

# **OPERATION AND MAINTENANCE PROGRAM**

**FOR THE PREVENTION AND REDUCTION  
OF POLLUTION IN STORMWATER RUNOFF  
FROM MUNICIPAL OPERATIONS  
WITHIN THE CITY OF**

**UNIVERSITY CITY**

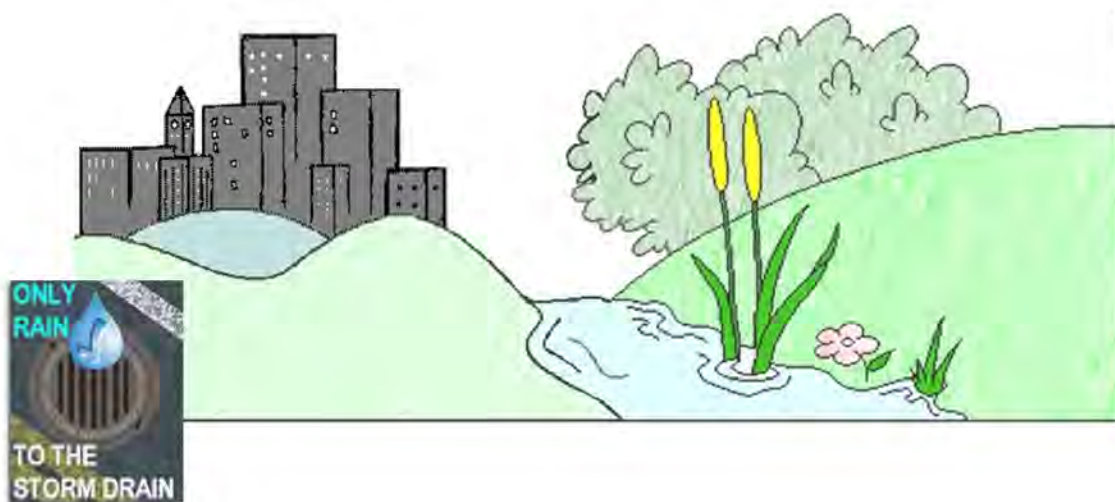
**ST. LOUIS COUNTY, MISSOURI**



**2019**

## Note From the Authors

This document is a Model Operation and Maintenance Program template developed to meet the requirements in the St. Louis Metropolitan Small MS4 Stormwater Permit, Section 4.2.6. All co-permittees are required to implement an Operation and Maintenance Program to comply with their permit. Stormwater A model program was developed to assist co-permittees in complying with the permit Section 4.2.6, and to help foster uniform approaches to implementing the Operation and Maintenance (O&M) Program. Each co-permittee must include in their program the applicable elements from the model program, based on the extent of their infrastructure, municipal facilities and services. In drafting the model program, the authors made an effort to be as comprehensive as possible in addressing municipal operations by including generic example text for a variety of municipal operations. However, a co-permittee may add measures as it deems appropriate to meet its specific needs. Co-permittees are expected to edit the text in this model program to specifically apply it to their organization by including details, commitments, and policies specific to their organization. For additional information on the Best Management Practices (BMPs), please contact the Metropolitan St. Louis Sewer District Division of Environmental Compliance at 314-436-8710.



## Table of Contents

Chapter 1- Program Administration .....	7
A. Introduction:.....	7
B. Policies: .....	7
C. Organization Manual .....	7
D. Administration:.....	8
Chapter 2- General Housekeeping, Operation and Maintenance.....	9
A. Description of Activities:.....	9
B. Locations:.....	9
C. Responsible Parties: .....	10
D. Best Management Practices (BMP):.....	10
E. NPDES Permit status:.....	14
F. Training: .....	15
Chapter 3- Vehicle/Equipment Repair, Maintenance, and Washing .....	16
A. Descriptions of Activities:.....	16
B. Locations:.....	16
C. Responsible Parties: .....	16
D. Best Management Practices (BMP):.....	16
E. NPDES Permit status:.....	18
F. Training: .....	18
Chapter 4- Cleaning and Maintenance of Roadways, Highways, Bridges and Parking Facilities .....	19
A. Description of Activities:.....	19
B. Locations:.....	19
C. Responsible Parties: .....	20
D. Materials/Supplies Acquisition, Storage and Usage: .....	20
E. Waste Generation, Storage, Disposal, Recycling: .....	20
F. Best Management Practices (BMP):.....	20
G. NPDES Permit status:.....	21
H. Training .....	21
Chapter 5- Maintenance of Parks, Green Spaces, Trails and Landscaping .....	22
A. Description of Activities:.....	22
B. Locations:.....	22
C. Responsible Parties: .....	23
D. Best Management Practices (BMP):.....	23
E. NPDES Permit status:.....	26

