

Municipal Good Housekeeping Stormwater Pollution Prevention

Standard Operating Procedures (SOP) Manual

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This document is a publication of the Iowa Stormwater Education Partnership (ISWEP) and is made possible through partnerships with Iowa communities and organizations that are committed to improving the quality of Iowa's rivers, streams, creeks and lakes through local education and outreach efforts.

SOP-01: Building, Repair, and Remodeling

Pollutants of Concern	Hydrocarbons, hazardous wastes, trash, debris, non-stormwater discharges
Purpose	To prevent or reduce the discharge of pollutants from building, maintenance, and remodeling activities from entering storm drains
Application	Building, maintenance, and remodeling projects
Best Management Practices	<ol style="list-style-type: none"> Cover storm drains and protect drainageways before any work begins. Remove accumulated waste and debris before removing covers or protection. Recycle leftover paints, chemicals, lumber and other construction materials whenever possible. Use drop cloths underneath painting. Wastes generated through cleaning, scraping, and sandblasting activities should be properly disposed. Don't dump anything on paved surfaces, the ground or near a storm drain. Non-rainwater should not go into the storm drain. Water-based paint-covered brushes and other tools should be rinsed until clean and the rinsate collected in buckets and discharged to the sanitary sewer. Oil-based paint covered brushes and other tools that are cleaned with solvents must be cleaned so that the waste can be collected and disposed of properly. These may be hazardous wastes. Use a de-watering bag or other filtering device when de-watering excavations. Don't discharge directly to a storm drain. Cover all hazardous and other material containers and store indoors or under a tarp and use secondary containment for accidental spills. Cover dirt and other material stockpiles at all times. Clean up spills immediately following spill guidance.
Inspection & Maintenance	<ol style="list-style-type: none"> Inspect the work area daily and keep area clean and free of trash and debris. Contain and cover all wastes. Maintain spill response material (e.g., spill kit) in a location that is easy to access and is known to personnel. Inspect spill kit provisions on a regular basis and replace as needed. Replace any leaking containers.
Training	Stormwater managers and inspectors, and municipal staff that perform outdoor work activities that could contribute pollutants to storm water systems should have regular training that addresses general stormwater pollution prevention and spill prevention, control, and cleanup.



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 Municipal Good Housekeeping Pollution Prevention: SOP-01

SOP-02: Equipment and Vehicle Maintenance

Pollutants of Concern	Hydrocarbons, organics, heavy metals, oil and grease, and sediment
Purpose	To prevent or reduce the discharge of pollutants from equipment and vehicle maintenance activities from entering storm drains
Application	Maintenance of equipment and vehicles
Best Management Practices	<ol style="list-style-type: none"> 1. Implement a preventative maintenance program. Conduct maintenance indoors whenever possible. 2. Don't park vehicles and store equipment near storm drains. Protect nearby storm drains with rubber mats or absorbent rolls during fluid transfers or fueling. 3. Use non-toxic chemicals whenever possible and choose recyclable cleaning solutions. Recycle used oil, diesel oil and related fluids. Use drip pans under leaking vehicles or equipment. Select an area to drain or replace fluids where there is no connection to storm drains or sanitary sewer and spills can be easily contained. 4. Keep equipment with oily and fluid-soaked parts that must be stored outside up off the ground on a tarp, rack or blocks and cover with a tarp. 5. Properly dispose of unused and inoperable equipment. Make sure to drain all fluids prior to disposal or repurposing. 6. Train staff on spill response, proper disposal of waste and pollution prevention.
Inspection & Maintenance	<ol style="list-style-type: none"> 1. Regularly inspect equipment and vehicles and their storage or parking areas. 2. Dispose of or recycle unused equipment and vehicles. 3. Maintain spill response material (e.g., spill kit) in a location that is easy to access and is known to personnel. Inspect spill kit provisions on a regular basis and replace as needed.
Training	Stormwater managers and inspectors, and municipal staff that perform outdoor work activities that could contribute pollutants to storm water systems should have regular training that addresses general stormwater pollution prevention and spill prevention, control, and cleanup.





