

**Good Housekeeping and Pollution Prevention Activities  
Infrastructure Planning and Facilities - Landscape Services  
2025**

Oversight by: [Matt Bailey](#)

**Controls used for Reducing/Eliminating the Discharge of Pollutants from Streets, Roads, Highways, Parking Lots & Maintenance Garages**

- **What types of BMPs are used for the following activities: ([Jonckheere](#))**
  - Concrete Cutting – contractors utilize a wet-saw and clean-up all loose debris when completed.
  - Sidewalk Repairs – contractors install silt-sacks in CB's as necessary, erosion eels at low points in walks to reduce run-off.
  - Asphalt Patching – contractors install silt-sacks in CB's, erosion eels at low points in pavement, as necessary.
  - Curb and Gutter Repair – contractors install silt-sacks in CB's, erosion eels as needed.

**Catch Basin Cleaning (how many are owned, cleaning schedule, targeted areas, tracking, and record keeping) ([Harper](#))**

- Utilize CB Inspection and CB Cleaning Collector Application.
- Inspect all CBs on an annual basis to determine amount of debris in the sump. If the sump is more than half full, schedule CB for cleaning.
- Clean identified CBs as needed, and record total amount of debris collected on an annual basis and add to spreadsheet located: Stormwater Committee Teams page/Documents/General/Progress Report 2025
- CBs located within construction sites are monitored by IPF inspectors weekly or within 24-hours of a rain event. Post construction, if sumps are more than 40% full, CB is scheduled for cleaning performed by contractor prior to removal of SESC sediment control devices.
- CB cleaning contractor utilizes ArcGIS FieldMaps app to locate and document cleaning activities. Detailed invoices are maintained at IPF Landscape Services.
- The history of when each structure was cleaned and inspected for the past couple of years were uploaded into CB Cleaning app.

**Oil/Water Separator Cleaning (maintenance procedures, disposal of waste, record keeping) ([Harper](#))**

- Maintenance Procedures- See Appendix 6 in SWPPI
- Waste is disposed of in two ways- surface parking lots and parking ramp waste are treated differently. See Appendix 6 in SWPPI
- Diesel fuel pump area with secondary containment. Monitored daily, spills cleaned up, sheen removed from water before draining into separator with absorbent added and then to sanitary sewer.
- All structures are monitored every 6 months and oil absorbent pads replaced as needed.
- Maintenance history is included in Collector Application.

**Parking Lot Sweeping (schedule, disposal of debris, record keeping) ([Harper](#))**

- Parking lot sweeping is primarily done during spring, summer and fall with winter cleaning done on an as needed basis. All lots will be swept at least twice per calendar year. Cleaning is prioritized in the spring starting with lots that have a larger amount of debris on them and then parking areas near Commencement Sites are cleaned. The remainder of the parking lots are done after that throughout the summer. Like street sweeping, parking lot sweeping is an ongoing project throughout the year, and we are constantly monitoring the parking lots and keeping them clean and safe.
- All debris from parking lot sweeping is collected in a 10-yard roll-off bin (which is used only for the street sweepings) that is staged at the Landscape Services Building.
- Maintenance location maps are documented and stored within the Landscape Services department. Stormwater Committee Teams page/Documents/General/Progress Report/ then the year. We also save an Excel spreadsheet of the total amount of debris collected from CB waste and Oil Separator waste in this folder also.
- Debris collected while sweeping the porous pavement areas in the parking lots will be weighed separately, and the totals will be kept in the collector app for our records. We will also keep track of the condition of the porous pavement in the maintenance records.
- All the porous pavement (6.88 acres) is broomed or vacuumed (twice at a minimum) every year.

#### **Parking Structure Cleaning (schedule, disposal of debris, BMPs to protect storm drain inlets) (Harper)**

- Parking ramps are swept throughout the year on an as-needed basis and washed, using a machine mounted pressure washer, during the summer months.
- All debris gathered from the parking deck sweeping is landfilled and collected in a 10-yard roll-off bin staged at the Landscape Services Building.
- The Grand River Ramp (#6) and the Shaw Ramp (#1) have storm separators installed to help treat the stormwater. Each oil separator is cleaned on an annual basis through our contractor utilizing the Collector App.
- Big Orange E which contains natural citrus solvents is used in conjunction with pressure washing in all parking ramps. Big Orange E is a non-petroleum degreaser and is completely biodegradable.
- Where applicable, drain socks or other catchment devices are used to stop sediment from entering storm drains while pressure washing.