F. Training: .....	26
Chapter 6- Transfer Station Solid Waste Management Plan.....	27
1.0 Operations .....	27
1.1 Solid Waste Inspection, Acceptance, Handling, and Removal.....	27
1.2 Recovered Material Inspection, Acceptance, Handling and Removal .....	28
1.3 Hours of Operation .....	28
2.0 Facility Signage.....	28
2.1 Control of Employee and Public Access .....	29
2.2 Control of Collection Vehicle and Transfer Trailer Access.....	29
2.3 On-site Roadways and Parking Areas .....	29
2.4 Facility Supervision.....	29
3.0 Facility Personnel and Equipment .....	29
3.1 Facility Personnel .....	29
3.2 MSW Transfer Facilities Equipment .....	30
3.3 Storm Water Drainage Management.....	30
3.4 Waste Water Management.....	31
3.5 Air Quality.....	31
3.6 Vectors .....	31
3.7 Aesthetics and Housekeeping .....	31
4.0 Processed Solid-Waste and Residue Handling .....	32
4.1 Storage and Removal of Waste.....	32
4.2 Safety Operations .....	33
4.3 Emergency Coordinator .....	33
4.4 Emergency Services Contacts.....	34
4.5 Personal Protective Equipment .....	34
4.6 Safety Training .....	34
4.7 General Safety Guidelines .....	34
4.8 Fire District Services .....	35
4.9 Spill Control Equipment .....	35
4.10 Internal Plant Radio System.....	35
4.11 Salvaging .....	36
4.12 Unauthorized Materials .....	36
4.13 Explosion Prevention .....	36
4.14 Evaluation Plan .....	36
4.15 Records .....	37



4.16 Contingency Plans.....	37
5.0 Closure Provision.....	37
Chapter 7- Water Quality Impact Assessment of Flood Management Project .....	38
1. Description of Activities:.....	38
2. Locations:.....	38
3. Responsible Parties: .....	38
4. Materials/Supplies acquisition, storage and usage: .....	38
5. Waste generation, storage, disposal, recycling: .....	38
6. Best Management Practices (BMP):.....	39
7. NPDES Permit status.....	39
8. Training: .....	40
Appendices .....	41
Appendix 1-B1: Policies.....	41
Appendix 1-B2: Policies.....	45
Appendix 1-B3: Policies.....	47
Appendix 1-B4: Policies.....	48
Appendix 1-B5: Policies.....	50
Appendix 1-B6: Policies.....	51
Appendix 2-F1: Sample Recycling Policy .....	53
3. Policy .....	53
4. Methods to Achieve Solid Waste Reduction .....	53
5. Procedures .....	54
Appendix 2-F2: Sample Green Procurement Policy .....	55
1. Policy Objective.....	55
2. Policy Statement.....	55
3. Definitions .....	55
4. Policy Procedures.....	56
5. Guidelines .....	56
Appendix 2-F3: St. Louis County Waste Management Code .....	60
Appendix 2-F4: Model- Little Control Ordinance.....	66
1. General Provisions .....	66
2. Definitions .....	67
3. Prohibition Against Littering Public or Property of Waters .....	67
4. Vehicle Loads Causing Litter .....	67
5. Violations Enforcement and Penalties.....	67

Appendix 2-F5: Model- Nuisance Ordinance for Debris and Yard Waste .....	70
Appendix 2-F6: Model- Animal Waste Ordinance .....	72
Appendix 5-F1: Corps of Engineers 404 Permit & MDNR 401 Certification .....	74
Glossary: Definitions of Terms Used in This Document.....	76

## Chapter 1- Program Administration

### A. Introduction:

The Missouri Department of Natural Resources (MDNR) issued Phase II Stormwater Permit MO-R040005 to the University City effective **December 14, 2016**. The area served by the co-permittees is collectively known as the St. Louis Metropolitan Small MS4. One of the minimum control measures in the permit that must be addressed by the co-permittees includes pollution prevention and good housekeeping for municipal operations. Specifically, MCM 6 section of the permit requires each co-permittee to “develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.”