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SOP-03: Fueling Operations

Pollutants of Concern	Hydrocarbons, oils & grease	
Purpose	To prevent or reduce the discharge of pollutants from fueling operations from going into storm drains	
Application	Equipment and vehicle fueling operations	
Best Management Practices	<ol style="list-style-type: none"> 1. Block nearby storm drain inlets with rubber mats or absorbent rolls during large fueling operations. 2. Fueling activities must be overseen by the equipment operator at all times. Do NOT leave fueling operations unattended. 3. During fueling operations, visually monitor the liquid level indicator or equipment to prevent the tank from being overfilled. 4. The maximum amount of product received shall not exceed 95% capacity of the receiving tank. 5. Do not run vehicles, tanker trucks, or equipment during fueling operations. 6. Do not park machinery, equipment, or vehicles over storm drains. 7. Restrict access to fueling equipment and maintain equipment to prevent leaks. 8. Maintain clean fuel-dispensing areas using dry cleanup methods such as sweeping for removal of litter and debris or use of rags and absorbents for leaks and spills. Do not wash down areas with water. 	 
Inspection & Maintenance	<ol style="list-style-type: none"> 1. These procedures must be implemented during all fueling operations. 2. Maintain spill response material (e.g., spill kit) in a location that is easy to access and is known to personnel. Inspect spill kit provisions on a regular basis and replace as needed. 3. Repair or replace leaking or damaged fuel-dispensing equipment as needed. 	
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SOP-04: General Good Housekeeping Practices

Pollutants of Concern	Sediment, trash & debris, metals, bacteria, oils & grease, hydrocarbons & other organics, salts & deicers
Purpose	To prevent or reduce the discharge of pollutants from outdoor work and storage areas from going into storm drains
Application	Outdoor construction work and material or equipment storage areas
Best Management Practices	<ol style="list-style-type: none"> 1. Keep outdoor work and storage areas clean and orderly. 2. Use dry cleaning methods (e.g., sweeping or vacuuming) to remove all loose debris (e.g., metal or wood shavings), discarded materials, sediment, rags, etc. 3. Use absorbent materials to clean up spilled oil or other liquid chemicals and place used absorbents in a properly labeled container & dispose of properly. 4. Do not store or wash machinery, equipment, or vehicles over storm drains. 5. Store equipment with exposed oily/greasy parts or other potential pollutants (e.g., metals) in a covered area or on pallets or in bins and under plastic sheeting/tarps to prevent contact with rainwater. 6. Prevent surface flow from contacting raw materials, equipment, or machinery by storing them on pallets or blocks, or by surrounding the objects with berms. 7. Cover/protect storm drain inlets from outdoor work activities as needed. 8. Keep outdoor trash cans/bins closed, make sure bottom drains on roll offs/dumpsters are plugged. 9. If water is used to clean, do not allow wash water to get into storm drains. Review outdoor washing BMP for appropriate wash water disposal options. <div style="display: flex; justify-content: space-around; margin-top: 10px;">   </div>
Inspection & Maintenance	<ol style="list-style-type: none"> 1. Sweep or vacuum outdoor work and storage areas where pollutants have accumulated weekly during the wet season (October through May). 2. Using street sweeper, clean asphalt covered parking lots and streets weekly.
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SOP-05: Hazardous Materials Management

