management Practices, 2001
4. California Stormwater Quality Association, Best Management Practice Handbook – Municipal, January 2003
5. Western New York Stormwater Coalition, Erie County Department of Environment and Planning Division of Environmental Compliance Services, Pollution Prevention/Good Housekeeping for Municipal Operations: A Guidance Document of Best Management Practices and Inspection Checklists, April 2006
6. Municipal Pollution Prevention and Good Housekeeping Program Assistance, NYSDEC May 2006
7. Environmental Compliance Guide for Auto Body Shops, NYSDEC December 2009

These control strategies and suggested practices are not all-inclusive and are intended to help identify practices that are efficient, effective and practicable in addressing potential impacts to stormwater.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Use drip pans or containers to collect leaking fluids. Keep separate for ease of disposal.
- Perform work indoors or under cover in a designated area draining to a sanitary sewer.[†]

CLEAN UP

- Maintain a clean work area using dry cleaning methods. Do not hose down work area.
- Promptly clean spills following existing SOPs and protocols.
- Promptly transfer wastes to separate, leak-proof containers and use proper disposal practices.

REDUCE/MINIMIZE

- Perform wet cleaning in one location to keep solvents and residues in one well-maintained area.
- Use dry cleaning methods, such as sanding and sweeping, for parts/surfaces whenever possible.
- Locate drip pans and draining boards to direct solvents into solvent sink or container for reuse.

PRODUCT SUBSTITUTION

- Use non-hazardous chemicals, non-caustic detergents, and non-chlorinated solvents when possible.
- Recycle or reuse materials (e.g., parts, fluids) when possible to reduce the potential for material discharge into waterways.
- Use water-based cleaning products instead of chemical solvents.

MANAGE RUNOFF

- If exposed to stormwater, either use berms or curbs to direct designated area runoff away from storm inlets or temporarily block or seal the storm inlet until designated area runoff is properly disposed.

CAPTURE/TREAT/DISPOSE

- Install pretreatment systems (e.g., vaults, particle separators, oil-water separators) where necessary to capture contaminants (e.g., oil, grit) in accordance with manufacturer's recommendations. These systems should be connected to the sanitary sewer.
- Establish a schedule for regular inspection and maintenance for pretreatment systems in accordance with manufacturer recommendations.
- Install monitoring equipment on pretreatment systems.

[†] Facility needs to ensure that all discharges to the sewer system comply with DEP regulations, as well as applicable DOB regulations.

References

1. NYSDEC SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity, Permit No. GP-0-17-004, March 2018
2. Municipal Pollution Prevention and Good Housekeeping Program Assistance, NYSDEC May 2006
3. Environmental Compliance Guide for Auto Body Shops, NYSDEC December 2009
4. USEPA Potential Pollutants Likely Associated with Specific Municipal Facilities and Activities, November 2011
5. USEPA, Pollution Prevention/Good Housekeeping for Municipal Operations, National Menu of Best Management Practices, 2001
6. Western New York Stormwater Coalition, Erie County Department of Environmental and Planning Division of Environmental Compliance Services, Pollution Prevention/Good Housekeeping for Municipal Operations: A Guidance Document of Best Management Practices and Inspection Checklists, April 2006
7. Erie County/Western New York Stormwater Coalition, Pollution Prevention/Good Housekeeping for Municipal Operations: A Guidance Document of BMPs and Inspection Checklists, April 2006

These control strategies and suggested practices are not all-inclusive and are intended to help identify practices that are efficient, effective and practicable in addressing potential impacts to stormwater.

Vehicle/Equipment Operations



Issue Date: August 2018

Vehicle Equipment Fueling SCM-PP/GH-3



Description

Spills and leaks that occur during vehicle and equipment fueling can contribute hydrocarbons, oil, grease, and heavy metals to stormwater runoff. Implementing the following management practices can help prevent and improve response to fuel spills and leaks.

NYC MS4 SPDES Permit Requirement(s)	IV.E. Construction Site Controls IV.G. Pollution Prevention/Good Housekeeping for Municipal Operations IV.H Industrial/Commercial Sources
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EFFECTIVENESS FOR TARGETED POLLUTANTS/IMPAIRMENTS

✓	Floatables
	Sediments
	Nitrogen
	Phosphorus
	Pathogens
	Oxygen Demand
	PCBs
✓	Metals
✓✓	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

KEY SELECTION CRITERIA

Targeted Activities	<ul style="list-style-type: none"> Fueling of vehicles/equipment Transfer of fuel/oil to tanks/storage containers
Performance Goals	<ul style="list-style-type: none"> Minimize/eliminate fuel spills Minimize pollutants reaching storm sewers or waterways Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Keep fueling areas under cover Install hold-open latches and oil/water separators Install collection equipment

RELATED CONTROL MEASURES AND REGULATIONS

Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-6 SCM-PP/GH-7 SCM-PP/GH-19 SCM-PP/GH-26
Other Regulatory Requirements*	<ul style="list-style-type: none"> 6 NYCRR Part 613-3.2 40 CFR Part 110, 112 & 280 NYC PC 1003.4, & 1003.4.2.2 15 RCNY Chapter 4 and Chapter 19

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules & Regulations; NYCPC: New York City Plumbing Code
CFR: Code of Federal Regulations, EPCRA: Emergency Planning & Community Right-to-Know Act

Control Strategies/Suggested Practices

COVER/CONTAIN

- Cover fueling area with roof or canopy.
- Install sumps, tanks, and containment systems to collect fuel/oil leaks or spills and ensure they are properly maintained per manufacturer's specifications and guidelines.

CLEAN UP

- Keep spill cleanup materials on site and readily accessible.
- Promptly clean spills using dry cleaning methods when possible, such as a dry absorbent that can be swept and properly disposed.
- Promptly transfer wastes to separate, leak-proof containers and use proper disposal practices.

REDUCE/MINIMIZE

- Perform regular inspections of fueling area to identify leaks/spills and damaged vehicles/equipment, fuel/oil storage containers, and transfer hoses and nozzles.
- Label storm drains to increase awareness and use signs to remind users not to top off or perform other maintenance while fueling, as accidental spillage can occur.

PRODUCT SUBSTITUTION

- N/A

MANAGE RUNOFF

- Grade or use physical barriers to divert runoff from fueling area away from storm drains.

CAPTURE/TREAT/DISPOSE

- Install oil/water separators where necessary to capture contaminants (e.g., oil, grit). These systems should be connected to the sanitary sewer.[†]
- Perform regular inspections to identify maintenance and repair needs of installed oil/water separators. Perform maintenance and repair in accordance with manufacturer recommendations.
- Install monitoring and alarms for oil/water separators for notification when maintenance and repair should occur.

[†] Facility needs to ensure that all discharges to the sewer system comply with DEP regulations, as well as applicable DOB regulations.

References

1. California Stormwater Quality Association, *Stormwater Best Management Practice Handbook-Municipal*, January 2003.
2. Western New York Stormwater Coalition, Erie County Department of Environment and Planning Division of Environmental Compliance Services, *Pollution Prevention/Good Housekeeping for Municipal Operations: A Guidance Document of Best Management Practices and Inspection Checklists*, April 2006.

TRUCK BED MANAGEMENT SCM-PP/GH-4



Description

Truck bed management, including washing, can introduce sediment, hydrocarbons, debris, waste materials, trash and nutrients to stormwater runoff. Application of control measures can help minimize the potential introduction of pollutants into the stormwater system and local waterways.

NYC MS4 SPDES Permit Requirement(s)	IV.E Construction Site Controls IV.G Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities IV.H Industrial/Commercial Sources
KEY SELECTION CRITERIA	
Targeted Activities	<ul style="list-style-type: none"> • Truck bed washing • Disposal of wash water
Performance Goals	<ul style="list-style-type: none"> • Minimize pollutants entering storm sewers and waterways • Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> • Store and wash truck beds indoors • Minimize accumulation of waste in truck beds • Use containment pad/berms to capture wash waters for proper disposal
RELATED CONTROL MEASURES AND REGULATIONS	
Related SCMs	• SCM-PP/GH-2
Other Regulatory Requirements*	• 15 RCNY Chapter 19, Sections 19-01 to 19-04

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS	
✓	Floatables
✓✓	Sediments
✓	Nitrogen
✓	Phosphorus
	Pathogens
✓	Oxygen Demand
	PCBs
	Metals
✓	Petroleum Products/PAHs
✓✓ = Good ✓ = Fair = Poor	

CONTROL STRATEGIES	
✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose
✓ = Yes	

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Store trucks indoors or under cover when not in use.
- Use dedicated locations for cleaning when possible.
- Whenever possible, wash truck beds indoors where drains discharge to the sanitary sewer system.[†]
- If washing outdoors, use a containment pad or berms around the cleaning area to capture wash waters for disposal.

CLEAN UP

- Use dry cleaning methods (sweeping) to remove debris from truck bed and dispose of properly.

REDUCE/MINIMIZE

- Empty beds of material and sweep at job site before returning to the yard.
- Sweep or vacuum truck bed to clean. Use water only when necessary.
- Use minimal amounts of soap or detergent, and dry cleaning methods where possible.

PRODUCT SUBSTITUTION

N/A

MANAGE RUNOFF

- Use hoses with automatic shutoff devices and spray nozzles.

CAPTURE/TREAT/DISPOSE

- Label drains to deter improper disposal of wash/rinse water.
- Capture and discharge truck bed wash water to the sanitary sewer, a holding tank, process treatment system or an enclosed recycling system based on its composition.[†]

[†] Facility needs to ensure that all discharges to the sewer system comply with DEP regulations, as well as applicable DOB regulations.

References

1. USEPA, *Potential Pollutants Likely Associated with Specific Municipal Facilities and Activities*, November 2015
2. Western New York Stormwater Coalition, Erie County Department of Environment and Planning Division of Environmental Compliance Services, *Pollution Prevention/Good Housekeeping for Municipal Operations: A Guidance Document of Best Management Practices and Inspection Checklist*, April 2006
3. California Stormwater Quality Association, *Best Management Practice Handbook - Municipal*, January 2003
4. USEPA/Center for Watershed Protection, *Pollution Source Control Practices, Manual 8, Version 2.0*, February 2005
5. USEPA, *Pollution Prevention/Good Housekeeping for Municipal Operations, National Menu of Best Management Practices, 2001*

Vehicle/Equipment Operations



Issue Date: August 2018

VEHICLE/EQUIPMENT STORAGE SCM-PP/GH-5



Description

Vehicle and equipment storage, parking and staging areas (for example, fleet parking and long term equipment storage areas) can introduce sediment, metals, hydrocarbons, and trash to stormwater runoff. Implementation of appropriate control measures can help minimize the introduction of these pollutants to impaired waterways.

NYC MS4 SPDES Permit Requirement(s)	IV.E. Construction Site Controls IV.G. Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities IV.E. Industrial/Commercial Sources
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KEY SELECTION CRITERIA

Targeted Activities	<ul style="list-style-type: none"> Vehicle and equipment storage, parking, and staging (short- and long-term)
Performance Goals	<ul style="list-style-type: none"> Minimize pollutants entering storm sewers and waterways Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Store under cover Regularly check for leaks Promptly respond to spills

RELATED CONTROL MEASURES AND REGULATIONS

Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-6 SCM-PP/GH-19
Other Regulatory Requirements*	<ul style="list-style-type: none"> 1 RCNY Chapter 30 Section 30-02 40 CFR 112

EFFECTIVENESS FOR TARGETED POLLUTANTS/IMPAIRMENTS

✓	Floatables
✓	Sediments
	Nitrogen
	Phosphorus
	Pathogens
	Oxygen Demand
✓	PCBs
✓✓	Metals
✓✓	Petroleum Products/PAHs
✓✓ = Good ✓ = Fair = Poor	

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
	Product Substitutions
	Manage Runoff
	Capture/Treat/Dispose
✓ = Yes	

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Store vehicles/equipment prone to fluid leaks/spills (such as gasoline, hydraulic fluid, etc.) under cover (e.g. roof, shed, secure plastic tarp).
- Drain fluids from leaking long-term inactive or damaged vehicles/equipment.
- If fluids cannot be drained, use drip pans or other containment measures for idle equipment.

CLEAN UP

- Clean spills, leaks, and drips promptly using an absorbent material or other appropriate dry cleaning method that can be swept and properly disposed.

REDUCE/MINIMIZE

- Regularly inspect vehicles/equipment for leaks and repair or contain issues immediately.

PRODUCT SUBSTITUTION

- N/A

MANAGE RUNOFF

- N/A

CAPTURE/TREAT/DISPOSE

- N/A

References

1. USEPA *Potential Pollutants Likely Associated with Specific Municipal Facilities and Activities*, November 2011
2. USEPA, *Pollution Prevention/Good Housekeeping for Municipal Operations, National Menu of Best Management Practices*, 2001
3. California Stormwater Quality Association, *Best Management Practice Handbook – Municipal*, January 2003
4. Western New York Stormwater Coalition, Erie County Department of Environment and Planning Division of Environmental Compliance Services, *Pollution Prevention/Good Housekeeping for Municipal Operations: A Guidance Document of Best Management Practices and Inspection Checklists*, April 2006
5. Center for Watershed Protection, USEPA, *Urban Subwatershed Restoration Manual 8: Pollution Source Control Practices, Version 2.0*, February 2005

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities.

Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Storage Facilities



Issue Date: August 2018

GENERAL OUTDOOR STORAGE

SCM-PP/GH-6



Description

Outdoor storage of solid materials, equipment, or other items can introduce sediment, nutrients, hydrocarbons, trash and other pollutants to stormwater runoff. Application of control measures can help minimize the potential introduction of pollutants into the stormwater system and local waterways.

NYC MS4 SPDES Permit Requirement(s)	IV.E Construction Site Controls IV.G Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities IV.H Industrial/Commercial Sources
KEY SELECTION CRITERIA	
Targeted Activities	<ul style="list-style-type: none"> Storage of outdoor solid materials
Performance Goals	<ul style="list-style-type: none"> Minimize pollutants entering storm sewers and waterways Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Store under cover Perform regular inspections Use secondary containment
RELATED CONTROL MEASURES AND REGULATIONS	
Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-7 SCM-PP/GH-9 SCM-PP/GH-10 SCM-PP/GH-26
Other Regulatory Requirements*	Potentially applicable regulations included in the referenced SCMs.

EFFECTIVENESS FOR TARGETED POLLUTANTS/IMPAIRMENTS

✓	Floatables
✓	Sediments
✓	Nitrogen
✓	Phosphorus
	Pathogens
	Oxygen Demand
✓	PCBs
✓	Metals
✓	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Control Strategies/Suggested Practices

COVER/CONTAIN

- Cover material storage area under existing structure to minimize contact with rainwater and snow.
- At minimum use a secure waterproof cover that is in place unless active work is occurring.

CLEAN UP

- Use dry cleaning methods (sweeping) regularly to remove debris.

REDUCE/MINIMIZE

- Provide clean and clear walkways for inspections and properly stack materials to minimize accidental spills or dispersement.
- Perform regular inspections to identify material spillage and damaged containers or structures.
- Keep storage areas secure to prevent vandalism/unauthorized access.
- Use material transfer procedures that reduce the chance of leaks or spills.

PRODUCT SUBSTITUTION

N/A

MANAGE RUNOFF

- Use curbing or berm at edge of storage area to prevent runoff/runon from adjacent areas to minimize storm water contact.

CAPTURE/TREAT/DISPOSE

- Utilize catch basin inserts, vaults, or particle separators to prevent particulate matter from entering the storm sewer system.