A Stormwater Management Plan (SWMP) for the St. Louis Metropolitan Small MS4 Stormwater is implemented under the Phase II permit. As a co-permittee under the state permit the University City is bound by the commitments contained in the SWMP. The SWMP requires a model operation and maintenance program template and that each co-permittee implement a written operation and maintenance program.

This document represents the University City implementation of the model operation and maintenance program as applicable and tailored to specifically meet University City needs and goals. This program impacts all facets of municipal operations. It is the University City intent to adhere to the policies and procedures stated herein in order to prevent pollution, to safeguard the environment for the health and benefit of all University City employees, residents and visitors and to serve as a model for the entire regulated area. Where the municipal operations described in this manual are contracted, rather than performed by municipal employees, the best management practices (BMPs) will be imposed to the maximum extent practicable on the contractor through purchasing or contract mechanisms by including BMPs in the scope of work or job/service specifications. Contractors will be required to obtain all applicable local/state/federal environmental permits.

### B. Policies:

University City has adopted several policies regarding the purchase of recycled products; janitorial and other supplies exhibiting lower toxicity; utilization of integrated pest management practices; and other pollution prevention policies. University City has sections of municipal code related to its sanitation services. Copies of policies are contained in Appendix 1-B1.

### C. Organization Manual

The SWMP contains nine major categories of municipal operations/activities. Based on its size and the nature of its municipal services each co-permittee may have activities in only some or in all nine categories. For consistency within the Plan area, each of the nine categories is addressed in the following Chapters 2 through 10. A statement of non-

applicability is contained in those chapters where the University City is not engaged in the subject activity.

#### D. Administration:

The responsible party for administration of the operation and maintenance (O&M) program is the Director of Public Works. This person is responsible for ensuring the program is kept up to date, and that employees are trained on the procedures implementing the program.

University City will train all staff associated with activities that can impact pollution in stormwater runoff. Each chapter will identify employees who should be subject to training on that particular chapter. Employees will receive general stormwater pollution prevention training provided by the Metropolitan St. Louis Sewer District. Upon implementation of specific procedures, management will review the new procedures that incorporate stormwater BMPs, proper waste management and applicable NPDES permit requirements with all employees affected. New employees will be trained on applicable procedures within the first three months of employment. Contractors working for the municipality and implementing BMPs for municipal work, as described in Section A., must train their employees on applicable BMPs before work begins.

Records documenting the training of employees and contractors must be maintained in file.



## Chapter 2- General Housekeeping, Operation and Maintenance

### A. Description of Activities:

Municipal operations include a variety of activities conducted to maintain City owned property and facilities. This chapter will cover those activities that are not specifically covered in the other chapters of this document. This chapter covers custodial and building maintenance activities, materials management and storage, safe material substitutions, spill plans, establishment of general O&M procedures, scheduling, record keeping and housekeeping practices in general.

This chapter also covers general municipal housekeeping issues, which include illegal dumping, littering, pet wastes, trash storage, and recycling.