Pollutants of Concern	Organics, hydrocarbons, heavy metals, caustics, oil and grease, and other chemicals
Purpose	To prevent or reduce the discharge of hazardous waste from entering storm drains
Application	Areas where hazardous wastes are stored, used, loaded and unloaded
Best Management Practices	<p>Labels on Waste Containers</p> <ol style="list-style-type: none"> 1. Keep labels on all containers and label all containers with the following information: contents, composition, state, hazardous properties, accumulation start date, name of waste generator. 2. They must be legible, written in waterproof marker, and labels must be visible. 3. Contact your local solid and hazardous waste facility for proper handling and disposal of unlabeled wastes. <p>Storage of Wastes</p> <ol style="list-style-type: none"> 1. All waste containers must be in good condition, no leaks or corrosion and kept closed when stored except when adding or removing waste. 2. Store in clean areas not susceptible to rain with secondary containment; all impervious surfaces located near waste storage and handling shall be well maintained with no cracks or gaps; locate storage and handling areas away from other waste streams and far away from storm drains and drainage areas. 3. Don't store hazardous waste for more than several months and only store small amounts. 4. Storage of ignitable, reactive, unstable, toxic, or corrosive, wastes must comply with local and state fire and waste management codes. <p>Mixing and Transfer</p> <ol style="list-style-type: none"> 1. Mixing of all chemicals shall be done in areas with secondary containment. 2. When mixing paint and other chemicals, open containers must be observed at all times, never left unattended. 3. Mix materials away from sparks, heat, flames, spa and other sources of ignition. <p>Material Compatibility</p> <ol style="list-style-type: none"> 1. Ensure that each container is compatible with its contents. 2. Mixed wastes within containers shall be compatible. 3. Incompatible wastes shall be separated and stored according to local and state regulations. <p>Secondary Containment</p> <ol style="list-style-type: none"> 1. When rainwater accumulates inside secondary containment, inspect before draining or pumping out water. Contaminated water must be put in proper labeled containers and disposed of according to local and state requirements. 2. Leaks in primary and secondary containment must be repaired immediately.
Inspection & Maintenance	<ol style="list-style-type: none"> 1. Regularly inspect all storage, mixing, loading and unloading areas. 2. Monitor all containers for leaks, corrosion and make sure all are properly labeled and make sure they are closed and secured. 3. Transfer chemicals out of leaking containers into appropriate containers.
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SOP-06: Landscaping and Integrated Pest Management

Pollutants of Concern	Nutrients such as nitrogen and phosphorus, pesticides, fungicides, trash, bacteria, sediment
Purpose	To prevent or reduce the discharge of pollutants from landscaped areas such as lawns and gardens from entering storm drains
Application	Lawns and gardens at golf courses, parks, and other municipal facilities
Best Management Practices	<ol style="list-style-type: none"> 1. When mowing, blow grass clippings back onto the lawn and not onto paved surfaces. 2. Keep logs of the types of quantities of lawn care products used, date applied, applicator and license number, and weather conditions. 3. Test soil fertility before fertilization to assess lawn needs. Only use what is needed and maintain buffers near waterbodies. Sweep up excess from paved surfaces. 4. Don't apply fertilizers and pesticides prior to expected rain or high winds and minimize overspray. 5. Remove weeds from plant beds that may become invasive or attract unwanted pests. 6. Use pest and disease resistant plants. Some native Iowa plants provide that benefit. 7. Use the least toxic, most effective and pest specific pesticides when necessary. 8. Use mechanical elements such as soil solarization (covering areas with black tarps), heat treatments or traps to prevent pests from propagating. 9. Tolerate a low amount of weeds and when control is necessary do so when there are small infestations. Use hand or mechanical methods when appropriate. A torch can be used to control small infestations of weeds. 10. Mulch beds to reduce weeds and maintain soil moisture. 11. Monitor any irrigation system for leaks and utilize during the evening when temperatures are low. 12. Use erosion control measures on exposed soils such as straw or hydraulically-applied mulches, soil binders, erosion control blankets, or temporary seeding. 13. Keep SDS sheets on relevant products. Use as few products as necessary and store them appropriately. Don't product remove labels. 14. Calibrate application equipment and load and unload on paved surfaces. 15. Keep a spill kit on hand.
Inspection & Maintenance	<ol style="list-style-type: none"> 1. Inspect stormwater conveyances at the start of the rainy season. Notify your supervisor if you come across illegal discharges. 2. Regularly inspect landscaped areas throughout the growing season for weeds and pests. Control them while small. 3. Monitor areas prone to soil erosion and keep them under control.
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SOP-07: Loading Dock Management