References

1. USEPA, *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP) – Fact Sheet*, 2015
2. NYSDEC SPDES *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity*, Permit No. GP-0-17-004, March 2018
3. USEPA *Potential Pollutants Likely Associated with Specific Municipal Facilities and Activities*, November 2011
4. California Stormwater Quality Association, *Best Management Practice Handbook – Municipal*, January 2003
5. Center for Watershed Protection, USEPA, *Urban Subwatershed Restoration Manual 8: Pollution Source Control Practices, Version 2.0*, February 2005
6. *Municipal Pollution Prevention and Good Housekeeping Program Assistance*, NYSDEC May 2006

ABOVE-GROUND STORAGE TANKS

SCM-PP/GH-7



Description

Above-ground storage tanks are used for storing fuel and chemicals for municipal operations. These sources have the potential of introducing hydrocarbons and other pollutants into stormwater runoff if not maintained and used properly.

NYC MS4 SPDES Permit Requirement(s)

IV.E Construction Site Controls
IV.G Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities
IV.H Industrial/Commercial Sources

KEY SELECTION CRITERIA

Targeted Activities	<ul style="list-style-type: none"> Maintenance of tank and components Proper filling and dispersing of tank contents
Performance Goals	<ul style="list-style-type: none"> Minimize pollutants entering storm drains and waterways Implement good housekeeping practices Engage in proper filling and dispersing of tank contents
Most Effective Controls (more detail on page 2)	<ul style="list-style-type: none"> Capture and properly dispose of wastes and spilled material Use dry cleaning methods Install and maintain secondary capture/containment mechanisms Use spill alarms

RELATED CONTROL MEASURES AND REGULATIONS

Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-3 SCM-PP/GH-6 SCM-PP/GH-8 SCM-PP/GH-9 SCM-PP/GH-19 SCM-PP/GH-26
Other Regulatory Requirements*	<ul style="list-style-type: none"> 3 RCNY 3404-03 40 CFR Part 112 6 NYCRR 596, 598, 599, 613 40 CFR 355, 370 & 372

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

	Floatables
	Sediments
	Nitrogen
	Phosphorus
	Pathogens
	Oxygen Demand
	PCBs
✓	Metals
✓✓	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Control Strategies/Suggested Practices

COVER/CONTAIN

- Install appropriate containment structures for the volume of the largest tank, with sufficient extra capacity for precipitation.
- Utilize barriers to protect storage tank and mixing equipment from vehicle & equipment traffic.

CLEAN UP

- Have appropriate materials available at appropriate locations to contain spills.
- Clean up spills properly using a dry, absorbent, and approved material (e.g., Speedy Dry).

REDUCE/MINIMIZE

- Ensure there is adequate storage available when receiving materials into the tanks.
- Fill ports and boxes should be cleared, cleaned, and sealed properly.
- Tanks and fuel pumps should be equipped with monitoring and leak detection systems and overfill alarms.
- Establish a schedule for regular maintenance of tanks and all hoses, fittings, probes, control panels, fill boxes and drains, and tank sumps including a visual inspection for structural integrity.
- Keep secondary containment clean.
- Hook-ups, terminal caps, and gaskets should be used properly and sealed to prevent leaks.
- Do not conduct work or perform maintenance near open storm drains or in areas that drain by sheet flow into water and do not flush spills into sewer systems.
- Measure tank levels after delivery to ensure the proper delivery amount and that none was spilled.

PRODUCT SUBSTITUTION

N/A

MANAGE RUNOFF

- Seal nearby drains that discharge to storm drains, when possible, or insert filters in adjacent catch basins.
- Divert stormwater runoff from adjacent areas with practices such as berms or absorbent booms.

CAPTURE/TREAT/DISPOSE

- Use portable containment systems during repairs to prevent spills if unable to drain or relocate contents.
- Do not use fluids or wash water during spill cleanup. If unavoidable, all fluids and wash water generated during spill cleanup must be disposed of properly and not into storm sewer drains.
- Check containment water for oil sheen. All fluids, wash water, and captured discharges must be disposed of properly and not into storm sewer drains.

References

1. FDNY, *Above-Ground Petroleum Storage Tank (AST) Inspection Checklist*. March 2015
2. FDNY, *Contract Notice to Proceed and Commence Work*, PIN No. 057110002435, E-PIN 05712B0003001, December 2012
3. FDNY *Emergency Notification Procedures for Gasoline Leaks or Spills*, A.U.C. 211, March 1997
4. FDNY, Bureau of EMS, *Safely Dispensing Fuel*, February 2011
5. City of New York, DOC, *Directive 3900R – Environmental Health Program*, April 2014
6. FDNY, *Gasoline and Diesel Motor Fuel in Quarters*, April 1976
7. NYS DEC, *SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity*, Permit No. GP-0-17-004, March 2018

UNDERGROUND STORAGE TANKS

SCM-PP/GH-8



Description

Underground storage tanks are used for storing fuel and chemicals for municipal operations. These sources have the potential of introducing hydrocarbons and other pollutants into stormwater runoff if not maintained and used properly.

NYC MS4 SPDES Permit Requirement(s)	IV.G Pollution Prevention/Good Housekeeping for Municipal Operations IV.H Industrial/Commercial Sources
KEY SELECTION CRITERIA	
Targeted Activities	<ul style="list-style-type: none"> Maintaining tanks and components Filling and dispersing of tank contents
Performance Goals	<ul style="list-style-type: none"> Engage in proper filling and dispensing of tank contents Minimize pollutants entering storm drains and waterways Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Capture and properly dispose of wastes and spilled material Use dry cleaning methods for spills Install secondary capture/containment mechanisms
RELATED CONTROL MEASURES AND REGULATIONS	
Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-3 SCM-PP/GH-6 SCM-PP/GH-7 SCM-PP/GH-9 SCM-PP/GH-10
Other Regulatory Requirements*	<ul style="list-style-type: none"> 3 RCNY 3404-02 6 NYCRR Part 613 and Part 598 40 CFR 280 and 112

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

	Floatables
	Sediments
	Nitrogen
	Phosphorus
	Pathogens
	Oxygen Demand
	PCBs
✓	Metals
✓✓	Petroleum Products/PAHs
✓✓ = Good ✓ = Fair = Poor	

CONTROL STRATEGIES

	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose
✓ = Yes	

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Control Strategies/Suggested Practices

COVER/CONTAIN

N/A

CLEAN UP

- Clean up spills properly using a dry, absorbent, and approved material (e.g. Speedy Dry).

REDUCE/MINIMIZE

- Ensure there is adequate storage available when receiving materials into the tanks.
- Hook-ups, terminal caps, and gaskets should be used properly and sealed to prevent leaks.
- Tanks and fuel pumps should be equipped with monitoring and leak detection systems and overflow alarms.
- Fill ports and boxes should be cleared, cleaned, and sealed properly.
- Do not conduct work or maintenance near open storm drains or in areas that drain by sheet flow into water bodies and do not flush spills into storm sewer systems.
- Establish a schedule for regular maintenance of tanks and all hoses, fittings, probes, control panels, fill boxes and drains, and tank sumps.
- Develop spill prevention and control procedures for areas around fill ports, dispensers, sumps, and spill buckets that are exposed to stormwater and/or could runoff into a storm drain.
- Measure tanks after delivery to ensure the proper delivery amount and that none was spilled.

PRODUCT SUBSTITUTION

N/A

MANAGE RUNOFF

- Minimize stormwater run-on from adjacent areas with practices such as berms or absorbent booms.
- Seal nearby drains that discharge to storm drains, where feasible, or insert filters in adjacent catch basins.

CAPTURE/TREAT/DISPOSE

- Do not use fluids or wash water during spill cleanup. If unavoidable, all fluids and wash water generated during spill cleanup must be disposed of properly and not into storm sewer drains.

References

1. FDNY, *Aboveground Petroleum Storage Tank (AST) Inspection Checklist*. March 2015
2. FDNY, *Contract Notice to Proceed and Commence Work*, PIN No. 057110002435, E-PIN 05712B0003001, December 2012
3. FDNY *Emergency Notification Procedures for Gasoline Leaks or Spills*, A.U.C. 211, March 1997
4. FDNY, Bureau of EMS, *Safely Dispensing Fuel*, February 2011
5. City of New York, DOC, *Directive 3900R – Environmental Health Program*, April 2014
6. FDNY, *Gasoline and Diesel Motor Fuel in Quarters*, April 1976
7. NYS DEC, *SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity*, Permit No. GP-0-17-004, March 2018
8. USEPA *Memorandum: Significant Operational Compliance Performance Measures for UST Program*, September 2003

DRUM STORAGE AND MANAGEMENT

SCM-PP/GH-9



Description

Storage drums are used for chemicals needed for municipal operations. These sources have the potential of introducing pollutants into stormwater runoff if not maintained and used properly.

NYC MS4 SPDES Permit Requirement(s)

IV.E Construction Site Controls
IV.G Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities
IV.H Industrial/Commercial Sources

KEY SELECTION CRITERIA

Targeted Activities	<ul style="list-style-type: none"> • Drum storage area or facility operation & maintenance • Transfer of drum contents
Performance Goals	<ul style="list-style-type: none"> • Minimize potential for release or accidental discharge of drum contents • Minimize pollutants entering storm sewers & waterways • Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> • Store drums in designated, covered/protected area • Capture and properly dispose of wastes & spilled material • Use dry cleaning methods to reduce stored liquid waste

RELATED CONTROL MEASURES AND REGULATIONS

Related SCMs	<ul style="list-style-type: none"> • SCM-PP/GH-6 • SCM-PP/GH-7 • SCM-PP/GH-8 • SCM-PP/GH-10 • SCM-PP/GH-19 • SCM-PP/GH-26 • SCM-PP/GH-33
Other Regulatory Requirements*	<ul style="list-style-type: none"> • 40 CFR 280 • 6 NYCRR Part 597

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

	Floatables
	Sediments
✓	Nitrogen
✓	Phosphorus
	Pathogens
✓	Oxygen Demand
	PCBs
✓	Metals
✓✓	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Control Strategies/Suggested Practices

COVER/CONTAIN

- Establish designated, indoor or covered drum storage areas, as feasible.
- Place adequate secondary containment sufficient to capture emptied drum volumes.
- Water soluble solids should be stored in drums and protected from stormwater.

CLEAN UP

- Clean up spills properly using a dry, absorbent, and approved material (e.g., Speedy Dry).
- Avoid flushing spills into storm sewer systems or any areas that discharge to waterways.
- Keep spill response kit near storage area.

REDUCE/MINIMIZE

- Develop spill prevention and control procedures for materials stored or used in areas exposed to stormwater and/or that could run off into a storm drain.
- Ensure there is adequate storage available when placing materials into the drums.
- Hook-ups and gaskets should be used properly and sealed to prevent leaks.
- Keep storage area clear of all materials that may cause damage to the drum.
- Establish a schedule for regular inspection of drums, hoses, and fittings for leaks or damage.
- Observe for evidence of pollutants entering the drainage systems or waterways from storage areas.
- Minimize risk of spills by storing only the amount needed for operations.

PRODUCT SUBSTITUTION

N/A

MANAGE RUNOFF

- Avoid storing drums near open storm drains or areas that sheet flow directly into water bodies.
- Seal drains that discharge to storm drains, where feasible, or insert filters in adjacent catch basins.
- Minimize stormwater runoff from adjacent areas using berms, absorbent booms, or other practices.

CAPTURE/TREAT/DISPOSE

- Do not use fluids or wash water during spill cleanup. If unavoidable, all fluids and wash water from spill cleanup must be disposed of properly and not into storm sewer drains.

References

1. FDNY Emergency Notification Procedures for Gasoline Leaks or Spills, A.U.C. 211, March 1997
2. FDNY, Bureau of EMS, Safely Dispensing Fuel, February 2011
3. City of New York, DOC, Directive 3900R – Environmental Health Program, April 2014
4. NYS DEC, SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity, Permit No. GP-0-17-004, March 2018
5. NYS DEC, Chemical Bulk Storage Inspection Report, August 2006
6. NYS DEC, Petroleum Bulk Storage (PBS) Inspection Form v.4, July 2009
7. NYS DEC, Major Oil Storage Facility, Site Inspection Report, August 2006
8. City of New York, DPR, Garage Good Housekeeping Procedures, 2010

MATERIAL STOCKPILES

SCM-PP/GH-10



Description

Stockpiles of usable materials (e.g., topsoil, gravel, salt) can potentially introduce sediment, nutrients, and metals to stormwater runoff. Employing appropriate control measures can help minimize the introduction of pollutants to the stormwater system and maintain usability of materials.

NYC MS4 SPDES Permit Requirement(s)	IV.E. Construction Site Controls IV.G. Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities IV.H. Industrial/Commercial Sources
KEY SELECTION CRITERIA	
Targeted Activities	<ul style="list-style-type: none"> Storage of significant volumes of materials Outdoor storage of usable materials
Performance Goals	<ul style="list-style-type: none"> Minimize pollutants entering storm sewers or waterways Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Store materials under cover Use sediment control barriers Perform regular inspections of storage areas and maintain a clean and clear inspection walkway around storage area
RELATED CONTROL MEASURES AND REGULATIONS	
Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-6 SCM-PP/GH-9 SCM-PP/GH-19 SCM-PP/GH-26 SCM-PP/GH-27 SCM-PP/GH-29 SCM-PP/GH-38
Other Regulatory Requirements*	Potentially applicable regulations included in the referenced SCMs.

EFFECTIVENESS FOR TARGETED POLLUTANTS/IMPAIRMENTS

✓✓	Floatables
✓✓	Sediments
✓	Nitrogen
✓	Phosphorus
	Pathogens
	Oxygen Demand
✓✓	PCBs
✓✓	Metals
	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Control Strategies/Suggested Practices

COVER/CONTAIN

- For materials other than salt, store under cover such as an existing roof, secure waterproof tarp or sheeting, or in a sealed container.
- For materials other than salt, keep storage bins elevated above the ground or on pallets to minimize contact with water and other materials.
- For materials other than salt, enclose stockpile within a building.
- Cover or enclose salt stockpiles, unless there is no discharge from the salt stockpile or the discharge is covered under another SPDES permit.

CLEAN UP

- Regularly inspect storage areas and repair/replace damaged structures and containers.
- Monitor for accidental releases when transferring materials and promptly address issues.
- Use dry cleaning (e.g., sweeping) for material releases or to regularly remove debris.
- Provide adequate aisle space clean and clear walkways for 360 degree inspections.

REDUCE/MINIMIZE

- Maintain an inventory of materials and minimize stored materials as practicable, taking into consideration seasonal changes.
- Use material transfer procedures that reduce chances of accidental release.

PRODUCT SUBSTITUTION

- Evaluate material needs and consider alternative products that will reduce potential pollutants.

MANAGE RUNOFF

- Minimize run-on from adjacent areas using curbing/grading/berming/elevated storage to keep water away from material.
- Minimize run-off from material stockpiles using curbing/grading/berming to keep water from entering the storm sewer system or nearby waterways.

CAPTURE/TREAT/DISPOSE

- Utilize catch basin inserts, vaults, or particle separators to prevent particulate matter from entering the storm sewer system.

References

1. USEPA *Potential Pollutants Likely Associated with Specific Municipal Facilities and Activities*, November 2011
2. USEPA, *Pollution Prevention/Good Housekeeping for Municipal Operations, National Menu of Best Management Practices*, 2001
3. California Stormwater Quality Association, *Best Management Practice Handbook – Municipal*, January 2003
4. Center for Watershed Protection, USEPA, *Urban Subwatershed Restoration Manual 8: Pollution Source Control Practices, Version 2.0*, February 2005

Stormwater Collection System



Issue Date: August 2018

CATCH BASIN/INLET CLEANING AND REPAIR

SCM-PP/GH-11



Description

Cleaning and repairing catch basins, inlets and pre-treatment controls helps to ensure they continue to capture and retain sediment and pollutants from stormwater runoff. These activities have the potential for introducing sediments, floatables and other pollutants into stormwater runoff.