#### **Street Sweeping (schedule, types of sweepers, disposal of debris, record keeping, evaluation of effectiveness) (Harper)**

- Street sweeping is primarily done during spring, summer and fall with winter cleaning done on an as needed basis. All roads will be swept at least twice per calendar year. Cleaning is prioritized in the spring starting with streets that have a larger amount of debris on them and then streets near Commencement Sites are cleaned. The remainder of the roads are done after that with the goal of having all streets initially swept by the end of May. Street sweeping is an ongoing project throughout the spring, summer and fall and we are constantly monitoring the streets and keeping them clean and safe.
- IPF Landscape Services will utilize various street maintenance equipment including (but not limited to) sweepers, vacuums, blowers, etc.

- We utilize a tractor with a blower to blow leaves and other organic material that falls in the roadways and parking lots back onto lawn areas which are then mown with mulching deck mowers to reduce the amount of organic debris that ends up in CB's and to maintain safe bicycle lanes.
- All debris from parking lot sweeping is landfilled and collected in a 10-yard roll-off bin staged at the Landscape Services Building and is used only for street sweeping.
- Maintenance location maps are documented and located within the Landscape Services department Stormwater Committee Teams page/Documents/General/Progress Report 2025 We also save an Excel spreadsheet of the total amount of debris collected from CB waste and Oil Separator waste in this folder also.
- Records of the debris hauled away from parking lots, street sweepings, and catch basins are available in our Good Housekeeping Folder.
- Unpaved roadways will be grated and leveled annually. Dust suppression will be applied as needed to minimize sediment dispersion.

### **Power Washing (types of washing, control of debris, processes)**

- **Graffiti Removal**
  - Use only Bio-degradable cleaning supplies.
  - Graffiti is typically on concrete, asphalt, signs, bollards, etc.
  - Identify existing sewer destinations. If a sewer drain is present, after seeking permission from P.O.T.W install a sediment barrier where runoff water will enter the drain. Once collected by the sediment barrier, staff members will physically collect sediment/paint and send it to landfill disposal.
  - If stormwater sewer is present, deflect wastewater to exiting grass panel/vegetation or collect using approved collection system.
  - Instances where substantial amount of paint/toxic fluid is near drain to waterway, call ORCBS for proper extraction and cleaning. If water and power washing will not remove the graffiti, we have graffiti remover wipes that will often work. In many instances if the graffiti is on a painted surface, we can paint over it to cover it up.
- **General Power Washing**
  - Use only pressure and water, no cleaning chemicals.
  - Identify existing sewer destinations. If a sewer drain is present, after seeking permission from P.O.T.W install a sediment barrier where runoff water will enter the drain. Once collected by the sediment barrier, staff members will physically collect sediment/paint and send it to landfill disposal.
  - If stormwater sewer is present, deflect wastewater to exiting grass panel/vegetation or collect using approved collection system.
- **Ramp Power Washing**

- **Option 1:** Obtain permission to direct the wastewater to a publicly Owned Treatment Works (POTW) through sanitary sewer or combined sewer system at the job site. If sewer destination is unknown, then contact the local Public Works Department to learn an appropriate destination.
- **Option 2:** Collect wastewater from the job site and arrange for disposal at a POTW. If there is not direct access to a sanitary sewer system, another option is to collect the wastewater after arranging disposal at sites that have notified the waste and Hazardous Materials Division WHMD about their waste operations.