Pollutants of Concern	Hydrocarbons, organics, heavy metals, caustics, oil and grease, sediment, and trash	
Purpose	To prevent or reduce the discharge of pollutants from loading dock activities from entering storm drains	
Application	Loading and unloading of materials from vehicles and other equipment	
Best Management Practices	<ol style="list-style-type: none"> 1. Load and unload only in designate areas, when possible plan for a covered loading dock. 2. Keep areas clean and clean up leaks or spills immediately. 3. Avoid loading and unloading during wet weather. 4. Prevent wash water and other non-stormwater discharges from entering storm drains and other drainage areas. 5. Regularly inspect vehicles and equipment for leaks, use drip pans when necessary. 6. Store outdoor materials under cover and off the ground to prevent exposure to rainfall and stormwater runoff. 7. Don't store dumpsters near storm drains and make sure they are covered and plugged and in bermed areas when possible. 	 
Inspection & Maintenance	<ol style="list-style-type: none"> 1. Regularly inspect equipment and vehicles and their storage or parking areas. Repair or replace leaking parts. 2. Periodically dry sweep the loading dock. 3. Schedule regular trash and recycling pick up. 4. Maintain spill response material (e.g., spill kit) in a location that is easy to access and is known to personnel. Inspect spill kit provisions on a regular basis and replace as needed. 	
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SOP-08: Onsite Transport of Materials and Wastes

Pollutants of Concern	Hydrocarbons, organics, heavy metals, caustics, oil and grease, sediment, and trash
Purpose	To prevent or reduce the discharge of pollutants from transport of materials and wastes from entering storm drains
Application	Transport of any materials and wastes onsite
Best Management Practices	<ol style="list-style-type: none"> 1. Be familiar with SDS for material transport, labeling, cleanup and disposal practices. 2. Make sure prior to transport that containers are closed, labeled, leak proof, and secured. Drums should be transported with a trap to prevent fall off. 3. Materials to be transported need to be compatible. 4. Keep loads a reasonable size and provide secondary containment. 5. Don't place materials directly on the ground use an impervious surface away from storm drains and drainage areas. 6. Impervious surfaces should be maintained with cracks and gaps filled. 7. Don't leave materials or wastes unattended during transport. 8. Avoid transport during wet weather. <div style="display: flex; justify-content: space-around; margin-top: 10px;">    </div>
Inspection & Maintenance	<ol style="list-style-type: none"> 1. Regularly consult and maintain SDS and records for all transported materials and wastes. 2. Maintain spill response material (e.g., spill kit) in a location that is easy to access and is known to personnel. Inspect spill kit provisions on a regular basis and replace as needed.
Training	Stormwater managers and inspectors, and municipal staff that perform outdoor work activities that could contribute pollutants to storm water systems should have regular training that addresses general stormwater pollution prevention and spill prevention, control, and cleanup.

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SOP-09: Outdoor Painting and Sandblasting

Pollutants of Concern	Organics, heavy metals, paint chips, sediment, trash, and debris
Purpose	To prevent or reduce the discharge of pollutants from outdoor painting and sandblasting from entering storm drains
Application	Any outdoor painting and sandblasting
Best Management Practices	<ol style="list-style-type: none"> 1. Protect storm drains with weighted mats or other inlet protection and drainage ways . 2. Avoid sanding, painting and sandblasting on windy days and during wet weather. 3. Place tarps under objects prior to painting, scraping, or sandblasting to collect scrapings, drippage, and spillage. 4. Shroud work area with boards or tarps prior to activities to minimize drift. 5. Sweep, vacuum, shovel or use absorbent materials to collect particulate material, debris, and paint. 6. Pollutants collected such as paint or metal chips, sediment, trash and debris must be collected and properly disposed. 7. When working on bridges, nets or tarps may be suspended below the bridge to catch falling debris, vacuum can also be used. Work during low-flow periods for bridges over waterbodies and low-traffic periods for bridges over roadways. 8. Collect all rinse and wash water and dispose of according to local wastewater guidelines.
Inspection & Maintenance	<ol style="list-style-type: none"> 1. Keep work areas clean. 2. Maintain spill response material (e.g., spill kit) in a location that is easy to access and is known to personnel. Inspect spill kit provisions on a regular basis and replace as needed.
Training	Stormwater managers and inspectors, and municipal staff that perform outdoor work activities that could contribute pollutants to storm water systems should have regular training that addresses general stormwater pollution prevention and spill prevention, control, and cleanup.