NYC MS4 SPDES Permit Requirement(s)

IV.G Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities
IV.H Industrial and Commercial Sources
IV.I Trash and Debris Control

KEY SELECTION CRITERIA

Targeted Activities	<ul style="list-style-type: none"> Cleaning and repair of catch basins, inlets and pre-treatment controls
Performance Goals	<ul style="list-style-type: none"> Minimize pollutants entering storm sewers and waterways Implement good housekeeping practices Optimize performance of catch basins, inlets and pre-treatment controls
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Capture and properly dispose of wastes Clean during dry weather when possible

RELATED CONTROL MEASURES AND REGULATIONS

Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-12 SCM-PP/GH-16 SCM-PP/GH-19 	<ul style="list-style-type: none"> SCM-PP/GH-26 SCM-PP/GH-27
Other Regulatory Requirements*	<ul style="list-style-type: none"> 15 RCNY 19-02 	

EFFECTIVENESS FOR TARGETED POLLUTANTS/IMPAIRMENTS

✓✓	Floatables
✓✓	Sediments
✓	Nitrogen
✓	Phosphorus
✓	Pathogens
✓	Oxygen Demand
	PCBs
✓	Metals
✓	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
	Product Substitutions
	Manage Runoff
✓	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

N/A

CLEAN UP

- Plan cleaning to coincide with municipal street sweeping, when feasible.
- Inspect catch basins and other inlets frequently and clean as needed.
- Clean during dry weather when catch basin sump is greater than one-third full.
- Clean catch basin inserts in accordance with manufacturer's specification.
- Clean up sediment and debris using dry methods, when feasible.
- Maintain a log of the amount of sediment collected and date removed.
- Keep records on accumulation rates within each catch basin using GIS or other tracking system and identify priority areas with high accumulation rates.

REDUCE/MINIMIZE

- Regularly clean areas tributary to catch basins and inlets.
- During cleaning, report suspected illicit discharges, such as sewage effluent or chemical contamination.
- Conduct repairs during dry weather.

PRODUCT SUBSTITUTION

N/A

MANAGE RUNOFF

N/A

CAPTURE/TREAT/DISPOSE

- Liquids collected during clean-outs should be disposed of properly. Do not discharge to the storm sewer or into water bodies.
- Sediment and debris removed should be properly handled and disposed of in a location not exposed to stormwater.
- Analyze materials to determine appropriate disposal method.

References

1. USEPA Potential Pollutants Likely Associated with Specific Municipal Facilities and Activities, November 2015
2. USEPA/Center for Watershed Protection, Municipal Pollution Prevention/Good Housekeeping Practices, Manual 9, Version 1.0, September 2008
3. NYSDOT, Highway Maintenance Guidelines, Chapter 6: Drainage, January 2009
4. Western New York Stormwater Coalition, Erie County Department of Environment and Planning Division of Environmental Compliance Services, Pollution Prevention/Good Housekeeping for Municipal Operations: a Guidance Document of Best Management Practices and Inspection Checklist, April 2006

Stormwater Collection System



Issue Date: August 2018

STORM SEWER/UNDERGROUND FACILITY CLEANING & REPAIR

SCM-PP/GH-12



Description

Cleaning and repair activities for storm sewers and underground facilities to optimize safe conveyance of stormwater runoff to discharge points. These activities have the potential of introducing sediments, floatables and other pollutants into stormwater runoff.

NYC MS4 SPDES Permit Requirement(s)	IV.G Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities IV.H Industrial and Commercial Sources IV.I Trash and Debris Control
KEY SELECTION CRITERIA	
Targeted Activities	<ul style="list-style-type: none"> Cleaning and repair of storm sewers and underground facilities
Performance Goals	<ul style="list-style-type: none"> Minimize pollutants entering waterways and wetlands Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Capture and properly dispose of wastes Clean storm sewers and underground facilities during dry weather
RELATED CONTROL MEASURES AND REGULATIONS	
Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-11 SCM-PP/GH-19 SCM-PP/GH-26 SCM-PP/GH-27
Other Regulatory Requirements*	Potentially applicable regulations included in the referenced SCMs.

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS	
✓✓	Floatables
✓✓	Sediments
✓	Nitrogen
✓	Phosphorus
✓	Pathogens
✓	Oxygen Demand
	PCBs
	Metals
✓	Petroleum Products/PAHs
✓✓ = Good ✓ = Fair = Poor	

CONTROL STRATEGIES	
✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
	Product Substitutions
	Manage Runoff
✓	Capture/Treat/Dispose
✓ = Yes	

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Containment devices such as berms and booms should be installed during cleaning & repair activities.
- Exposed work areas should be covered during non-work hours.

CLEAN UP

- Manage wastes generated during cleaning and repair activities according to SCM-PP/GH-26 and appropriate regulatory requirements.
- Respond to any spills quickly and efficiently.
- Maintain a log of the amount of sediment collected and date removed.
- Keep records on accumulation rates within each underground facility using GIS or other tracking system and identify priority areas with high accumulation rates.
- Remove sediment and debris from underground facilities during dry weather, when possible, following manufacturer's instructions, to prevent resuspension of sediments and pollutants during rain and snow events.

REDUCE/MINIMIZE

- During cleaning and repair, report suspected illicit discharges, such as sewage effluent or chemical contamination.
- Repairs should be performed using the minimum amount of materials necessary to complete the task to avoid generation of waste and minimize spills.

PRODUCT SUBSTITUTION

N/A

MANAGE RUNOFF

N/A

CAPTURE AND TREAT

- Collect and discharge water used to flush storm sewers to the sanitary sewer system in order to protect waterways and wetlands.
- For systems that discharge to a waterway or wetland, install structural sediment control measures at the downstream end to capture flushed materials.
- Sediment and debris removed should be properly handled and disposed.

References

1. USEPA, *Potential Pollutants Likely Associated with Specific Municipal Facilities and Activities*, November 2015
2. USEPA/Center for Watershed Protection, *Municipal Pollution Prevention/Good Housekeeping Practices, Manual 9, Version 1.0, September 2008*.
3. NYSDOT, *Highway Maintenance Guidelines, Chapter 6: Drainage, January 2009*
4. Western New York Stormwater Coalition, *Erie County Department of Environment and Planning Division of Environmental Compliance Services, Pollution Prevention/Good Housekeeping for Municipal Operations: A Guidance Document of Best Management Practices and Inspection Checklist, April 2006*
5. USEPA, *Pollution Prevention/Good Housekeeping for Municipal Operations, National Menu, 20016*. NYSDOT, *Environmental Handbook for Transportation Operations, June 2011*

These control strategies and suggested practices are not all-inclusive and are intended to help identify practices that are efficient, effective and practicable in addressing potential impacts to stormwater.

Stormwater Collection System



Issue Date: June 2020

DITCH/OPEN CHANNEL CLEANING AND REPAIR

SCM-PP/GH-13



Description

Ditches and open channels require cleaning and repair to optimize safe conveyance of stormwater runoff to discharge points. These activities have the potential of introducing sediments, floatables and other pollutants into stormwater runoff.

SPDES Permit Requirement(s)	IV.G Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities IV.H Industrial/Commercial Sources IV.I Trash and Debris Control
KEY SELECTION CRITERIA	
Targeted Activities	<ul style="list-style-type: none"> Cleaning and repair of ditches and open channels
Performance Goals	<ul style="list-style-type: none"> Minimize pollutants entering waterways Implement good housekeeping practices Manage sediment discharge during cleaning and repair
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Capture and properly dispose of generated sediment Install temporary check dams and inlet protection Avoid stripping of vegetation during cleaning
RELATED CONTROL MEASURES AND REGULATIONS	
Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-19 SCM-PP/GH-26 SCM-PP/GH-27 SCM-PP/GH-38
Other Regulatory Requirements*	Potentially applicable regulations included in the referenced SCMs.

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

✓✓	Floatables
✓✓	Sediments
	Nitrogen
✓	Phosphorus
	Pathogens
	Oxygen Demand
	PCBs
	Metals
	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- During cleaning and repair, provide temporary cover, such as mulch or a tarp, over exposed earth areas to minimize exposure to rain or snow.

CLEAN UP

- Sweep up and remove any loose debris and dispose of properly.
- Regularly clean ditches and open channels of trash and debris.

REDUCE/MINIMIZE

- Limit disturbances to the bottom of the ditch, where sediment has accumulated, with minor side slope regrading.
- Avoid stripping of vegetation during cleaning.
- Cleaning should ideally be conducted between June and October, and only in areas where function is impaired.
- Begin cleaning at lowest elevation point and work uphill to the point of highest elevation to reduce erosion and flooding.

PRODUCT SUBSTITUTION

N/A

MANAGE RUNOFF

- Avoid cleaning ditches during or immediately before rainfall events.

CAPTURE/TREAT/DISPOSE

- When feasible, dispose of removed clean sediment in a suitable upland site.
- Contaminated soil and sediment must be captured and properly disposed of.
- Install temporary check dams to reduce sedimentation in downstream waterways. Leave in place until ditch revegetates.

References

1. USEPA, *Potential Pollutants Likely Associated with Specific Municipal Facilities and Activities*, November 2015
2. NYSDOT, *Environmental Handbook for Transportation Operations*, June 2011
3. Western New York Stormwater Coalition, *Erie County Department of Environment and Planning Division of Environmental Compliance Services, Pollution Prevention/Good Housekeeping for Municipal Operations: A Guidance Document of Best Management Practices and Inspection Checklist*, April 2006
4. NYSDEC *Maintenance Guidance Stormwater Management Practices*, March 2017
5. NYS *Standards and Specifications for Erosion and Sediment Control*, November 2016

Stormwater Collection System



Issue Date: August 2018

GREEN INFRASTRUCTURE/OPEN FACILITY MAINTENANCE

SCM-PP/GH-14



Description

Green infrastructure and open facilities require periodic maintenance to allow them to continue to function as designed. These maintenance activities have the potential for introducing sediments, floatables, nutrients and other pollutants into stormwater runoff and impacting impaired waters.

NYC MS4 SPDES Permit Requirement(s)	IV.G Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities IV.I Trash and Debris Control
KEY SELECTION CRITERIA	
Targeted Activities	<ul style="list-style-type: none"> Maintenance of green infrastructure and open facilities Accumulated sediment removal and vegetation replacement
Performance Goals	<ul style="list-style-type: none"> Minimize pollutants entering storm sewers and waterways Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Install temporary inlet protection and check dams Properly dispose of sediment, waste and debris Protect revegetated areas until stabilized
RELATED CONTROL MEASURES AND REGULATIONS	
Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-22 SCM-PP/GH-26
Other Regulatory Requirements*	Potentially applicable regulations included in the referenced SCMs.

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

✓✓	Floatables
✓✓	Sediments
✓	Nitrogen
✓	Phosphorus
✓	Pathogens
✓	Oxygen Demand
	PCBs
	Metals
	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Cover or stabilize exposed earth areas throughout the duration of maintenance activities.

CLEAN UP

- Regularly remove trash and debris and dispose of properly.

REDUCE/MINIMIZE

- Limit disturbances to the bottom of the swale, where sediment has accumulated, with minor side slope regrading.
- Avoid or minimize use of fertilizer, pesticides and herbicides.
- Use vacuum cleaning on porous pavement.
- Perform work in dry weather to minimize potential for erosion.

PRODUCT SUBSTITUTION

- Use substitutes for soluble nitrogen fertilizers and compost on green roofs due to potential for introducing nutrients into stormwater.
- Avoid using sand during deicing activities on porous paving - use less harmful alternatives.
- Use non-chemical based pest and plant control practices.

MANAGE RUNOFF

- Protect disturbed areas with an erosion control mulch or mat until area has stabilized. Remove dead/dying vegetation and grass clippings to reduce the release of nutrients during decomposition.
- Minimize use of heavy equipment in and around practices to avoid compaction and increased runoff.

CAPTURE/TREAT/DISPOSE

- Install temporary sediment controls such as inlet protection and check dams to protect downstream waterways.
- Capture and remove sediment and debris in forebays and green infrastructure practices.
- Install and regularly clean out litter control barriers, such as screens, to prevent accumulation in green infrastructure practices.

References

1. USEPA, *Potential Pollutants Likely Associated with Specific Municipal Facilities and Activities*, November 2015
2. NYSDOT, *Environmental Handbook for Transportation Operations*, June 2011
3. California Stormwater Quality Association, *Best Management Practice Handbook - Municipal*, January 2003
4. NYDEC, *New York State Stormwater Management Design Manual*, January 2015
5. MADEP, *Massachusetts Stormwater Handbook, Volume 2*, 2000

Stormwater Collection Systems



Issue Date: August 2018

HYDROLOGIC AND HABITAT MODIFICATION

SCM-PP/GH-15



Description

Hydrologic and habitat modification activities, such as streambank or shoreline stabilization, have the potential to change flow regimes and add sediment to waterways. Implementing control strategies can minimize this potential. Permits may be required for activities that impact Waters of the United States, navigable waters, freshwater and tidal wetlands, coastal zones, and floodplains.

NYC MS4 SPDES Permit Requirement(s)	IV.G Pollution Prevention/Good Housekeeping for Municipal Operations	
KEY SELECTION CRITERIA		
Targeted Activities	<ul style="list-style-type: none"> Hydrologic and habitat modification 	
Performance Goals	<ul style="list-style-type: none"> Minimize pollutants entering storm sewers and waterways 	
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Protect streambanks and shorelines Control streambed erosion and sediment deposition Minimize erosion of coastal shoreline 	
RELATED CONTROL MEASURES AND REGULATIONS		
Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-19 SCM-PP/GH-22 SCM-PP/GH-26 	<ul style="list-style-type: none"> SCM-PP/GH-27 SCM-PP/GH-38
Other Regulatory Requirements*	<ul style="list-style-type: none"> 6 NYCRR 182-182.2, 664.5 and 664.6 33 CFR 320.4 ECL Article 15 Titles 5 and 27, Article 24, Article 25, 34, and 36 Federal Clean Water Act Sections 401/404, River and Harbor Act Section 10, MPRSA Section 103 	

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

✓	Floatables
✓✓	Sediments
✓	Nitrogen
	Phosphorus
✓	Pathogens
✓✓	Oxygen Demand
	PCBs
✓	Metals
	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
	Clean Up
✓	Reduce/Minimize
	Product Substitutions
✓	Manage Runoff
	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations; ECL: Environmental Conservation Law

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- During construction and repairs, cover disturbed/exposed soils with mulch or other practices until vegetation is established and final surface is in place.
- Contain material and sediment with erosion barriers during construction and/or repairs.

CLEAN UP

N/A

REDUCE/MINIMIZE

- Stage work to minimize exposed soils.
- Protect streambanks & shorelines by using vegetation, structures, management techniques, or biotechnology.*
- Control streambed erosion and sediment deposition by use of instream flow control structures.
- Use structural or non-structural practices to minimize erosion of coastal shoreline. Includes use of vegetation, relocation of structures, bulkheads, & retaining walls.*
- Use geotextiles to assist in the establishment of vegetation or placement of riprap.
- Decrease erosion of channels by selective removal of trees and sediments to re-establish original channel gradient and hydraulic capacity.
- Where possible, modify stream cross-sections to reduce velocity & scour, by installing geotextiles, low-flow channels, backwater channels, or interlocking concrete blocks with voids for vegetation & groundwater recharge.
- Operate reservoirs in a manner such that sediment is controlled in the stream channel.