### B. Locations:

1. City Hall - 6801 Delmar Blvd. This facility is situated on nine (9) acres, with a building size of approximately 33,495 square feet. City Hall houses the Administration Department, Planning and Development Department, Finance Department, Human Resources Department, Police Department, and Public Works Department.
2. Maintenance Yard – 1015 Pennsylvania Ave. This facility is situated on four (4) acres. The maintenance facility houses the parks, forestry, streets, fleet, and solid waste division operations.
3. Centennial Commons (Recreation Center) and Heman Park Municipal Pool – 7210 Olive Blvd. This facility administrates and operates recreation programs and events. Centennial Commons and Heman Park Municipal Pool are located in Heman Park and are included in the square footage listed below.
4. Community Center – 975 Pennsylvania. This facility is used for meetings and events.
5. University City Parks:
  - Ackert Park (includes Ackert Walkway) – 6600 Delmar Blvd. 3.5 acres
  - Eastgate Park- Northeast corner of Vernon and Eastgate- 0.93 acres
  - Flynn Park- Bounded by Pershing, Midvale and Kingsbury- 6.61 acres
  - Fogerty Park- 1500 block of North 82<sup>nd</sup> Blvd- 11.80 acres
  - Greensfelder Park- West of 8333 Fullerton- 6.75 acres
  - Greenway South- South from 6600 Kingsbury to Millbrook- 0.809 acres
  - 170 Bike Trail (Great Rivers Greenway) – situated on the east side of 170 between south of Delmar and Olive Blvd – 10.5 acres
  - Heman Park- Bounded by Midland, Olive, Purdue, Pennsylvania, and Vernon- 85.26 acres
  - Kaufman Park- Mulberry and Blackberry- 7.77 acres
  - Kingsland Park- Kingsland at Chamberlain- 0.84 acres

- Lewis Park- Delmar at Yale- 4 acres
- Janet Majerus Park- Raymond and Partridge Avenues- 4.5 acres
- Metcalfe Park- Canton and North & South Roads- 12.19 acres
- Millar Park- Canton and North & South Roads- 12.19 acres
- Mona Trail – starts at the east end of 7800 block of Shaftesbury running east to the dead end of Warder Ave. turning Northwest along Mona Drive – 2 acres
- Mooney Park- Jackson Avenue, Delmar to Amherst- 5.2 acres
- Joseph L. Adams Park- Bid Bend, south of Forsyth- 1.6 acres
- Rabe Park- Midland at Canton- 2.0 acres
- Ruth Park Golf Course – 8210 Groby Rd. – 70 acres
- Ruth Park Woods- 1018-1094 McKnight Rd- 26 acres
- Wilson Buyout – Beginning west side of Midland Blvd. along the east side of Wilson Ave. and on the west side of River des Peres – 3.5 acres

### C. Responsible Parties:

1. City Hall- Authority over City Hall is divided by departments.
  - a. Administration  
City Manager: (314) 505-8534
  - b. Department of Planning and Development: (314) 505-8500
  - c. Department of Finance: (314) 505-8544
  - d. Human Resources  
Director of Human Resources: (314) 505-8693  
(Responsible for the Fleet Division)
  - e. Police Department  
Police Chief: (314) 505-8659
  - f. Department of Public Works: (314) 505-8560  
(Responsible for Streets and Sanitation Divisions)
  - g. Department of Parks, Recreation, and Forestry: (314) 505-8625

### D. Best Management Practices (BMP)

(THE FOLLOWING BMP'S ARE RECOMMENDED TO BE IMPLEMENTED TO THE MAXIMUM EXTENT PRACTICABLE)

#### FACILITIES



- Pool drainage and filter backwash water from chlorinated swimming pools, fountains and lined ponds must be discharged into the sanitary sewer system. Other chlorinated water from water line or tank disinfection must also be directed to the sanitary sewer.
- Any discharge to surface water of pool or backwash water from pools and ponds must be dechlorinated prior to discharging into storm sewer system under the conditions of an NPDES permit
- obtained by the facility. The NPDES permit requires ceasing chlorination 7 days prior to discharge or using chemical dechlorination. These discharges to surface water must be approved under local building code, and not create a nuisance to adjoining property.
- Avoid using copper or silver-containing algacides in pools, fountains and ponds.
- Ensure grease traps and oil/water separators in kitchens and food service areas are maintained. Avoid sanitary sewer grease-blockage by regularly pumping out traps and separators.
- Maintain site plumbing plans showing sanitary and storm sewer connections. Ensure wastewater is discharged only to the sanitary sewer, and stormwater to the storm sewer. Label storm drain inlets to ensure they are used only for stormwater drainage.
- Minimize the use of pesticides through an Integrated Pest Management (IPM) Program. An IPM Program uses monitoring of pest populations compared to an action threshold, and then choosing the proper tactics, using nonchemical pest control practices, such as mechanical and biological controls, when possible, or less toxic products when needed. IPM does not rely on routine applications of pesticide based on a calendar date.
- Reduce the risk of West Nile Virus by reducing stagnant water (mosquito breeding grounds) caused by cans, containers and tires present in litter and junk piles. Keeping stormwater drainage gutters and drains clean will also reduce conditions suitable for mosquito breeding. Refer to MU Extension IPM Guides at: <https://ipm.missouri.edu/pubs/> (See Chapter 7 for additional BMPs.)
- Minimize the use of herbicides through an Integrated Pest Management Program for weed control. With turf grass, prevention of weed infestation begins with practices to promote healthy grass through proper planting, watering, fertilizing, mowing, aerification, and thatch control. Refer to MU Extension Publication IPM1009: <https://extension2.missouri.edu/MX399> (See Chapter 7 for additional BMPs.)