SOP-10: Outdoor Washing and Cleaning

Pollutants of Concern	Sediment, trash & debris, paint & paint chips, oil & grease, cleaning products, metals, hydrocarbons and other organics, bacteria
Purpose	To prevent or reduce the discharge of pollutants from outdoor work and storage areas from going into storm drains
Application	Outdoor equipment or vehicle washing areas
Best Management Practices	<ol style="list-style-type: none"> 1. Do not discharge any wash water or cleaning products into a storm drain. 2. Cover/protect storm drain inlets from outdoor washing activities as needed. 3. Collect all wash water and discharge to one of the following: <ul style="list-style-type: none"> • If wash water contains soap but no pollutants, discharge it into the sanitary sewer system (e.g., indoor drain). • If wash water does not contain any cleaning chemicals or other pollutants, it may be discharged to a landscaped area where it can infiltrate if there are no storm drain inlets nearby. • Perform all equipment washing in areas designed to collect and hold the wash and rinse water generated. 4. Do not wash vehicles on-site, use an indoor car wash or wash bay. 5. Train employees on proper cleaning and wash water disposal procedures, and conduct "refresher" training on a regular basis. 6. Pollutants/debris generated during washing activities must be collected and properly disposed of to avoid potential discharge into a storm drain. 7. Use dry cleaning methods (e.g., sweeping or vacuuming) whenever possible. 8. Surface cleaning should not be conducted during wet weather. <div style="display: flex; justify-content: space-around; margin-top: 10px;">   </div>
Inspection & Maintenance	<ol style="list-style-type: none"> 1. Sweep or vacuum outdoor work and storage areas where pollutants have accumulated regularly during the wet season (October through May). 2. Inspect wash areas for evidence of discharges into storm drains and if found, contact your supervisor.
Training	Stormwater managers and inspectors, and municipal staff that perform outdoor work activities that could contribute pollutants to storm water systems should have regular training that addresses general stormwater pollution prevention and spill prevention, control, and cleanup.



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SOP-11: Parking Lots and Outdoor Storage and Maintenance

Pollutants of Concern	Organics, heavy metals, oil and grease, paint chips, sediment, trash, and debris
Purpose	To prevent or reduce the discharge of pollutants from parking areas, storage and maintenance areas from entering storm drains
Application	Any parking, outdoor storage and maintenance areas
Best Management Practices	<ol style="list-style-type: none"> 1. Keep parking lots, storage and maintenance areas clean and repaired. 2. Provide trash receptacles and scheduled removal. 3. Use a street sweeper to regularly clean lots, especially after the fall leaves drop and snow melts. 4. Regularly inspect paved areas for leaks, conduct preventative maintenance on all vehicles and equipment, complete inspection reports. Use drip pans and absorbents to contain leaks. 5. Install post construction practices such as rain gardens or bioretention cells to collect and treat stormwater runoff from paved surfaces. Maintain these practices as prescribed. <div style="display: flex; justify-content: space-around; margin-top: 10px;">   </div>
Inspection & Maintenance	<ol style="list-style-type: none"> 1. Regularly inspect and maintain paved areas. Report any leaks or spills. 2. Maintain spill response material (e.g., spill kit) in a location that is easy to access and is known to personnel. Inspect spill kit provisions on a regular basis and replace as needed.
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SOP-12: Salt and Deicer Use and Storage