PRODUCT SUBSTITUTION

N/A

MANAGE RUNOFF

- Implement stream corridor protection programs, including retention and restoration of vegetation and remediation practices.
- Install or maintain corridors of trees, shrubs or grasses at the margins of water bodies, groundwater recharge areas, and between development areas and urban waterbodies.
- Use green infrastructure to help restore the hydrologic flow regime to address hydromodification.

CAPTURE/TREAT/DISPOSE

N/A

*Any work in or adjacent to Waters of the United States must comply with all regulatory requirements, including Sections 401 and 404 of the Clean Water Act and any state, wetland, and tidal wetland regulations.

References

1. NYSDEC *Hydrologic and Habitat Modification Management Practices Catalogue for Nonpoint Source Pollution Prevention and Water Quality Protection in New York State, August 1995.*

Paved Surface Maintenance



Issue Date: August 2018

PAVEMENT CLEANING SCM-PP/GH-16



Description

Pavement cleaning or street sweeping is critical to reducing the amount of trash, litter, sediments, and other pollutants entering storm sewers and waterways. Implementing the following management practices can help minimize the introduction of pollutants into the storm drain system and waterways.

NYC MS4 SPDES Permit Requirement(s)	IV.E Construction Site Controls IV.G Pollution Prevention/Good Housekeeping for Municipal Operations IV.H Industrial / Commercial Sources IV.I Trash and Debris Control
--	--

KEY SELECTION CRITERIA

Targeted Activities	<ul style="list-style-type: none"> Street, sidewalk, parking lots, and other pavement cleaning and sweeping
Performance Goals	<ul style="list-style-type: none"> Minimize pollutants entering storm sewers and waterways Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Sweep streets at optimal frequency for area Select most effective combination of sweeper technology Work with police departments to enforce parking restrictions

RELATED CONTROL MEASURES AND REGULATIONS

Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-11 SCM-PP/GH-17 SCM-PP/GH-18 SCM-PP/GH-19 SCM-PP/GH-20 SCM-PP/GH-26 SCM-PP/GH-27
Other Regulatory Requirements*	<ul style="list-style-type: none"> 34 RCNY 4.02 and 4.08

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

✓✓	Floatables
✓✓	Sediments
✓	Nitrogen
✓	Phosphorus
	Pathogens
✓	Oxygen Demand
	PCBs
✓	Metals
✓	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
	Manage Runoff
	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

N/A

CLEAN UP

- Clean out sweepers and deposit sweepings in designated areas and dispose of properly.

REDUCE/MINIMIZE

- Sweep streets at the optimal frequency to achieve the maximum feasible pollutant removal, given local rainfall, street density, tree cover, curb access and traffic safety.
- Enforce regulations for litter control and trash and refuse storage.
- Ensure that equipment is in good working order and contains filters and/or other controls as feasible.
- Maintain a training program for operators on the use of street sweepers.
- Perform tandem sweeping or make multiple passes on a street whenever conditions necessitate.
- Patrol designated routes to ticket illegally parked cars to optimize access to trash and floatables accumulated at the curb.

PRODUCT SUBSTITUTION

- Select the more effective regenerative air and vacuum sweeper technologies if consistent with municipal budgets.

MANAGE RUNOFF

N/A

CAPTURE/TREAT/DISPOSE

N/A

References

1. NYSDOT, ESB, *Environmental Handbook for Transportation Operations, A Summary of the Environmental Requirements and Best Practices for Maintaining and Constructing Highways and Transportation Systems*, June 2011
2. USEPA, *Urban Subwatershed Restoration Manual Series, Municipal Pollution Prevention/Good Housekeeping Practices Manual 9*, September 2008
3. NYS DEC, *Urban/Stormwater Runoff Management Practices Catalogue for Nonpoint Source Pollution Prevention in New York State*, February 2002

Paved Surface Maintenance



Issue Date: August 2018

PAVEMENT/SIDEWALK RESURFACING AND REPAIR

SCM-PP/GH-18



Description

Pavement/sidewalk resurfacing and repair uses materials and activities that can contaminate waterways if they interact with stormwater. Implementing the following management practices can help minimize the introduction of pollutants into the storm drain system and waterways.

NYC MS4 SPDES Permit Requirement(s)	IV.E Construction Site Controls IV.G Pollution Prevention/Good Housekeeping for Municipal Operations IV.H Industrial / Commercial Sources
KEY SELECTION CRITERIA	
Targeted Activities	<ul style="list-style-type: none"> Pavement and sidewalk resurfacing and repair
Performance Goals	<ul style="list-style-type: none"> Minimize pollutants entering storm drains and waterways Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Prevent paving materials from entering the storm sewer Perform paving or marking activities in dry weather Collect any loose materials soon after construction activities
RELATED CONTROL MEASURES AND REGULATIONS	
Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-10 SCM-PP/GH-16 SCM-PP/GH-19 SCM-PP/GH-38 SCM-PP/GH-20 SCM-PP/GH-26 SCM-PP/GH-27 SCM-PP/GH-32
Other Regulatory Requirements*	<ul style="list-style-type: none"> 34 RCNY 2-09, 2-11 & 2-13(l)

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

✓	Floatables
✓✓	Sediments
	Nitrogen
✓	Phosphorus
	Pathogens
✓	Oxygen Demand
	PCBs
✓✓	Metals
✓	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Use tarps or other covers on exposed soil areas during resurfacing and repairs.

CLEAN UP

- Collect any loose sand, gravel, asphalt, or other material as soon as possible after construction activities. Never wash excess materials into a street, gutter or storm drain.
- Shovel or vacuum to clean up saw-cut slurry and remove from site for proper disposal.
- When placing chip seals, limit spreading aggregate to the sealed surface and sweep up excess aggregate.

REDUCE/MINIMIZE

- Minimize the area of soils left exposed or graded during resurfacing and repair.
- Use dry cutting techniques when saw cutting and sweep/vacuum residue.
- If wet cutting is necessary, control cooling water use and switch the water off when the saw is not in use.
- Perform traffic marking or paving activities that use concrete, asphalt, or other sealers only in dry weather.
- Use booms and vacuums during painting, wet saw cutting, sand blasting, or water blasting activities.
- Reuse road spoil in repairs if possible.
- Eliminate “edge break” by fully sealing road shoulders.

PRODUCT SUBSTITUTION

- When marking pavement/sidewalk, use water-based paints or thermoplastics rather than solvent-based ones.

MANAGE RUNOFF

- Use check dams, ditches or berms to divert runoff around excavations.
- Avoid over-application by water trucks for dust control.
- Prevent paving materials and wastes from entering the storm sewer. Cover all catch basins while milling and resurfacing.

CAPTURE/TREAT/DISPOSE

- Collect saw cut water and concrete washout.

References

1. Western New York Stormwater Coalition, Erie County Department of Environment and Planning Division of Environmental Compliance Services, *Pollution Prevention/Good Housekeeping for Municipal Operations: A Guidance Document of Best Management Practices and Inspection Checklist*, April 2006
2. USEPA, *Urban Subwatershed Restoration Manual Series Municipal Pollution Prevention/Good Housekeeping Practices Manual 9*, September 2008
3. NYCDOT, *ROW Operations*, February 2016

Paved Surface Maintenance



Issue Date: August 2018

SPILL PREVENTION AND RESPONSE

SCM-PP/GH-19



Description

Prevention of spills and well-coordinated response is crucial to preventing pollutants from entering the storm sewers and waterways. All regulations regarding spill reporting must be followed to ensure the appropriate agencies are responding to spills.

NYC MS4 SPDES Permit Requirement(s)

IV.E Construction Site Controls
IV.G Pollution Prevention/Good Housekeeping for Municipal Operations
IV.H Industrial/Commercial Sources

KEY SELECTION CRITERIA

Targeted Activities	<ul style="list-style-type: none"> • Spill prevention • Spill response and containment
Performance Goals	<ul style="list-style-type: none"> • Minimize pollutants entering storm drains and waterways • Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> • Follow spill reporting requirements • Implement spill prevention plans • Create and implement spill response plans

RELATED CONTROL MEASURES AND REGULATIONS

Related SCMs	• Relevant to all SCM-PP/GH-1 through -38
Other Regulatory Requirements*	<ul style="list-style-type: none"> • 15 RCNY 11 • 40 CFR Part 112 • 6NYCRR Part 597.4 • 40 CFR 355, 370 & 372

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

	Floatables
	Sediments
✓	Nitrogen
✓	Phosphorus
	Pathogens
	Oxygen Demand
✓	PCBs
✓	Metals
✓✓	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

N/A

CLEAN UP

- Have appropriate materials available at targeted locations to contain and clean-up spills. Properly dispose of all waste materials.
- Engage trained employees, third parties, and/or emergency response agencies as required by the type, location, and magnitude of the spill event.
- Follow appropriate guidance in determining when cleanup standards have been met.
- In case of a spill, plug any drains impacted, contain the spill by placing absorbent booms or “socks” around perimeter, and properly dispose of waste materials.
- Use dry cleaning methods where possible.

REDUCE/MINIMIZE

- Perform regular preventative maintenance to prevent spills from occurring.
- Install leak detection devices, overflow controls, and diversion berms. Inspect devices or systems daily.
- Use material transfer procedures or filling procedures for tanks and other equipment that minimize spills.
- Post cleanup procedures near potential spill areas and keep fully stocked spill kits nearby.

PRODUCT SUBSTITUTION

N/A

MANAGE RUNOFF

- Identify potential spill or source areas, such as loading and unloading, storage, processing, and waste disposal areas. Where necessary, implement practices to isolate them from waterways and storm drains.
- Stop additional material from spilling at its source if possible, (e.g., plug a leaking hole, turn a leaking barrel on its side, or use temporary stormwater catch basin covers).

CAPTURE/TREAT/DISPOSE

- When feasible, apply absorbent materials directly to spill to stop or slow flow.
- Retain and dispose of cleanup materials in accordance with regulations.

References

1. USEPA *Pollution Prevention/Good housekeeping for Municipal Operations, National Menu, 2001*
2. NYSDOT, ESB, *Environmental Handbook for Transportation Operations, A Summary of the Environmental Requirements & Best Practices for Maintaining and Constructing Highways & Transportation Systems, June 2011*
3. NYSDEC, *Leaks, Spills and Accidents Management Practices Catalogue for Nonpoint Source Pollution Prevention and Water Quality Protection in New York State, June 1996*

These control strategies and suggested practices are not all-inclusive and are intended to help identify practices that are efficient, effective and practicable in addressing potential impacts to stormwater.

Paved Surface Maintenance



Issue Date: August 2018

BRIDGE / ELEVATED STRUCTURE MAINTENANCE

SCM-PP/GH-20



Description

Bridge and elevated structure repairs use materials and processes that can contaminate receiving waters if they are exposed to stormwater or are discharged into waterways. Implementing the following management practices can minimize the introduction of pollutants into the storm drain system and waterways.

NYC MS4 SPDES Permit Requirement(s)	IV.E Construction Site Controls IV.G Pollution Prevention/Good Housekeeping for Municipal Operations
KEY SELECTION CRITERIA	
Targeted Activities	<ul style="list-style-type: none"> • Bridge and elevated structure maintenance
Performance Goals	<ul style="list-style-type: none"> • Minimize pollutants entering storm drains and waterways • Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> • Collect all loose dirt and debris before washing • Control particulate wastes from sandblasting operations • Clean out bridge scuppers and catch basins regularly • Place drop cloths or tarps under work areas to capture falling debris
RELATED CONTROL MEASURES AND REGULATIONS	
Related SCMs	<ul style="list-style-type: none"> • SCM-PP/GH-11 • SCM-PP/GH-15 • SCM-PP/GH-16 • SCM-PP/GH-17 • SCM-PP/GH-18 • SCM-PP/GH-19 • SCM-PP/GH-26 • SCM-PP/GH-27 • SCM-PP/GH-32
Other Regulatory Requirements*	<ul style="list-style-type: none"> • 17 NYCRR 165.1 through 165.6 & 165.13 • 23 CFR 650 Subpart C

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS	
✓	Floatables
✓✓	Sediments
	Nitrogen
	Phosphorus
	Pathogens
	Oxygen Demand
	PCBs
✓	Metals
✓✓	Petroleum Products/PAHs
✓✓ = Good ✓ = Fair = Poor	

CONTROL STRATEGIES	
✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose
✓ = Yes	

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Place drop cloths and tarps under work areas to catch falling debris.
- Use localized containment when painting over water or using lubricating equipment for moveable bridges.

CLEAN UP

- Clean up spills immediately, following reporting and spill response protocols.
- Properly dispose of waste generated during spill clean up.

REDUCE/MINIMIZE

- Avoid/minimize the use of a hose for cleaning.
- Before washing, clean all loose sand, dirt, and debris from the upper surface of bridge deck by sweeping and/or vacuuming.
- Do not wash areas of bridges with rusted and flaking paint chips. Repainting may be required.

PRODUCT SUBSTITUTION

- Use calcium magnesium acetate, potassium acetate, or sodium acetate for deicing around bridges to minimize corrosion.
- Detergents should not be used for bridge washing.

MANAGE RUNOFF

- Install catch basins in place of bridge scuppers, where possible. Scuppers can cause direct discharges to surface waters.

CAPTURE/TREAT/DISPOSE

- Control particulate wastes from abrasive blasting operations.
- Clean out bridge scuppers and catch basins regularly and direct runoff from bridges to vegetated areas, where possible.

References

1. *NYS DOT, ESB, Environmental Handbook for Transportation Operations, A Summary of the Environmental Requirements and Best Practices for Maintaining and Constructing Highways and Transportation Systems, June 2011*
2. *Roadway and Right-of-Way Maintenance, Management Practices Catalogue for Nonpoint Source Pollution Prevention and Water Quality Protection in New York State, June 1994*
3. *Memorandum of Understanding between NYS DOT and NYC DEP Concerning Transportation Projects in the Watershed of NYC Water Supply, 1999*
4. *Western New York Stormwater Coalition, Erie County Department of Environment and Planning Division of Environmental Compliance Services, Pollution Prevention/Good Housekeeping for Municipal Operations: A Guidance Document of Best Management Practices and Inspection Checklist, April 2006*
5. *USEPA, Urban Subwatershed Restoration Manual Series Municipal Pollution Prevention/Good Housekeeping Practices Manual 9, September 2008*

Landscape and Open-Space Maintenance



Issue Date: August 2018

HERBICIDES / PESTICIDES / FERTILIZER APPLICATIONS

SCM-PP/GH-21



Description

The application of herbicides, pesticides, and fertilizers can introduce nutrients, such as nitrogen and phosphorous, and other pollutants to stormwater runoff. Use of control measures can help minimize the potential for introduction of these pollutants into the stormwater system and local waterways.

NYC MS4 SPDES Permit Requirement(s)	IV.A. Public Outreach/Education IV.E. Construction Site Controls IV.G. Pollution Prevention/Good Housekeeping for Municipal Operations IV.H. Industrial/Commercial Sources
KEY SELECTION CRITERIA	
Targeted Activities	<ul style="list-style-type: none"> Herbicide, pesticide, and fertilizer application
Performance Goals	<ul style="list-style-type: none"> Reduce application of herbicides/pesticides/fertilizers Minimize nutrients from entering storm sewers or waterways Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Education of public employees Integrated pest management Application timing and management control
RELATED CONTROL MEASURES AND REGULATIONS	
Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-4 SCM-PP/GH-9 SCM-PP/GH-22 thru 26
Other Regulatory Requirements*	<ul style="list-style-type: none"> 6 NYCRR Parts 320.1, 325, 327.1 and 327.4 40 CFR Parts 150-189 40 CFR 455 NYC Local Law 37 NYS Environmental Conservation Law, Article 17, Title 21

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS	
	Floatables
	Sediments
✓✓	Nitrogen
✓✓	Phosphorus
	Pathogens
✓	Oxygen Demand
	PCBs
	Metals
	Petroleum Products/PAHs
✓✓ = Good ✓ = Fair = Poor	

CONTROL STRATEGIES	
✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
	Manage Runoff
✓	Capture/Treat/Dispose
✓ = Yes	

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Control Strategies/Suggested Practices

COVER/CONTAIN

- Store herbicides, pesticides, and fertilizers indoors or in covered storage areas.
- Store in tightly sealed containers.
- Cover ground where mixing or preparation occurs to contain spills.