## MATERIAL MANAGEMENT

- Develop a policy to purchase recycled products or products with high post-consumer waste content whenever practical. Many resources are available from the EPA WasteWise Helpline: 800 EPA-WISE. Website <https://www.epa.gov/smm/wastewise> (See Appendix 2-F1 for a sample waste reduction and recycling policy.)
- Collect and recycle, to the maximum extent practicable, wastes generated by municipal operations. (See the policy in Appendix 2-F1.)
- Develop policy to purchase environmentally preferred products whenever practical. For a "Database of Environmental Information for Products and Services," see EPA website: <https://www.gsa.gov/governmentwide-initiatives/sustainability/buy-green-products-services-and-vehicles> (See Appendix 2-F2 for a sample green procurement policy or

<https://www.dgs.pa.gov/Businesses/Materials%20and%20Services%20Procurement/Procurement-Resources/Pages/Green-Procurement.aspx>

Provide for the proper disposal of all wastes generated or collected in the course of municipal operations, in accordance with all applicable local, state and federal laws.

- Inspect facilities for litter on a regular basis, and clean up as needed.
- Keep trash container lids closed to keep rain out. Do not dispose of liquid waste in the trash container.
- Ensure that the collection frequency of trash containers is appropriate to avoid overflows.
- Outdoor material stockpiles at both permanent locations and at job sites should be covered to protect from rainfall and prevent contamination of stormwater runoff.
- Material stockpiles which cannot feasibly be covered should be surrounded by a berm or otherwise contained so that stormwater runoff can be captured.



- Petroleum products, fuels, chemicals, hazardous and toxic materials, and all wastes should be properly labeled to ensure appropriate handling and disposal.
- Petroleum products, fuels, chemicals, hazardous and toxic materials, and all wastes should be stored and handled with appropriate safeguards to prevent contamination of stormwater from drips and spillage from the transfer of materials (for example, cover storage containers, use collection trays for drips, maintain spill kits and floor drain plugs to contain spills, etc.). Liquid containers should be stored under roof; or if outdoors, containers should be kept clean and sealed water-tight.
- Prevent spills of hazardous materials by selecting storage areas that avoid traffic to minimize accidental contact, and select areas that are away from storm drain inlets and streams to minimize the impact of a spill. Storage areas should be kept clean and organized.
- Contain and clean up all spills immediately. Ensure employees are familiar with spill response procedures and the location of spill kits to enable them to stop the spills at the source and contain the spilled material. With training on hazards from a material safety data sheet, minor spills can be addressed by employees, however, significant spills will require evacuation and contacting emergency responders.
- Keep material safety data sheets (MSDS) for chemicals onsite for information on reportable spill quantities, proper handling, and health and safety issues.
- Maintain and post a list of emergency contact numbers for spill reporting and spill clean-up contractor response, including: Missouri Department of Natural Resources (MDNR) – 573-634-2436, National Response Center – 800-424-8802, and for releases to the sewer, MSD – 314-768-6260. Reportable quantities (RQ) for chemicals are listed on the MSDS, and petroleum RQs include: any amount released to a storm sewer or waterway causing a sheen, 25 gallons from an underground tank, and 50 gallons from all other sources.
- Prepare for appropriately handling the clean-up of the spilled material and disposal of waste. Do not hose down spills to the storm sewer system. Clean up spills with dry methods, using absorbent to pick up fluids.
- Spill response plans are recommended for all areas of municipal operations. Spill Prevention Control and Countermeasure (SPCC) plans are required to meet regulatory criteria in 40 CFR 112 for sites with a storage capacity over 660 gallons oil in one container or 1,320 gallons on site.
- Establish at all municipal facilities materials management and inventory controls to include the proper identification of hazardous and non-hazardous substances, and proper labeling of all containers.
- Regular inspections and inventory of material storage and use areas should be performed to ensure BMPs are being used.