Pollutants of Concern	Chlorides in road salts and additives, carbohydrates in plant-based deicers
Purpose	To determine the correct application of salt to balance effective deicing and to prevent stormwater pollution.
Application	Deicing procedures for city maintenance crews
Best Management Practices	<ol style="list-style-type: none"> 1. Use secondary containment for liquid deicer storage areas. 2. Calibrate all equipment before and during winter season. 3. Utilize a temperature sensor to monitor surface temperatures and adjust product use and application accordingly. 4. Don't overfill the truck or spreader as it may cause unintentional spills. 5. Sand does not provide any de-icing capabilities and should be used in extreme cold temperatures or icy conditions as an abrasive. 6. For building entrances and steps, use a handheld spreader or shaker to evenly apply salt at a much more efficient rate without compromising the safety of the sidewalks or steps. 7. Move snow to flat, vegetated areas, away from waterbodies and remove debris in the spring. 8. Limit use of salt and sand during the storm. 9. Do not apply dry salt below 10° F pavement temperature; use a deicer solution in this situation. 10. Apply only what is required or needed based upon an application rate chart, which accounts for size of treatment area, pavement temperature, and de-icer chemical composition. 11. Apply a small and strategic amount of anti-icer as the first step in a series of deicing. 12. Record failures and successes for each treatment area for future winter seasons.
Inspection & Maintenance	<ol style="list-style-type: none"> 1. Cover salt and salt/sand piles and place on impervious surface or pad to limit runoff. 2. Conduct loading and unloading in a covered area on an impervious surface.
Training	Conduct regular staff training prior to the winter season. Provide updates on the Salt Management Plan during staff training. Send staff to APWA's Snow Conference to learn more about BMPs and policy.



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SOP-13: Sanitary Sewer Overflows

Pollutants of Concern	Bacteria, related raw sewage pollutants, dry weather flows
Purpose	To prevent or reduce the discharge of pollutants from sanitary sewer overflows from going into storm drains
Application	Operation and maintenance of the sanitary sewer system
Best Management Practices	<p>Response Procedures</p> <ol style="list-style-type: none"> 1. Notify the Spill Response Team immediately. 2. Follow the spill response plan. 3. Try to control or stop the source of sanitary waste. 4. Block nearby storm sewers, divert sanitary waste to vegetated areas away from drainage swales by creating berms or using spill kit resources. 5. Dewater into vegetated areas and not directly into the storm sewer system.
Inspection & Maintenance	<ol style="list-style-type: none"> 1. Regularly maintain the sanitary sewer system to minimize overflows. 2. Identify and schedule priority areas for extensive sewer rehab and maintenance.
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SOP-14: Spill Prevention and Cleanup

Pollutants of Concern	Organics, hydrocarbons, heavy metals, caustics, oil and grease, and other chemicals
Purpose	To prevent or reduce the discharge of pollutants from chemical spills or leaks from going into storm drains
Application	Operation and maintenance of public works facility
Best Management Practices	<p>Response Procedures (Consult Spill Response Plan for Full Details)</p> <ol style="list-style-type: none"> 1. If there is a hazardous condition contact your supervisor. Spill responders, usually the Fire Department, must wear protective gear to rescue injured/contaminated personnel and contain and cleanup the spill. If the spill may leave the site, call your Supervisor immediately, you may need to involve the Fire Department and/or Spill Response Team. If there is not a hazardous condition and depending on the type and amount of spill, materials from the facility's spill kit can be used to stop and contain the source. The Iowa DNR must be notified within 6 hours if the spill is outside and affects a Water of the State or bare soil. 2. <i>Dry Chemical Spills</i> - Immediately cover dry spills to prevent them from becoming airborne by placing a tarp over the spilled material. Weight the edges of the tarp. 3. <i>Liquid Spills</i> - Place an appropriate absorbent material over the spilled material. Absorbent materials may be sorbents, sawdust, kitty litter, gels or foams. Prevent the spill from spreading by trenching or encircling the area with a dike of sand, soil, or absorbent material. Place barriers at floor drains, storm drains, doorways, and at the next control point downstream to limit the spill from escaping. Collect all the spent absorbent material using a shovel, shop vac, or vac truck and place into appropriate leakproof containers. Don't wash materials down the drain unless approved by the Spill Response Team. 4. Spilled material should be cleaned up or removed prior to applying any decontaminant. Depending on the type and size of spill, all decontamination and disposal activities must be carried out only after appropriate cleanup methods have been determined by the Spill Response Team and/or the Iowa DNR. 5. The decontamination solution determined to be correct should be thoroughly worked into the surface. It should then be soaked up using absorbent material. The spent absorbent material is then placed into a labeled leak proof container for disposal. Porous materials such as wood may not be adequately decontaminated. If contamination is great enough to warrant, these materials should be replaced. 6. Tools, vehicles, equipment and any contaminated metal or other nonporous objects can be readily decontaminated using the appropriate decontamination solution. All contaminated materials that cannot be effectively decontaminated as described above must be placed in properly labeled, sealed, leak-proof containers and disposed of according to the Spill Response Team.
Inspection & Maintenance	<ol style="list-style-type: none"> 1. Regularly update and incorporate lessons learned into facility's Spill Response problem. 2. Identify evaluate causes of past spills and future prevention through routine maintenance.
Training	Stormwater managers and inspectors, and municipal staff that perform outdoor work activities that could contribute pollutants to storm water systems should have regular training that addresses general stormwater pollution prevention and spill prevention, control, and cleanup