CLEAN UP

- Clean up spills immediately and dispose of waste materials according to manufacturer's recommendations.
- Frequently clean storage area using dry sweeping methods and dispose of waste materials according to manufacturer's recommendations.
- Refrain from using water, when feasible, to clean herbicide, pesticide, and fertilizer storage areas.
- Sweep and collect dry materials.

REDUCE/MINIMIZE

- Inspect chemical storage containers frequently for leaks and spills.
- Do not mix or prepare near storm drains or in areas that sheet flow directly into water bodies.
- Work fertilizers into soil when possible.
- Prepare the minimum amount needed for the job based on manufacturer's instructions and use the lowest rate that will provide effective control. Apply all prepared mixtures to avoid waste generation.
- Plan selection, rate, and timing of application of fertilizers, pesticides, and herbicides to minimize contaminated runoff.
- Apply integrated pest management practices, such as mulching, to prevent weeds; using insect traps; disinfecting pruning equipment after removing diseased vegetation; and encouraging beneficial organisms.
- Select and use herbicides and pesticides to target only immediate pests of concern, not on a regular preventative schedule.
- Use proper fertilizer for specific nutrient applications at the correct plant-life cycle.
- Do not apply herbicides, pesticides and fertilizer immediately before or during wet weather.

PRODUCT SUBSTITUTION

- Use organic herbicides or hand weeding where feasible.
- Use mulch to prevent weeds.

MANAGE RUNOFF

N/A

CAPTURE/TREAT/DISPOSE

- Any waste generated from unused product should be collected and disposed of properly.

References

- 1) NYSDEC, *Urban/Stormwater Runoff Management Practices Catalogue for Nonpoint Source Pollution Prevention in New York State, February 2002*
- 2) NYSDEC, *Construction Management Practices Catalogue for Nonpoint Source Pollution Prevention in New York State, June 2000*
- 3) NYSDEC, *SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity, September 2012*
- 4) FDNY, *Contract for Landscaping Services, January 2011*

Landscape and Open-Space Maintenance



Issue Date: August 2018

LANDSCAPING / TURF / GROUNDS CARE

SCM-PP/GH-22



Description

Pollutants generated from overwatering; vegetation, turf, and ground cover maintenance; and debris and waste management can contaminate runoff. Use of control measures can help minimize the potential for introducing pollutants into the stormwater system and local waterways.

NYC MS4 SPDES Permit Requirement(s)

- IV.A. Public Outreach/Education
- IV.E. Construction Site Controls
- IV.G. Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities
- IV.H. Industrial/Commercial Sources

KEY SELECTION CRITERIA

Targeted Activities	<ul style="list-style-type: none"> • Watering and irrigation • Fertilizer, pesticide, and herbicide use • Debris and waste management
Performance Goals	<ul style="list-style-type: none"> • Reduce watering frequency and duration • Reduce stormwater contact with soil, clippings, and landscaping debris • Implement good housekeeping practices
Most Effective Controls (more detail on page 2)	<ul style="list-style-type: none"> • Manage irrigation timing and quantity • Cover stockpiled materials, clippings, and debris trash • Match chemical applications with specific need

RELATED CONTROL MEASURES AND REGULATIONS

Related SCMs	<ul style="list-style-type: none"> • SCM-PP/GH-14 • SCM-PP/GH-21 • SCM-PP/GH-24 • SCM-PP/GH-25 • SCM-PP/GH-26 • SCM-PP/GH-27 • SCM-PP/GH-38
Other Regulatory Requirements*	Potentially applicable regulations included in the referenced SCMs.

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

✓	Floatables
✓✓	Sediments
✓✓	Nitrogen
✓✓	Phosphorus
	Pathogens
✓	Oxygen Demand
	PCBs
	Metals
	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Provide cover and containment for soil and mulch stockpiles.
- Cover and contain temporary debris and waste storage piles.
- Mulch exposed soil areas to limit transport of contaminants.
- Store chemicals in sealed containers in a covered area, where feasible. Provide secondary containment.

CLEAN UP

- Collect vegetative waste/debris/grass clippings using dry sweeping methods and dispose of properly.
- Collect trash/debris frequently and dispose of properly.
- Manage/properly dispose of grass clippings to minimize discharge to inlets, drains and waterways.
- Inspect chemical storage containers frequently for leaks or spills.
- Sweep up misapplied solid fertilizer on hard surfaces and dispose of properly.

REDUCE/MINIMIZE

- Mow only when necessary to maintain functionality or appearance. Base mower selection on cut height.
- Perform landscape/turf maintenance during dry weather.
- Select vegetation/turf that requires less maintenance.
- Match fertilizer, herbicide, and pesticide types/qualities/application rate to specific needs.

PRODUCT SUBSTITUTION

- Use integrated pest management practices.
- Use mulch materials that stay in place during heavy rains, such as triple shredded mulch.
- Substitute environmentally friendly chemical alternatives where possible.

MANAGE RUNOFF

- Control the rate, amount, and timing of landscape irrigation or watering to minimize runoff.

CAPTURE/TREAT/DISPOSE

- Divert mowing waste away from waterways, collect and dispose of properly.
- Collect pesticide, herbicide and fertilizer waste and dispose of properly.

References

- 1) NYSDEC, *Urban/Stormwater Runoff Management Practices Catalogue for Nonpoint Source Pollution Prevention in New York State*, February 2002
- 2) Western New York Stormwater Coalition, *Erie County Department of Environment and Planning Division of Environmental Compliance Services, Pollution Prevention/Good Housekeeping for Municipal Operations: A Guidance Document of Best Management Practices and Inspection Checklist*, April 2006
- 3) NYSDEC, *Silviculture Management Practices Catalogue for Nonpoint Source Pollution Prevention and Water Quality Protection in New York State*, October 1993
- 4) NYCDOT, *Right of Way Operations*, February 2016

Landscape and Open-Space Maintenance

Issue Date: August 2018



SYNTHETIC TURF MANAGEMENT

SCM-PP/GH-23



Description

Pollutants from turf management, painting, rubberized pellet infill management, and equipment maintenance can contaminate runoff. Use of control measures can help minimize the potential introduction of pollutants into the stormwater system and local waterways.

NYC MS4 SPDES Permit Requirement(s)	IV.A Public Outreach/Education IV.G Pollution Prevention/Good Housekeeping For Municipal Operations IV.H Industrial/Commercial Sources
KEY SELECTION CRITERIA	
Targeted Activities	<ul style="list-style-type: none"> Artificial turf painting and maintenance Management of infill material
Performance Goals	<ul style="list-style-type: none"> Minimize exposure of paint & infill material Minimize paint and infill in runoff
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Store paint/infill material in closed containers under cover where feasible Minimize infill in runoff by keeping infill materials on field and avoid using water to wash field
RELATED CONTROL MEASURES AND REGULATIONS	
Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-6 SCM-PP/GH-19 SCM-PP/GH-26
Other Regulatory Requirements*	Potentially applicable regulations included in the referenced SCMs.

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

✓	Floatables
	Sediments
	Nitrogen
	Phosphorus
	Pathogens
	Oxygen Demand
	PCBs
✓	Metals
✓	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
	Manage Runoff
	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Control Strategies/Suggested Practices

COVER/CONTAIN

- Store paint and infill material in a covered area, where feasible, and in tightly sealed containers.
- Provide secondary containment for chemical storage areas.
- Provide temporary cover for exposed soil areas during turf maintenance.

CLEAN UP

- Sweep areas around playing field to keep infill material on the field
- Inspect chemical storage containers frequently for leaks or spills.
- Groom the field once a month during season to distribute infill material evenly.
- Collect trash and debris frequently and dispose of properly.

REDUCE/MINIMIZE

- Use the minimum quantity of paint necessary to achieve the desired results.
- Do not use water to wash or cool down the playing field.

PRODUCT SUBSTITUTION

- Substitute rubber pellets for organic infill materials.
- Use water-based paints & those listed in the USEPA's Design for the Environment (DfE) labeled products. Do not use aerosol paint.
- Use paint removers that are formulated specifically for the type of paint and turf.

MANAGE RUNOFF

N/A

CAPTURE/TREAT/DISPOSE

N/A

References

- 1) NYSDEC, *Urban/Stormwater Runoff Management Practices Catalogue for Nonpoint Source Pollution Prevention in New York State, February 2002*
- 2) Western New York Stormwater Coalition, Erie County Department of Environment and Planning Division of Environmental Compliance Services, *Pollution Prevention/Good Housekeeping for Municipal Operations: A Guidance Document of Best Management Practices and Inspection Checklist, April 2006*

Landscape and Open-Space Maintenance



Issue Date: August 2018

GOLF COURSES

SCM-PP/GH-24



Description

Pollutants generated from overwatering, fertilizer applications, mowing, sand/sediment stockpiles, and chemical storage can contaminate runoff. Use of control measures can help minimize the potential introduction of pollutants into the stormwater system and local waterways.

NYC MS4 SPDES Permit Requirement(s)	IV.G Pollution Prevention/Good Housekeeping for Municipal Operations IV.H Industrial/Commercial Sources
KEY SELECTION CRITERIA	
Targeted Activities	<ul style="list-style-type: none"> Establishing or maintaining turfgrass and soils Sand and other material stockpiling Fertilizer, pesticide and other chemical applications
Performance Goals	<ul style="list-style-type: none"> Reduce watering frequency and duration Reduce runoff contact with soil and grass clippings Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Irrigation timing and amount management Fertilization timing and management control Minimize use of chemicals for turf and water hazard maintenance
RELATED CONTROL MEASURES AND REGULATIONS	
Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-9 SCM-PP/GH-21 SCM-PP/GH-22 SCM-PP/GH-38
Other Regulatory Requirements*	• 6 NYCRR 325.2, 325.4 and 325.16

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

✓	Floatables
✓✓	Sediments
✓✓	Nitrogen
✓✓	Phosphorus
	Pathogens
✓	Oxygen Demand
	PCBs
	Metals
	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
✓	Manage Runoff
✓	Capture /Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Sod heavily sloped areas or mulch new seedlings.
- Cover and contain sand, soil, and mulch stockpiles to prevent transport of contaminants.
- Store chemicals in a covered area, where feasible, and in tightly sealed containers.

CLEAN UP

- Collect and properly dispose of grass clippings during mowing.
- Respond to spills and leaks immediately.
- Sweep up fertilizer that is misapplied onto hard surfaces rather than using water to clean work areas.
- Sweep up grass clippings on hard surfaces rather than using water to clean work areas.

REDUCE/MINIMIZE

- Implement practices that reduce establishment time to full turfgrass cover and prevent soil transport.
- Perform landscape maintenance during dry weather.
- Use pesticides, herbicides and fertilizer based on need, not schedule, and use only the minimum quantity necessary.
- Use topdressing and cultivation to manage organic surface debris.
- Use integrated pest management practices, such as mulching to prevent weeds; using insect traps; disinfecting pruning equipment after removing diseased vegetation; and encouraging beneficial organisms.
- Use proper fertilizer for specific nutrient applications at correct turf cycle.
- Inspect chemical storage containers frequently for leaks or spills.
- Base mower selection on expected height of cut to minimize volume of clippings.

PRODUCT SUBSTITUTION

- Include genetically improved turfgrasses to reduce the need for fertilizer, pesticides, or water.

MANAGE RUNOFF

- Control the rate, amount, and timing of mowing or watering, especially during the establishment phase.
- Stockpile areas should be located away from storm sewers and waterways.

CAPTURE/TREAT/DISPOSE

- Waste collected from leaks in chemical storage areas shall be treated immediately according to manufacturer's directions.
- Collect pesticide, herbicide, and fertilizer waste and dispose of according to manufacturer's directions.
- Runoff from stockpile areas should be contained.

References

- 1) NYSDEC, *Urban/Stormwater Runoff Management Practices Catalogue for Nonpoint Source Pollution Prevention in New York State, February 2002*
- 2) Cornell University, *Best Management Practices for New York State Golf Courses, February 2014*
- 3) Western New York Stormwater Coalition, *Erie County Department of Environment and Planning Division of Environmental Com*
- 4) NYSDEC, *Construction Management Practices Catalogue for Nonpoint Source Pollution Prevention in New York State, June 2000*

Landscape and Open-Space Maintenance



Issue Date: August 2018

ANIMAL RECREATIONAL FACILITIES / STABLES MAINTENANCE SCM-PP/GH-25



Description

Pollutants from animal recreational facilities and stables can contain pathogens, nutrients, and sediment that can contaminate runoff. Use of control measures can minimize the potential introduction of pollutants into the stormwater system and local waterways.

NYC MS4 SPDES Permit Requirement(s)	IV.G. PP/GH For Municipal Operations IV.H. Industrial/Commercial Sources	
KEY SELECTION CRITERIA		
Targeted Activities	<ul style="list-style-type: none"> • Stockpiling of animal waste, feed, hay, soil, and sand • Animal and facility/stable maintenance and cleaning • Using dirt access roads and trails 	
Performance Goals	<ul style="list-style-type: none"> • Minimize stormwater contact with animal waste and material stockpiles • Implement good housekeeping practices 	
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> • Cover stockpiles and eliminate stormwater contact • Connect animal wash water stations to sewer • Stabilize dirt access roads and trails 	
RELATED CONTROL MEASURES AND REGULATIONS		
Related SCMs	<ul style="list-style-type: none"> • SCM-PP/GH-19 • SCM-PP/GH-21 • SCM-PP/GH-22 	<ul style="list-style-type: none"> • SCM-PP/GH-23 • SCM-PP/GH-26 • SCM-PP/GH-38
Other Regulatory Requirements*	<ul style="list-style-type: none"> • 24 RCNY - Title 14, 161.919 & 161.21 • 15 RCNY Chapter 19 	

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

✓	Floatables
✓✓	Sediments
✓✓	Nitrogen
✓✓	Phosphorus
✓✓	Pathogens
✓	Oxygen Demand
	PCBs
	Metals
	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
✓	Manage Runoff
	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Properly store, dispose of, or compost animal waste/manure to prevent contamination of runoff.
- Cover and contain stockpiles of feed, hay, soil, manure, and sand to prevent transport of contaminants.

CLEAN UP

- Clean up pet waste and manure daily to prevent stormwater pollution and protect animal health.
- Routinely check stockpile areas and sweep up any spills rather than using water to clean work areas.

REDUCE/MINIMIZE

- Locate material stockpile areas away from storm drains and waterways.
- Compost manure where possible to decompose and create a fertilizer on site. Dispose of manure in a landfill when composting is not possible.
- Stabilize dirt access roads or trails to prevent sediment from being transported to waterways.
- Provide pet waste supplies, signage, and convenient collection points for pet waste.
- Match timing and quantities of pesticide application to the specific needs to avoid overuse.

PRODUCT SUBSTITUTION

- Substitute pesticides with more biologically friendly practices or chemicals.

MANAGE RUNOFF

- Connect animal wash stations to sanitary sewer.[†] If this is not feasible, direct wash water away from storm drains, inlets, or waterways.
- Redirect runoff from stockpile areas before it enters storm drains or waterways.