Oversight by: [Joseph Grulke](#)

**Maintenance Garages and Storage Yards (chemical/bulk storage, vehicle washing, spill kits, sanding/grinding waste disposal, vehicle maintenance, oil filter disposal, storm drain inlet maintenance, yard sweeping)**

- All chemicals are stored in flameproof cabinets (with built-in containment) and bulk oil is stored in the oil room.
- Vehicles are all washed in areas that are plumbed to sanitary sewer. No storm sewer connections.
- Spill kits are located around the shop for easy access.
- Waste from sanding and grinding are disposed of in landfill.
- Oil filters are crushed and recycled.
- All drains inside garage and in vehicle storage area are plumbed into sanitary sewer and all are cleaned regularly.
- The yard around our maintenance garage is swept (vacuumed) regularly as well as inside the shop.

**Disposal of Operation and Maintenance Waste (dredge spoil, accumulated sediments, floatables, other debris)**

- All maintenance waste is land filled.

Oversight by: [John Jonckheere](#)

**Deicing Activities (type of deicing agents used, storage, tracking of locations/volumes calibration of trucks)**

- All documents are stored in IPF Landscape Services Leadership Team TEAMS PAGE: Documents/Subject Files/Snow & Everything Weather-Related, Winter Work
- Sodium Chloride- Rock Salt
- Sodium Chloride Brine- made from rock salt to 23.3% salinity.
- Magnesium Chloride- MAG – utilized in the parking ramp structures due to non-corrosive factors on structure concrete/steel.
- Magnesium Chloride Brine - utilized in the parking ramp structures due to non-corrosive factors on structure concrete/steel.
- Sno-N-Ice Melter- blend – “colored” and utilized at building entrances so customers can see it and do not think they need to spread more salt.

- All granular (bulk and bagged) product is stored in covered buildings. Liquid product is stored in tanks with secondary containment. Total volumes of material used are documented.
- All salt distribution equipment is calibrated at the beginning of each season and gates are locked to keep calibration accurate.
- Storage is in accordance with the EGLE Salt and Brine Storage Guidelines. All salt storage locations are covered from the weather elements and are NOT near any stormwater run-off collection features.
- We use brine as much as possible for our ice and snow control to reduce the amount of salt usage volume each season. A new brine maker was purchased this fall to help make sure we can meet the demands of the brine required for our snow removal efforts.
- Operators are trained annually, including standard calibration of equipment.
- 

### **Snow Removal (snow piling and disposal) (Jonckheere)**

- A campus snow removal plan outlining each department's responsibility and a video to explain the process has been developed by IPF.
- Review snow maps annually and snow piling locations indicated on individual route maps to ensure snow melt run-off is not being direct to sewer and watershed catchment features. No snow should ever be located inside of a designated stormwater device.: IPF Landscape Services Leadership Team  
TEAMS PAGE: Documents/Subject Files/Snow & Everything Weather-Related, Winter Work then by the specific year.

Oversight by: [Jerry Wahl](#), [Josh Ridner](#), [Scott Feick](#) & [John Jonckheere](#)

### **Pesticide, Herbicide and Fertilizer Applications**

#### **Certification of applicators**

- All applicators are required to have a valid Michigan Pesticide Applicators Certificate with endorsements in categories 3A (turf), 3B (ornamentals) and 6 (right-of-way), some may need 7 (Mosquito)
- Applicators are trained annually, including standard calibration of equipment.
- All application records are captured daily and stored (per MDARD) within a password secured IPF hosted MS SharePoint folder than can be accessed upon request.

#### **Chemical Storage**

- Self-contained safety designed storage unit inside building with designed mix and fill pad.
- Fertilizer stored in secured building separate from chemical storage.
- Minimum amounts stored for time delivery and application.

#### **Application plans**

- Pre-emergent herbicide with fertilizer last week in March to end of May.
- Grub control, as needed.
- Growth regulator, as needed.

- Post emergent herbicide applied late May to late September.
- Dormant application of fertilizer may be applied late October through November.
- Applications pending environmental and turf conditions.
- Insect and disease control products are only applied after inspection and diagnose of pest problems.
- Many insect and disease problems in trees are being controlled by trunk injection of pesticides. No environmental release of product occurs.
- Tree fertilizers are soil injected in controlled amounts in water suspension, 6-10 inches below the surface to target the root zone.
- All applications of foliar is limited near the river.
- 289 acres of turf are fertilized.
- Product used is 100% slow-release encapsulated fertilizer.
- All our chemical applications are entered into an app. called CP App, there is also a list of all our certified applicators on the CP List app. All application records are captured daily and stored (per MDARD) within a password secured IPF hosted MS SharePoint folder than can be accessed upon request.