Adapted From:

University of California, San Diego: <http://stormwater.ucsd.edu>
 Minnesota Pollution Control Agency: www.pca.state.mn.us
 Douglas County Public Works Engineering / Tierra Group International, LTD.
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SOP-15: Street, Curb, Gutter, Sewer, and Utility Maintenance

Pollutants of Concern	Sediment, trash & debris, paint & paint chips, oil & grease, hydrocarbons
Purpose	To prevent or reduce the discharge of pollutants from street project areas from going into storm drains
Application	Maintenance, repair and replacement of streets, curbs and cutters
Best Management Practices	<ol style="list-style-type: none"> 1. The Iowa DNR General Permit Number 2 would cover certain projects that disturb one or more acres. A Stormwater Pollution Prevention Plan would need to be prepared and required paperwork filed with IDNR. An IDNR dewatering permit may be required for projects that disturb less than one acre. Best management practices would need to be used throughout the project and need maintenance or replacement. 2. Concrete washout mixers, delivery trucks and other equipment only in designated areas. 3. Cover all stockpiles with a tarp when not in use. 4. Locate concrete washout, portable toilets and material storage away from storm drains. 5. Protect all storm sewer intakes with external or drop-in protection, remove when site is stabilized. 6. When saw cutting make sure that dry or wet cuttings are not entering the storm drain or street. Use an absorbent gel to solidify and neutralize wet cutting waste and dispose of accordingly. Dry cuttings should be swept up and disposed of accordingly, in many cases in a covered trash container. 7. Don't transfer or load any materials directly over waterways, especially bridge projects. Suspend drop cloths or nets below any bridgework where wastes could be dropped into the waterway. 8. Don't perform concrete or asphalt patch work during wet weather. 9. Minimize concrete curing chemical drift during windy conditions by using it sparingly and applying close to the surface. 10. Recycle concrete and asphalt rubble when possible. 11. Schedule painting and striping projects during dry, calm weather conditions. Use thermoplastic or epoxy markings in place of paint when feasible. The heaters and melting tanks used for thermoplastic striping should be monitored to prevent splashing and spills. 12. Repair or replace any leaking containers and store containers under a tarp when not in use. 13. Monitor equipment regularly for leaks, use drip pans and conduct maintenance. 14. Sweep up or vacuum the roadway once the project is complete.
Inspection & Maintenance	<ol style="list-style-type: none"> 1. Monitor vehicles and equipment regularly for leaks 2. Stabilize soils as soon as possible, ensure that inlet protection is effective 3. Sweep or vacuum street surfaces regularly
Training	Stormwater managers and inspectors, and municipal staff that perform outdoor work activities that could contribute pollutants to storm water systems should have regular training that addresses general stormwater pollution prevention and spill prevention, control, and cleanup