CAPTURE/TREAT/DISPOSE

N/A

[†] Facility needs to ensure that all discharges to the sewer system comply with DEP regulations, as well as applicable DOB regulations.

References

- 1) NYSDEC, *Urban/Stormwater Runoff Management Practices Catalogue for Nonpoint Source Pollution Prevention in New York State, February 2002*
- 2) *Equine Best Management Practices, County of San Diego Watershed Protection Program*

Waste Management



Issue Date: August 2018

WASTE MANAGEMENT AND DISPOSAL

SCM-PP/GH-26



Description

Poor waste management and improper waste disposal practices can result in discharge of pollutants to the storm sewers and waterways. Consistent implementation of storm water control strategies that are applicable to the operation of concern can reduce the likelihood of discharges to impaired waters. In all instances, it is necessary to follow all applicable local, state and federal waste storage and disposal regulations and hazardous and non-hazardous materials.

NYC MS4 SPDES Permit Requirement(s)

- IV.A Public Outreach/Education
- IV.E Construction Site Controls
- IV.G PP/GH for Municipal Operations
- IV.H Industrial / Commercial Sources
- IV.I Trash and Debris Control

KEY SELECTION CRITERIA

Targeted Activities	<ul style="list-style-type: none"> • Waste generation • Waste management • Waste disposal
Performance Goals	<ul style="list-style-type: none"> • Contain wastes and minimize exposure to stormwater • Consistent implementation of good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> • Minimize waste generation • Segregate and reuse or recycle wastes where feasible • Provide cover/containment for temporary waste stockpiles

RELATED CONTROL MEASURES AND REGULATIONS

Related SCMs	<ul style="list-style-type: none"> • SCM-PP/GH-1 through -25 • SCM-PP/GH-27 through -38
Other Regulatory Requirements*	<ul style="list-style-type: none"> • 6 NYCRR Part 360, Part 370-374 • 40 CFR 243, 256.5, 257.3-3, 258.27, 261 and 264 • NYC Administrative Code, Title 16, Chapter 1

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

✓✓	Floatables
✓	Sediments
✓	Nitrogen
✓	Phosphorus
✓	Pathogens
✓	Oxygen Demand
	PCBs
✓	Metals
✓	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Store waste materials indoors or under cover prior to disposal.
- Cover dumpsters & other waste containers.
- Store waste chemicals and liquids in tightly sealed containers prior to disposal.
- Check waste containers and dumpsters frequently for leaks or spills.

CLEAN UP

- Keep work areas clean by sweeping/collecting/consolidating waste materials frequently.
- Respond immediately to spills.
- Use dry sorbent materials during spill response where practicable to reduce generation of liquid waste.
- Use dry cleaning methods such as sweeping, when feasible, to clean work areas.
- Clean work areas of waste materials prior to anticipated wet weather events.

REDUCE/MINIMIZE

- Minimize generation of waste materials through careful planning.
- Use the minimum amount of materials needed to complete the operation or activity.
- Use dry cleaning methods such as sweeping and vacuuming, when feasible, to clean roll-offs/dumpsters.
- Segregate and reuse or recycle waste materials where feasible.

PRODUCT SUBSTITUTION

- Use alternative products that generate less waste.
- Select/purchase materials that have minimal packaging.

MANAGE RUNOFF

- Divert storm water runoff from waste collection and management areas using practices such as physical barriers or piping.
- Locate waste collection, storage & management areas away from storm drains, inlets & waterways.

CAPTURE/TREAT/DISPOSE

- Where water is necessary for use, collect & treat water used to clean work areas where possible.
- Test collected water generated during cleaning to ensure that the appropriate disposal practice is followed.
- Dispose of treated waste materials following applicable regulations and guidance.

References

1. *Western New York Stormwater Coalition, Erie County Department of Environment and Planning Division of Environmental Compliance Services, Pollution Prevention/Good Housekeeping for Municipal Operations: A Guidance Document of Best Management Practices and Inspection Checklist, April 2006.*
2. *Center for Watershed Protection, Urban Subwatershed Restoration Manual Series No. 8: Pollution Source Control Practices, v.2, February 2005.*
3. *Center for Watershed Protection, Urban Subwatershed Restoration Manual Series No. 9: Municipal Pollution Prevention/Good Housekeeping Practices, September 2008*

DEBRIS MANAGEMENT AND DISPOSAL

SCM-PP/GH-27



Description

Debris is solid material generated during many municipal activities including repair and maintenance of buildings, bridges, roadways, and paved surfaces; and maintenance of landscaping, parks and right of way areas. Improper debris management can result in discharge of pollutants to storm sewers and waterways. Following proper debris management and disposal practices can reduce the likelihood of contaminating runoff with pollutants.

NYC MS4 SPDES Permit Requirement(s)	IV.A Public Outreach/Education IV.E Construction Site Controls IV.G PP/GH for Municipal Operations IV.H Industrial / Commercial Sources IV.I Trash and Debris Control
KEY SELECTION CRITERIA	
Targeted Activities	<ul style="list-style-type: none"> Municipal activities that routinely generate debris Debris management and disposal activities
Performance Goals	<ul style="list-style-type: none"> Manage municipally generated debris to minimize potential to discharge to waterways Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Reduce the amount of debris generated Contain debris in controlled areas away from inlets, storm drains, and waterways Identify/implement practices to reduce, reuse, and recycle
RELATED CONTROL MEASURES AND REGULATIONS	
Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-11 through -15 SCM-PP/GH-18 through -20 SCM-PP/GH-22 through -24 SCM-PP/GH-31 through -38
Other Regulatory Requirements*	Potentially applicable regulations included in the referenced SCMs.

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS	
✓✓	Floatables
✓✓	Sediments
✓	Nitrogen
✓	Phosphorus
✓	Pathogens
✓	Oxygen Demand
	PCBs
✓	Metals
	Petroleum Products/PAHs
✓✓ = Good ✓ = Fair = Poor	

CONTROL STRATEGIES	
✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose
✓ = Yes	

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Control Strategies/Suggested Practices

COVER/CONTAIN

- Cover and contain temporary debris and storage piles, including compost piles.
- Store smaller debris in covered, leak-proof containers, dumpsters, or other waste collection containers prior to off-site disposal.

CLEAN UP

- Keep work areas clear of debris through frequent sweeping and debris collection.
- Respond to spills immediately.

REDUCE/MINIMIZE

- Minimize debris generation during operations and activities.
- Segregate and reuse or recycle debris when possible.
- Compost landscape waste rather than dispose offsite.
- Reuse recycled or composted debris onsite where possible.
- Avoid use of water to clean debris from work areas.

PRODUCT SUBSTITUTION

N/A

MANAGE RUNOFF

- Divert runoff from debris collection and management areas using practices such as physical barriers or piping.
- Locate debris management areas away from inlets, storm drains, and waterways.

CAPTURE/TREAT/DISPOSE

- Screen/test debris for the presence of hazardous materials such as asbestos, lead and PCBs; store and dispose of properly.
- Contain necessary wash waters and allow clean water to evaporate/soak into ground, where feasible.

References

1. *Western New York Stormwater Coalition, Erie County Department of Environment and Planning Division of Environmental Compliance Services, Pollution Prevention/Good Housekeeping for Municipal Operations: A Guidance Document of Best Management Practices and Inspection Checklist, April 2006.*
2. *Center for Watershed Protection, Urban Subwatershed Restoration Manual Series No. 8: Pollution Source Control Practices, v.2, February 2005.*
3. *Center for Watershed Protection, Urban Subwatershed Restoration Manual Series No. 9: Municipal Pollution Prevention/Good Housekeeping Practices, September 2008*

WASTE TRANSFER STATION SCM-PP/GH-28



Description
 Transfer stations receive solid waste that will be eventually transferred to another solid waste management facility for additional processing, treating, transfer or disposal. They can be authorized to process construction and demolition debris, or store, collect or process recyclable waste. Stormwater control is provided by keeping wastes at transfer stations indoors or under cover, and promptly cleaning up uncontained waste material.

NYC MS4 SPDES Permit Requirement(s)	IV.G Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities IV.I Trash & Debris Control
--	--

KEY SELECTION CRITERIA

Targeted Activities	<ul style="list-style-type: none"> Transporting, loading, unloading, storing, and managing waste at transfer stations
Performance Goals	<ul style="list-style-type: none"> Minimize contact between stormwater and waste at municipal transfer stations Consistent implementation of good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Contain or cover waste materials Clean loading/unloading zones frequently Conduct routine facility inspections for loose waste/debris

RELATED CONTROL MEASURES AND REGULATIONS

Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-26 SCM-PP/GH-27
Other Regulatory Requirements*	<ul style="list-style-type: none"> 16 RCNY Chapter 4 Subchapter A, B, and C 6 NYCRR Part 362-3 40 CFR 263

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

✓✓	Floatables
✓	Sediments
✓	Nitrogen
✓	Phosphorus
✓	Pathogens
✓	Oxygen Demand
✓	PCBs
✓	Metals
✓	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Contain waste materials and store under cover.
- Waste materials in outdoor storage areas should be placed in watertight, covered containers.
- Netting or wind-blocking devices should be used to minimize airborne transfer of containments outside of facility.
- Avoid placing temporary stockpiles in areas without cover. If unavoidable, place temporary stockpiles on a paved surface and cover if exposed to stormwater.
- Control blowing papers and litter, insects, odor or any other potential troubles.
- Keep waste streams separated.
- Contain/collect leachate from temporary stockpiles.
- Recyclable solid waste must be stored separately and in a covered, safe, sanitary location for a regulated period of time.

CLEAN UP

- Promptly clean up loose waste materials along access roadways, in loading/unloading areas, and in other areas exposed to stormwater.
- Respond immediately to spills.
- Use dry sorbent materials during spill response where practicable to reduce generation of liquid waste.
- Clean work areas of waste materials prior to anticipated wet weather events.

REDUCE/MINIMIZE

- Waste intake should be regulated so as not to exceed the capacity of the facility. Keep accurate records.
- Waste retention times at a facility should not exceed established time frames.
- Divert runoff away from or around active waste management areas using practices such as physical barriers or piping.
- Avoid use of water, when feasible, when cleaning dumpsters, storage containers, operational areas, and loading and unloading zones. Sweeping and other dry cleaning methods are preferred.
- Develop and implement a program to track waste types and quantities being accepted.

PRODUCT SUBSTITUTION

N/A

MANAGE RUNOFF

- Transfer station waste management areas should be located away from storm inlets, storm drains and waterways.

CAPTURE/TREAT/DISPOSE

- Collect and test water used in clean up for pollutants of concern. Treat as necessary prior to disposal.

References

1. USEPA, *Waste Transfer Stations, Manual for Decision-Making*, June 2002
2. USEPA, *Industrial Stormwater Fact Sheet Series, Sector N: Scrap Recycling and Waste Recycling Facilities*, December 2006

LANDFILL RUNOFF

SCM-PP/GH-29



Description

Landfill runoff has the potential to contribute pollutants such as floatables, sediments, nutrients, metals, oxygen demand, and pathogens into the storm drain system and waterways. Implementing the following management practices, and those regulated by landfill closure permit regulations, can help minimize the introduction of pollutants into the storm drain system and waterways.

NYC MS4 SPDES Permit Requirement(s)	IV.G Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities IV.I Trash & Debris Control	
KEY SELECTION CRITERIA		
Targeted Activities	• Management of landfill runoff	
Performance Goals	<ul style="list-style-type: none"> • Minimize waste releases from landfill operations • Implement requirements of landfill erosion and sediment control plan 	
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> • Follow landfill erosion and sediment control plan permit requirements • Follow applicable closure and post-closure permit requirements • Conduct landfill inspections as specified under the NYC solid waste management plan 	
RELATED CONTROL MEASURES AND REGULATIONS		
Related SCMs	<ul style="list-style-type: none"> • SCM-PP/GH-6 • SCM-PP/GH-10 • SCM-PP/GH-19 • SCM-PP/GH-22 	<ul style="list-style-type: none"> • SCM-PP/GH-26 • SCM-PP/GH-28 • SCM-PP/GH-38
Other Regulatory Requirements*	<ul style="list-style-type: none"> • 6 NYCRR Part 360 to 363 • ECL 27-07 • 40 CFR Part 258 Subpart C 	

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

✓	Floatables
✓✓	Sediments
✓	Nitrogen
✓	Phosphorus
	Pathogens
✓	Oxygen Demand
✓	PCBs
✓	Metals
✓	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
	Clean Up
✓	Reduce/Minimize
	Product Substitutions
✓	Manage Runoff
	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations; ECL: Environmental Conservation Law

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Soil cover integrity, slopes, cover vegetation, and drainage structures must be maintained as described in the landfill permit requirements.

CLEAN UP

N/A

REDUCE/MINIMIZE

- Follow all permit requirements in the landfill erosion and sediment control plan.
- Post-closure care includes maintaining the facilities and environmental monitoring infrastructure.
- Post-closure, landfills must be inspected at least quarterly. Inspect erosion control measures, leachate collection and treatment systems, and all closed land application areas.
- Also, during quarterly inspections, identify any discharges of sediment or other pollutants from the site, and identify any best management practices and erosion and sediment control practices in need of repair or maintenance.
- Follow procedures in post-closure monitoring and maintenance manual.
- Once a facility is closed, continue post-closure care for 30 years (or as directed by the NYSDEC Division of Environmental Remediation).

PRODUCT SUBSTITUTION

N/A

MANAGE RUNOFF

- Maintain adequate vegetation on landfill cover to stabilize slope and prevent erosion.
- Maintain the leak detection systems.

CAPTURE/TREAT/DISPOSE

N/A

References

1. Title 6 NYCCR Part 360 Regulations
2. NYSDEC, *Beyond Waste: A Sustainable Materials Management Strategy for New York State*, December 2010
3. NYSDEC, *SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity*, October 2012.

SHOOTING RANGE SCM-PP/GH-30



Description

Shooting ranges and explosives testing areas can potentially introduce floatables, sediments, and metals to storm water runoff. Employing appropriate control measures can help minimize the introduction of pollutants to the stormwater system and waterways.

NYC MS4 SPDES Permit Requirement(s)	IV.G Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities IV.H Industrial/Commercial Sources
KEY SELECTION CRITERIA	
Targeted Activities	<ul style="list-style-type: none"> Runoff from shooting and explosive testing ranges
Performance Goals	<ul style="list-style-type: none"> On-site containment, reduction of runoff from active shooting areas Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Configure shooting range to contain fired bullets Divert runoff away from areas containing lead Protect and stabilize earthen shooting range berms
RELATED CONTROL MEASURES AND REGULATIONS	
Related SCMs	<ul style="list-style-type: none"> <li style="width: 50%;">SCM-PP/GH-19 <li style="width: 50%;">SCM-PP/GH-38 <li style="width: 50%;">SCM-PP/GH-22 <li style="width: 50%;">SCM-PP/GH-26
Other Regulatory Requirements*	Potentially applicable regulations included in the referenced SCMs.

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS	
✓	Floatables
✓✓	Sediments
	Nitrogen
	Phosphorus
	Pathogens
	Oxygen Demand
	PCBs
✓✓	Metals
	Petroleum Products/PAHs
✓✓ = Good ✓ = Fair = Poor	

CONTROL STRATEGIES	
✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose
✓ = Yes	

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Control Strategies/Suggested Practices

COVER/CONTAIN

- Control lead at the source by containing fired bullets in earthen backstops, sand traps, steel traps, or in shock absorbing traps. Maintain lead control devices regularly.