### **IPM activities**

- Continuous monitoring by turf crew and additional observations/input from gardening staff
- Mapping of areas for level of maintenance and usage
- Arborists monitor and control insects and diseases by removing infected plants and material. (Sanitation pruning)
- Insects are targeted. Blanket sprays are not conducted.
- Use of cultural methods to stimulate the health of the plants to promote their resistance to diseases and insects. All application records are captured daily and stored (per MDARD) within a password secured IPF hosted MS SharePoint folder than can be accessed upon request.

### **Alternative landscaping**

- Artificial playing fields as funding allows.
- Brick and stone mulch instead of bark mulch.
- Pervious pavement instead of concrete or asphalt
- Crushed glacial gravel instead of traditional mulch.
- Pollinator gardens and native species plant material

### **Educational activities for applicators (Bailey)**

- 40 hours of Continuing education classes required each year by Landscape Services staff.
- Attend regional trade shows.
- Attend seminars put on by professional organizations.
- CEU's are continually being attained to maintain ISA certification and the Commercial Pesticide Applicators certificate.
- All full-time staff receive funding to attend conferences and seminars for continuing education credits.

- Applicators are trained annually, including standard calibration of equipment.

### **BMPs in right-of ways and playing fields.**

- Application pending on wind and temperature conditions.
- Avoid/remove all fertilizer from hard surfaces areas.
- Mark all areas of applications
- Recalibration of equipment every 2 weeks or as needed.
- Individual log of each application, including volume, location, rates, and weather conditions.
- Right-of-Ways consist of thirty-three feet from center line on all county roadways.

Oversight by: [Josh Ridner & Scott Feick](#)

### **Grassed Swales, Rain Gardens, Pond Perimeters, Other Vegetated Controls Maintenance**

All Grassed Swales, Rain Gardens, Pond Perimeters, and other Vegetated Controls are inspected annually. Maintenance activities are captured through time entries using AppTree and the proper Work Orders. An annual cost summary of each order can be generated to show hours spent maintaining each type of feature. ArcGIS FieldMaps App. will be used for our records.

#### **Grassed Swales**

- Mapping of swales are included in the campus low mow areas.
- Areas are mowed 1-2 times annually.

#### **Rain Gardens**

- Mapping of rain gardens is performed during the construction process and added to the campus base map and ArcGIS FieldMaps App.
- The gardening staff is responsible for weeding, pruning, mulching, and litter control on a daily/weekly basis.
- Annual inspections will be performed in the spring and fall to verify invasive weeds, monitor sediment levels, and check invert out structure/pipe for blockages.

#### **Pond Perimeters**

- Retention and Detention ponds are mapped and entered the campus database.
- The gardening staff is responsible for maintaining the buffer zone of plant material.
- The mowing staff are responsible for maintaining the low-mow buffer zone along the perimeter.

### **Yard Debris Reduction and Disposal (mulching/composting, leaf litter removal)**

- Mowers are outfitted with mulching decks which reduce the amount of grass trimmings collected annually. Some sites collect trimmings and/or leaf compost. This material is composted and reused on campus.
- All campus hardwood trimmings/brush and wood debris are stockpiled and then tub-ground as needed. The woodchips are used on campus as wood mulch.

- Woodchips are purchased in through a blanket purchase order contract after all woodchips generated are utilized.

Leaf litter is generated in the fall and early spring by the gardening, mowing, and hard-surface crew staff. The leaves collected in the streets and curbs are blown into the lawn panels by a tractor and blower to reduce the amount of leaves entering the storm drainage system. The mowers outfitted with mulching decks chop up and/or collect most of the leaf matter. Leaves collected in landscape beds or turf areas are Composted and reused on campus.