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SOP-16: Street Sweeping

Pollutants of Concern	Organics, heavy metals, oil and grease, paint chips, sediment, trash, and debris
Purpose	To prevent or reduce the discharge of pollutants from impervious streets from entering storm drains
Application	Any streets and parking areas
Best Management Practices	<ol style="list-style-type: none"> 1. Create a schedule for routine street sweeping and vacuuming in your community so that the entire community is covered at least annually. Schedule specific events after leaves fall and snow melts. 2. Prior to operation, conduct a routine inspection to check for leaks or other mechanical issues. Operate all sweeper and vacuum trucks according to manufacturer's recommendations. Maintain all equipment and calibrate when applicable. 3. Conduct sweeping and vacuuming when the weather is nice, avoid wet weather. 4. Empty sweeper hoppers and vacuum trucks in a designated municipal area that is flat, distanced from storm drains, drainage swales, slopes, waterbodies, and any other areas where wind and rain can move waste into storm drains and drainage areas. 5. Record the number of sweepings collected on a daily or other frequency basis by weighing equipment before and after sweeping. Record the amount collected annually. This could be included in an annual MS4 report. 6. Sweepings are often landfilled. In some cases, when testing of sweepings for certain contaminants indicates none are present, sweepings could potentially be screened to remove debris and reused on roadway projects that are distanced from waterbodies and sensitive natural resources. Consult IDNR to determine if testing is even necessary. 7. Sweeper washout wastes should be contained and disposed of in a designated area according to local and IDNR requirements.
Inspection & Maintenance	<ol style="list-style-type: none"> 1. Immediately report any collected unusual substances to your supervisor. This could be an illicit discharge. 2. Maintain spill response material (e.g., spill kit) in a location that is easy to access and is known to personnel. Inspect spill kit provisions on a regular basis and replace as needed.
Training	Stormwater managers and inspectors, and municipal staff that perform outdoor work activities that could contribute pollutants to storm water systems should have regular training that addresses general stormwater pollution prevention and spill prevention, control, and cleanup





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SOP-17: Trash Management

Pollutants of Concern	Sediment, litter & debris, oils & grease, and bacteria
Purpose	To prevent or reduce the discharge of pollutants from outdoor trash storage areas from going into storm drains
Application	Outdoor trash areas where dumpsters, garbage containers and other bins are stored
Best Management Practices	<ol style="list-style-type: none"> 1. Keep all dumpsters and containers covered and make sure drains are plugged. 2. Schedule regular waste removal to prevent spillage, additional waste pickup may need to be scheduled when excess wastes are present. 3. Please trash in appropriate containers and recycling bins and label containers accordingly. 4. Don't place these containers near storm drains or drainage swales, place on impervious surfaces. 5. Clean containers when needed and dispose of wash water into the sanitary sewer. 6. Contain food and animal wastes in pest-proof containers. 7. Use absorbents to clean up any spilled liquid leachate and dispose of the absorbent in the appropriate trash containers. 8. If water is used for to cleaning, keep wash water out of storm drains, direct this to the sanitary sewer. 9. Use dry clean-up methods when appropriate and dispose of absorbents in appropriate trash containers. 10. All hazardous waste must be handled according to the hazardous waste management guide. Don't dispose of hazardous wastes into a trash container! <div style="display: flex; justify-content: space-around; margin-top: 10px;">   </div>
Inspection & Maintenance	<ol style="list-style-type: none"> 1. Schedule regular inspection and maintenance of trash containers and storage areas to make sure they are not leaking or overfilled. Keep all storage areas clean. 2. Repair or replace damaged containers.
Training	Stormwater managers and inspectors, and municipal staff that perform outdoor work activities that could contribute pollutants to storm water systems should have regular training that addresses general stormwater pollution prevention and spill prevention, control, and cleanup

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