CLEAN UP

- Remove and recycle lead from the range. Adjust frequency depending on number of rounds fired, annual precipitation, and depth to groundwater.

REDUCE/MINIMIZE

- Minimize soil erosion by protecting and stabilizing open areas with vegetative controls and terracing of slopes.
- Vegetation should be removed prior to lead removal and reclamation. However, quick-growing vegetation should be replanted immediately after reclamation activities. Use erosion control blankets or mulch while vegetation is becoming established.
- Keep records to document the number of rounds fired to help determine lead removal frequency and effectiveness of best management plans.

PRODUCT SUBSTITUTION

- Use steel shot, instead of lead, particularly if shooting into or over water, wetlands or other sensitive areas.

MANAGE RUNOFF

- Divert runoff away from areas containing lead using vegetated swales and berms.
- Manage runoff from explosive testing areas before discharge using practices such as sediment basins.

CAPTURE/TREAT/DISPOSE

- Install settling basins to settle out fine particles from runoff. Properly dispose of materials from settling basins.
- Use rock riprap across drainage ditches to slow water and allow sediments that may contain lead to settle out. Properly dispose of sediments.

References

1. USEPA, *Best Management Practices for Lead at Outdoor Shooting Ranges*, June 2005.
2. National Shooting Sports Foundation, *Environmental Aspects of Construction and Management of Outdoor Shooting Ranges*, 1997.
3. USACE, *Modules for Modeling Firing Range Best Management Practices within TREECS™ Environmental Laboratory*, July 2015.

Building Maintenance and Repair



Issue Date: August 2018

BUILDING REPAIR AND REMODELING

SCM-PP/GH-31



Description

Building repair and remodeling can potentially introduce floatables, sediments, and metals to stormwater runoff. Employing appropriate control measures can help minimize the introduction of pollutants to the stormwater system and waterways.

NYC MS4 SPDES Permit Requirement(s)	IV.A Public Outreach/Education IV.E Construction Site Controls IV.G Pollution Prevention/Good Housekeeping for Municipal Operations IV.H Industrial/Commercial Sources	
KEY SELECTION CRITERIA		
Targeted Activities	<ul style="list-style-type: none"> • Building repair and remodeling • Waste management 	
Performance Goals	<ul style="list-style-type: none"> • Minimize pollutants entering storm sewers and waterways • Implement good housekeeping practices 	
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> • Store construction materials and trash under cover • Inspect the site at the end of the day and pick up debris 	
RELATED CONTROL MEASURES AND REGULATIONS		
Related SCMs	<ul style="list-style-type: none"> • SCM-PP/GH-19 • SCM-PP/GH-26 • SCM-PP/GH-27 	<ul style="list-style-type: none"> • SCM-PP/GH-32 • SCM-PP/GH-33 • SCM-PP/GH-38
Other Regulatory Requirements*	<ul style="list-style-type: none"> • 1 RCNY 103-04 and 3314-01 • 19 NYCRR part 1204 	

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

✓✓	Floatables
✓✓	Sediments
	Nitrogen
	Phosphorus
	Pathogens
	Oxygen Demand
	PCBs
✓✓	Metals
	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Secure materials and opened containers from exposure to wind and rain.
- Lay tarps or drip pans on outside of buildings to collect fallen debris and splatters.

CLEAN UP

- Inspect the site at the end of each day; pick up debris and ensure construction materials are properly stored.
- Provide adequate dumpster capacity on site to store rubble and construction debris.
- Use dry cleaning methods, such as sweeping or vacuuming surfaces, immediately after scraping, stripping, sanding, or abrasive blasting operations are completed.
- Dry sweep surfaces and properly dispose of collected material prior to pressure washing activities.

REDUCE/MINIMIZE

- Store materials away from storm drains and inlets.
- Regularly inspect inlet protection devices for damage.
- Label storm drains with “No Dumping” signs to deter disposal of waste and washwater into storm drains.
- Recycle and reuse products such as paints, solvents, and building materials.
- Clearly define pollution prevention activity responsibility between all involved parties on-site.
- Train construction personnel in proper handling, spill response, spill kit location, and emergency actions to be taken.

PRODUCT SUBSTITUTION

N/A

MANAGE RUNOFF

- Temporarily block off any adjacent stormwater inlets when stripping or cleaning buildings with high-pressure water.

CAPTURE/TREAT/DISPOSE

- Concrete wash water must be contained on site and not disposed of in sewers or into waterways.
- Recycle wash water and solids if possible.

References

1. USEPA, *Urban Subwatershed Restoration Manual Series Municipal Pollution Prevention/Good Housekeeping Practices Manual 8*, February 2005
2. NYSDEC, *Standards and Specifications for Erosion and Sediment Control*, July 2016

Building Maintenance and Repair



Issue Date: June 2020

PAINTING

SCM-PP/GH-32



Description

Painting, and related activities, are an important component of building, roadway, and elevated structure maintenance and repair which can introduce metals, sediments, and floatables into storm sewers and waterways. Implementing the following management practices can help minimize the introduction of pollutants into the storm sewers and waterways.

NYC MS4 SPDES Permit Requirement(s)	IV.A Public Outreach/Education IV.E Construction Site Controls IV.G Pollution Prevention/Good Housekeeping for Municipal Operations IV.H Industrial/Commercial Sources
KEY SELECTION CRITERIA	
Targeted Activities	<ul style="list-style-type: none"> • Surface preparation and painting activities
Performance Goals	<ul style="list-style-type: none"> • Minimize the introduction of paint, dust, paint chips & painting wastes into storm sewers & waterways • Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> • Use drip pans & drop cloth in work area during active painting • Provide containment during surface preparation to limit airborne particulates • Store liquid materials under cover in tightly sealed containers - check frequently for leaks • Respond to spills immediately using dry sorbent materials
RELATED CONTROL MEASURES AND REGULATIONS	
Related SCMs	<ul style="list-style-type: none"> • SCM-PP/GH-18 thru 20 • SCM-PP/GH-31 • SCM-PP/GH-26 • SCM-PP/GH-27
Other Regulatory Requirements*	<ul style="list-style-type: none"> • 12 NYCRR Part 23-2.8 • 29 CFR part 1915.35, 1926.50 to 1926.66 • 40 CFR 355 & 370

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS	
✓	Floatables
✓	Sediments
	Nitrogen
	Phosphorus
	Pathogens
	Oxygen Demand
	PCBs
✓✓	Metals
	Petroleum Products/PAHs
✓✓ = Good ✓ = Fair = Poor	

CONTROL STRATEGIES	
✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose
✓ = Yes	

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Store paints, coatings, and solvents under cover in a contained area. Keep containers in good condition and closed when not in use.
- Enclose painting and paint removal operations, where possible.

CLEAN UP

- Clean up spills immediately. Maintain proper spill response materials and equipment.
- Use drip pans and drop cloth in paint and paint removal chemical mixing areas and areas being painted.
- Paint dust, particles, and other debris must be completely cleaned up, preferably by sweeping, and disposed of properly. Sweeping of lead based paint is not permitted; use vacuuming as alternative.

REDUCE/MINIMIZE

- Use drip pans, drop cloth, suspended tarps, and booms, as appropriate, in mixing and painting areas.
- Filter, reuse, and recycle thinners and solvents.
- Drain leftover paint in roller pan back into paint can. For paint hoses and guns, spray out the paint residue into a paint can.

PRODUCT SUBSTITUTION

- Use low-volatile organic compound (VOC) paints in place of standard paints. Use water-based paints instead of oil-based paints.

MANAGE RUNOFF

- Provide appropriate inlet and storm drain protection during painting operations including areas that sheet flow directly into water bodies.

CAPTURE/TREAT/DISPOSE

- Paint thinners cannot be discharged to the storm or sanitary sewer and must be disposed of as hazardous waste.
- Collect all unused or waste materials and dispose of properly.
- Contain rinse water from latex paint equipment and dispose of properly.

References

1. NYSDEC, *Municipal Pollution Prevention and Good Housekeeping Program Assistance*, May 2006
2. USEPA, *Urban Subwatershed Restoration Manual Series Municipal Pollution Prevention/Good Housekeeping Practices Manual 8*, February 2005.
3. NYSDOT, *Standard Specifications, Section 571, Treatment and Disposal of Paint Removal Waste*, May 2008
4. Western New York Stormwater Coalition, *Erie County Department of Environment and Planning Division of Environmental Compliance Services, Pollution Prevention/Good Housekeeping for Municipal Operations: A Guidance Document of Best Management Practices and Inspection Checklist*, April 2006.

These control strategies and suggested practices are not all-inclusive and are intended to help identify practices that are efficient, effective and practicable in addressing potential impacts to stormwater.

Building Maintenance and Repair



Issue Date: April 2020

SWIMMING POOL MAINTENANCE / DISCHARGES

SCM-PP/GH-33



Description

Maintenance of swimming pools and discharge of swimming pool water can introduce sediments, nutrients, metals, and oil and grease into storm sewers and waterways. Implementing the following management practices can help minimize the introduction of pollutants into the storm sewers and waterways.

NYC MS4 SPDES Permit Requirement(s)	IV.A Public Outreach/Education IV.G Pollution Prevention/Good Housekeeping for Municipal Operations IV.H Industrial/Commercial Sources	
KEY SELECTION CRITERIA		
Targeted Activities	<ul style="list-style-type: none"> Swimming pool maintenance Discharge of swimming pool water 	
Performance Goals	<ul style="list-style-type: none"> Minimize pollutants entering storm sewers and waterways Implement good housekeeping practices 	
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Maintain chlorine levels to allow safe discharge Discharge pool water and backwash water only to sanitary sewer Vacuum or brush pool sides and bottom daily or as needed 	
RELATED CONTROL MEASURES AND REGULATIONS		
Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-9 SCM-PP/GH-19 SCM-PP/GH-26 	<ul style="list-style-type: none"> SCM-PP/GH-27 SCM-PP/GH-31
Other Regulatory Requirements*	<ul style="list-style-type: none"> 10 NYCRR Part 6 Subpart 6-1 15 RCNY Chapter 19 	

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS	
	Floatables
✓	Sediments
	Nitrogen
✓	Phosphorus
	Pathogens
	Oxygen Demand
	PCBs
✓	Metals
✓	Petroleum Products/PAHs
✓✓ = Good ✓ = Fair = Poor	

CONTROL STRATEGIES	
✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
✓	Manage Runoff
	Capture/Treat/Dispose
✓ = Yes	

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Store pool chemicals and maintenance materials in tightly sealed containers under cover.
- Routinely check chemical and maintenance containers for leaks.
- Install secondary containment for stored chemicals.
- Collect pool backwash water and dispose in accordance with applicable regulations or discharge to sanitary sewer[†].

CLEAN UP

- Vacuum or brush pool sides and bottom daily or as needed to remove visible material.
- Clean spills immediately and properly dispose of waste material.
- Dispose of contaminated, routine cleaning materials properly.
- Clean filter media in accordance with manufacturer recommendations or dispose of properly

REDUCE/MINIMIZE

- When pool water discharge is needed, the level of chlorine and bromine residuals should be checked to verify that it is within acceptable limits prior to discharge. Application of chlorine or bromine should be stopped several days in advance of discharge.
- Discharge of pool water should only occur to the sanitary sewer,[†] or overland if space allows and is approved. Discharge should not occur to the storm sewer or surface waters.
- Follow mandated ranges for maintaining swimming pool chemical levels.
- The pH of discharge water should be within an acceptable range when discharged.
- Do not discharge settled material with pool water.
- Use a makeup meter to help monitor leaks. Repair cracks if they occur and have the potential for leakage.
- Minimize the use of hoses to clean pools and pool areas. Sweep or vacuum solid material and debris first to reduce the volume of floatables entering waterways.
- Discharge pool backwash water to the sanitary sewer[†].

PRODUCT SUBSTITUTION

- Quaternary ammonia compounds are recommended over algicides such as copper or silver due to toxicity to plants.

MANAGE RUNOFF

- Deflect pool cleaning runoff away from storm drains, inlets, and waterways.

CAPTURE/TREAT/DISPOSE

N/A

[†] Discharge should not be directed to the storm sewer or surface waters unless the discharge is covered under another SPDES permit. Facility needs to ensure that all discharges to the sewer system comply with DEP regulations, as well as applicable DOB regulations.

References

1. NYS Department of Public Health, *Compilation of the Rules and Regulations of the State of New York, Part 6, Subpart 6-1 Swimming Pools*, July 2011.
2. Western New York Stormwater Coalition, Erie County Department of Environment and Planning Division of Environmental Compliance Services, *Pollution Prevention/Good Housekeeping for Municipal Operations: A Guidance Document of Best Management Practices and Inspection Checklist*, April 2006.
3. California Urban Water Conservation Council, *Evaluation of Potential Best Management Practices, Pools, Spas, and Fountains*, September 2010.

DOCK/PIER MAINTENANCE

SCM-PP/GH-34



Description

Dock, pier, bulkhead and relieving platform maintenance is critical for continued performance of these structures, but can potentially introduce floatables, sediments, and metals into adjacent waterways. Implementing strategic management practices can help minimize the introduction of pollutants into the waterways and maintain usability of docks and piers.

NYC MS4 SPDES Permit Requirement(s)	IV.G Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities IV.H Industrial / Commercial Sources	
KEY SELECTION CRITERIA		
Targeted Activities	<ul style="list-style-type: none"> Maintenance of docks and piers Cleaning of docks and piers Repair of docks and piers 	
Performance Goals	<ul style="list-style-type: none"> Minimize pollutants entering waterways Implement good housekeeping practices 	
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Inspect docks and piers regularly to avoid intensive repairs Perform and prepare for repairs on land when possible Clean up spills promptly and do not wash into waterways 	
RELATED CONTROL MEASURES AND REGULATIONS		
Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-19 SCM-PP/GH-26 SCM-PP/GH-27 SCM-PP/GH-35 	<ul style="list-style-type: none"> SCM-PP/GH-36 SCM-PP/GH-37 SCM-PP/GH-38
Other Regulatory Requirements*	<ul style="list-style-type: none"> 6 NYCRR Part 608.4 & 608.5, Part 661 33 CFR 322, 323.1 to 323.6 	

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

✓✓	Floatables
✓	Sediments
	Nitrogen
	Phosphorus
	Pathogens
	Oxygen Demand
	PCBs
✓	Metals
✓	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
	Manage Runoff
	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Control Strategies/Suggested Practices

COVER/CONTAIN

- Store materials needed for repair, such as paint or tools, on land and under cover when not actively in use.
- Place tarp or other impermeable material beneath work area to catch debris.

CLEAN UP

- Clean up spills immediately. Do not wash spills into storm drain or surface waters.
- Use dry cleaning methods, such as sweeping, to regularly clean docks and dispose of sweepings in accordance with applicable rules and regulations.
- Avoid use of water to clean work areas when possible. Use dry cleaning methods such as sweeping or vacuuming.

REDUCE/MINIMIZE

- Inspect dock or pier regularly to reduce need for more intensive repairs and to reduce material falling into waterways.
- Carefully inspect, plan for, and promptly execute all repairs to prevent excess materials from entering storm drain or waterways.
- Perform paint and solvent mixing, fuel mixing, and similar handling of liquids on-shore.
- Perform repairs and preparation for repairs on land when possible.
- Match frequency and level of inspection of docks and piers with historical deterioration rate.

PRODUCT SUBSTITUTION

- Replace hazardous solvent cleaning products with aqueous or less toxic cleaning products.

MANAGE RUNOFF

N/A

CAPTURE/TREAT/DISPOSE

N/A

References

1. NYSDEC, *Pollution Prevention Unit, Environmental Compliance, Pollution Prevention, and Self-Assessment Guide for the Marina Industry*, March 2003
2. NYSDEC, *Waterfront Facilities Maintenance Management System, Inspection Guidelines Manual*, October 19993. Department of Defense, *United Facilities Criteria Maintenance and Operation: Maintenance of Waterfront Facilities*, June 2001
4. City and County of San Francisco Department of Public Health, *Pollution Prevention Checklist Marinas, Marine Repair Facilities and Boatyards*, July 2011



Description

Appropriate use of on-land marine vessel maintenance and repair areas is critical to preventing pollutants from entering the storm drain system and waterways. Implementing strategic management practices can help minimize the introduction of pollutants into storm sewers and waterways.

NYC MS4 SPDES Permit Requirement(s)	IV.G Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities IV.H Industrial / Commercial Sources	
KEY SELECTION CRITERIA		
Targeted Activities	<ul style="list-style-type: none"> On-land marine vessel maintenance and repair Upkeep of on-land maintenance and repair areas 	
Performance Goals	<ul style="list-style-type: none"> Minimize pollutants entering storm sewers and waterways Implement good housekeeping practices 	
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Perform vessel repair in designated, enclosed, roofed areas Clean up all spills as soon as they occur Maintain marine vessels in areas with no floor drains 	
RELATED CONTROL MEASURES AND REGULATIONS		
Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-19 SCM-PP/GH-26 SCM-PP/GH-27 	<ul style="list-style-type: none"> SCM-PP/GH-34 SCM-PP/GH-36 SCM-PP/GH-37
Other Regulatory Requirements*	<ul style="list-style-type: none"> 6 NYCRR Part 576 46 CFR Part 8 	

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

✓✓	Floatables
✓	Sediments
	Nitrogen
	Phosphorus
	Pathogens
	Oxygen Demand
✓	PCBs
✓	Metals
✓	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Perform vessel repairs in designated, enclosed, roofed areas whenever possible.
- If repairs are done outside, a plastic tarp or other containment must be placed under boat.
- Hazardous materials must be labeled and stored in a protected area away from drains.
- Perform abrasive blasting or spray painting in a building or enclosure whenever possible and properly capture and dispose of all waste.
- If blasting/painting is performed outdoors, use skirting to contain sand, paint, and debris.
- Store materials/waste inside or in covered storage. Inspect regularly to minimize potential for failure.
- Install drip trays and splash guards where required.

CLEAN UP

- Clean up all spills as soon as they occur and keep a spill kit close by. Train employees in spill containment and cleanup. Use a spill containment and collection system.
- Use dry cleaning methods where possible instead of washing or rinsing with water. Perform pressure washing over appropriate designated areas designed to contain wastewater and debris.

REDUCE/MINIMIZE

- Install oil absorbent material and a hood over any stormwater outlets to prevent oil and floatables from escaping. Regularly inspect and clean stormwater inlets and basins.
- Maintain marine vessels in areas with no floor storm drains or where they can be temporarily sealed during repairs.
- Inspect equipment frequently and address leaks immediately.
- If possible, limit use of soaps and detergents during marine vessel washing; use only plain water.

PRODUCT SUBSTITUTION

- Work with supply vendors to find non-toxic or less toxic alternative products that work for your processes.
- Use a biodegradable detergent when areas are cleaned with water.

MANAGE RUNOFF

- Divert off-site storm water away from maintenance and repair areas.
- Construct grass areas between the marina and the nearby surface water to filter out contaminants.
- Whenever possible, wash marine vessels at an off-site commercial car/vehicle wash.

CAPTURE/TREAT/DISPOSE

- Install sand filters, holding tanks, oil-grit separators, and other treatment practices where applicable for pollutant removal.

References

1. NYSDEC, *Pollution Prevention Unit, Environmental Compliance, Pollution Prevention, and Self-Assessment Guide for the Marina Industry*, March 2003
2. NYSDEC, *Division of Water, Marina Operations for Existing Facilities*, June 2002
3. NYCEDC, *Waterfront Facilities Maintenance Management System, Inspection Guidelines Manual*, October 1999
4. *City and County of San Francisco Department of Public Health, Pollution Prevention Checklist Marinas, Marine Repair Facilities and Boatyards*, July 2011

MARINE FUELING STATION SCM-PP/GH-36



Description

Spills and leaks that occur during marine vessel fueling can contribute hydrocarbons, oil, grease and heavy metals into waterways. Implementing the following management practices can help prevent and respond to fuel spills and leaks.

NYC MS4 SPDES Permit Requirement(s)	IV.G Pollution Prevention/Good Housekeeping for Municipal Operations IV.H Industrial / Commercial Sources
KEY SELECTION CRITERIA	
Targeted Activities	<ul style="list-style-type: none"> Fueling of marine vessels
Performance Goals	<ul style="list-style-type: none"> Reduce spill incidence and magnitude during fueling Minimize pollutants entering waterway Implement good housekeeping practices
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> Plan for spill response and locate a spill kit near pumps Use fuel leak prevention devices when pumping fuel Ensure pump automatic shut-offs are working properly
RELATED CONTROL MEASURES AND REGULATIONS	
Related SCMs	<ul style="list-style-type: none"> SCM-PP/GH-7 SCM-PP/GH-19 SCM-PP/GH-26 SCM-PP/GH-27 SCM-PP/GH-34 SCM-PP/GH-35 SCM-PP/GH-37
Other Regulatory Requirements*	<ul style="list-style-type: none"> 29 CFR 1917.156 40 CFR Part 80 Subpart I

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS	
✓	Floatables
	Sediments
	Nitrogen
	Phosphorus
	Pathogens
	Oxygen Demand
	PCBs
✓	Metals
✓✓	Petroleum Products/PAHs
✓✓ = Good ✓ = Fair = Poor	

CONTROL STRATEGIES	
✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
	Product Substitutions
	Manage Runoff
	Capture/Treat/Dispose
✓ = Yes	

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Locate fueling areas under cover where possible.
- Place drip trays beneath fuel connections at the dock to prevent fuel from entering the water.

CLEAN UP

- Develop spill prevention and control procedures for fueling areas exposed to stormwater and/or that could run off into a storm drain or the harbor.
- Locate a spill kit near fuel pumps.
- Have a sufficient quantity of spill containment and absorbent materials on hand to contain small spills.
- Train employees in the use of spill containment measures.
- Contain and clean up spills, and dispose of materials at an approved facility.

REDUCE/MINIMIZE

- Have trained marina employees do all fueling.
- Make sure pump automatic shut-offs are working properly.
- Locate fuel docks in areas protected from wave action and boat wakes and take spill containment into consideration.
- Use petroleum absorption collars/pads to catch splashback and drips from fuel nozzle.
- Use a no-spill fuel catcher when pumping gasoline into boats.
- Install and use fuel/air separators on air vents, tank stems or fuel whistles.

PRODUCT SUBSTITUTION

N/A

MANAGE RUNOFF

N/A

CAPTURE/TREAT/DISPOSE

N/A

References

1. NYSDEC, *Pollution Prevention Unit, Environmental Compliance, Pollution Prevention, and Self-Assessment Guide for the Marina Industry*, March 2003
2. NYSDEC, *Division of Water, Marina Operations for Existing Facilities*, June 2002
3. *City and County of San Francisco Department of Public Health, Pollution Prevention Checklist Marinas, Marine Repair Facilities and Boatyards*, July 2011

These control strategies and suggested practices are not all-inclusive and are intended to help identify practices that are efficient, effective and practicable in addressing potential impacts to stormwater.

MARINE LOADING / UNLOADING

SCM-PP/GH-37



Description

Spills and leaks that occur during loading and unloading of marine vessels at docks and piers can contribute floatables, sediments, nitrogen, phosphorus, PCBs, metals, and PAHs into waterways. Implementing the following management practices can help prevent and respond to spills, leaks, and discharges from marine loading and unloading.

NYC MS4 SPDES Permit Requirement(s)	IV.G Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities IV.H Industrial / Commercial Sources	
KEY SELECTION CRITERIA		
Targeted Activities	<ul style="list-style-type: none"> • Loading/unloading of marine vessels • Transfer of goods and materials on marine docks 	
Performance Goals	<ul style="list-style-type: none"> • Minimize pollutants entering storm sewers and waterways • Implement good housekeeping practices 	
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> • Routinely inspect all potential sources of leaks, spills, and discharges • Cover/contain transfer areas • Sweep transfer areas frequently • Retain and maintain an appropriate spill cleanup kit on site 	
RELATED CONTROL MEASURES AND REGULATIONS		
Related SCMs	<ul style="list-style-type: none"> • SCM-PP/GH-19 • SCM-PP/GH-26 • SCM-PP/GH-27 	<ul style="list-style-type: none"> • SCM-PP/GH-34 • SCM-PP/GH-35 • SCM-PP/GH-36
Other Regulatory Requirements*	<ul style="list-style-type: none"> • 40 CFR Part 112.7 	

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS

✓✓	Floatables
✓	Sediments
✓	Nitrogen
✓	Phosphorus
✓	Pathogens
✓	Oxygen Demand
✓	PCBs
✓	Metals
✓✓	Petroleum Products/PAHs

✓✓ = Good ✓ = Fair = Poor

CONTROL STRATEGIES

✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose

✓ = Yes

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Listed regulatory requirements are not inclusive of all legal requirements applicable to NYC facilities. Local, state, and/or federal regulations should be consulted to ensure full regulatory compliance.

Control Strategies/Suggested Practices

COVER/CONTAIN

- Cover and contain the transfer area to prevent runoff of stormwater and runoff of contaminated stormwater.

CLEAN UP

- Use dry cleaning methods, such as sweeping, in transfer areas to remove material that could otherwise be contacted by stormwater.
- Retain and maintain an appropriate spill cleanup kit on-site for rapid cleanup of material spills.
- Ensure that an employee trained in spill containment and cleanup is present during loading/unloading.

REDUCE/MINIMIZE

- Routinely inspect all potential sources of leaks, spills, and discharges. Include transfer areas and loading/unloading equipment in inspections.
- Prepare an "Operations Plan" with procedures for loading/unloading. Train employees in proper loading/unloading/transfer practices.
- Use pans to catch drips/spills when making or breaking connections with hoses, nozzles, or other transfer equipment.
- Ensure that transfers are supervised by facility employees who are experienced with normal and emergency operations.
- Regularly test liquid level sensing devices and audible alarms on storage tanks to ensure proper operation.
- Use physical barriers and signage to discourage tank cars/trucks from departing before complete disconnection of transfer lines.

PRODUCT SUBSTITUTION

N/A

MANAGE RUNOFF

- Design the loading/unloading area with barriers and grading to prevent the runoff of stormwater.

CAPTURE/TREAT/DISPOSE

- Ensure that the transfer area drains to a dead-end sump, spill containment sump, or an oil/grit separator.
- Properly dispose of collected waste.

References

1. MassDEP, *Massachusetts Stormwater Handbook*, 1997
2. City and County of San Francisco Department of Public Health, *Pollution Prevention Checklist Marinas, Marine Repair Facilities and Boatyards*, July 2011

These control strategies and suggested practices are not all-inclusive and are intended to help identify practices that are efficient, effective and practicable in addressing potential impacts to stormwater.

Small Scale Land Disturbance



Issue Date: July 2020

EROSION AND SEDIMENT CONTROL

SCM-PP/GH-38



Description

Construction projects, including small projects that disturb less than the 1 acre of earth disturbance regulatory threshold, can introduce sediment and other pollutants to stormwater runoff. Application of control measures can help minimize the potential introduction of pollutants into the stormwater system and local waterways.

NYC MS4 SPDES Permit Requirement(s)	IV.E Construction Site Controls IV.G Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities IV.H Industrial/Commercial Source	
KEY SELECTION CRITERIA		
Targeted Activities	<ul style="list-style-type: none"> • Construction projects disturbing less than 1 acre of earth • Small-scale earthmoving 	
Performance Goals	<ul style="list-style-type: none"> • Minimize soil area exposed and limit exposure to runoff • Minimize pollutants entering storm sewers and waterways • Implement good housekeeping practices 	
Most Effective Controls <small>(more detail on page 2)</small>	<ul style="list-style-type: none"> • Capture and contain sediment • Minimize areas of disturbance • Cover borrow or stockpile areas with plastic or geotextile 	
RELATED CONTROL MEASURES AND REGULATIONS		
Related SCMs	<ul style="list-style-type: none"> • SCM-PP/GH-15 • SCM-PP/GH-19 • SCM-PP/GH-22 • SCM-PP/GH-24 	<ul style="list-style-type: none"> • SCM-PP/GH-25 • SCM-PP/GH-27 • SCM-PP/GH-29 thru 31
Other Regulatory Requirements*	<ul style="list-style-type: none"> • 23 CFR 650 Subpart B • 40 CFR 450 Subpart B • Federal Clean Water Act Sections 401/404, River and Harbor Act Section 10, MPRSA Section 103 	

EFFECTIVENESS FOR TARGETED POLLUTANTS / IMPAIRMENTS	
✓	Floatables
✓✓	Sediments
✓	Nitrogen
✓	Phosphorus
	Pathogens
	Oxygen Demand
	PCBs
	Metals
	Petroleum Products/PAHs
✓✓ = Good ✓ = Fair = Poor	

CONTROL STRATEGIES	
✓	Cover/Contain
✓	Clean Up
✓	Reduce/Minimize
✓	Product Substitutions
✓	Manage Runoff
✓	Capture/Treat/Dispose
✓ = Yes	

*Note: RCNY: Rules of the City of New York; NYCRR: New York Codes, Rules and Regulations; CFR: Code of Federal Regulations

Control Strategies/Suggested Practices

COVER/CONTAIN

- Cover disturbed/exposed soil or stockpile area with plastic or geotextile to prevent soil loss until the site can be stabilized.
- Use silt fences, straw wattles, or other similar devices to provide perimeter sediment control.
- Use truck/vehicle tracking pads, when feasible, to keep soil/sediment on-site.

CLEAN UP

- Sweep paved areas to minimize sediment track-out.
- Remove trash and other floatables daily. Dispose of properly.

REDUCE/MINIMIZE

- Clear only what is required for immediate construction activities to minimize area of disturbance.
- Maintain native vegetation near waterways.
- Stabilize disturbed areas as soon as possible after construction is completed.
- Protect streambanks & shorelines by using vegetation, structures, management techniques, or biotechnology[†].
- Use structural or non-structural practices to minimize erosion of coastal shoreline. Include use of vegetation, relocation of structures, bulkheads, retaining walls, monitoring, etc[†].

PRODUCT SUBSTITUTION

- Limit use of products that generate trash or other floatable materials.

MANAGE RUNOFF

- Divert off-site runoff away from highly erodible soils and steep slopes to stable areas during construction.
- Perform construction activities during dry weather.
- Install temporary inlet and storm drain protection.

CAPTURE/TREAT/DISPOSE

- Capture and treat sediment-laden effluent from a dewatering system prior to discharge to the storm sewer system following applicable regulations.
- Consider off-site disposal and recharge basins; provide for DEP-permitted discharge to waterways, where feasible.
- Use temporary catch basin inserts to capture sediment from stormwater runoff.
- Remove deposited/collected sediment and dispose of properly.

[†]Any work in or adjacent to Waters of the United States must comply with all regulatory requirements, including Sections 401 and 404 of the Clean Water Act and any state, wetland, and tidal wetland regulations.

References

1. Western New York Stormwater Coalition, Erie County Department of Environment and Planning Division of Environmental Compliance Services, *Pollution Prevention/Good Housekeeping for Municipal Operations: A Guidance Document of Best Management Practices and Inspection Checklist*, April 2006
2. NYDEC, *New York State Standards and Specifications for Erosion and Sediment Control*, July 2016