## COMMUNITY

- Develop/enforce ordinances for waste containers which regulate size, type, covers and water-tightness for residential, commercial and industrial areas. (See Appendix 2-F3 for language from the St. Louis County Waste Management Code.)
- Develop/enforce ordinances against illegal dumping, littering and improper yard waste disposal, providing for corrective action, enforcement and penalties. (See Appendix 2-F4 and 2-F5 for Model Ordinances.)
- Develop/enforce ordinances requiring pet owners, property owners, and equestrian and animal boarding facilities to clean up wastes from their pets and other animals. (See Appendix 2-F6 for Model Ordinance).
- Provide pet waste scoop dispensers and signage in parks and other public areas frequented by pet walkers to promote the proper disposal of pet waste and notify the public of ordinance requirements.
- Provide recycling and yard waste services for residential waste.
- Provide sufficient numbers of appropriately-sized waste receptacles at municipal facilities and in public areas with regularly scheduled servicing, collection and disposal.
- Educate citizens on trash and pet waste issues to promote compliance with ordinances using available methods such as resident newsletters, brochures, internet sites, storm drain marking projects, etc.
- Promote and assist in neighborhood and stream clean-up activities.
- Develop/enforce municipal ordinances against illegal discharges to stormwater from sources such as failing septic tanks, septic tanks discharging to stormwater, etc. Ordinances to address illegal connections of sanitary sewers should be at least as stringent as the Missouri Department of Health regulations in 19 CSR 20-3 and County requirements, such as St. Louis County Plumbing Code Section 1103.
- Develop/enforce municipal ordinances requiring the proper maintenance of septic tanks and other small onsite sewage disposal systems. For a model ordinance, see: <http://www.anjec.org/pdfs/Ord-ModelSeptic.pdf>

## O&M PROGRAM

- Establish standard operation and maintenance procedures, maintenance schedules and long-term inspection procedures in accordance with this program manual with emphasis on safety, efficiency, and compliance with applicable laws and good environmental stewardship.
- General housekeeping inspections of facilities and storage areas should be performed once a month and records kept of the inspections.
- Develop record keeping procedures that effectively track implementation of program elements and that provide the information necessary to meet the reporting requirements of the MS4 permit.

### E. NPDES Permit status:

#### F. Training:

All employees involved in maintenance operations, construction, purchasing, facility or site design, or building or facility management will be trained on this chapter, including the following Departments and work units:

- Vehicle maintenance department – mechanics, storekeepers and management.
- Public works department – equipment operators, laborers, and management.

In addition to training on the housekeeping BMPs and proper waste management, employees will be provided general awareness of NPDES discharge requirements.



## Chapter 3- Vehicle/Equipment Repair, Maintenance, and Washing

### A. Descriptions of Activities:

Fleet maintenance facilities are responsible for the maintenance and repair of equipment and vehicles ranging from chain saws and light vehicles to loaders and tandem dump trucks. Preventative maintenance or PM's include oil and filter changes, tune ups and tire rotations. Repairs include engine and transmission replacement; brake, suspension or axle repair; and welding work. There is a fueling site at the Central Garage.

### B. Locations:

The Central Garage is located at 1015 Pennsylvania Ave.  
Off-site wash station is located at 8304 Olive Blvd.

### C. Responsible Parties:

The Fleet Manager oversees all aspects of fleet administration and operations. The Fleet Services Supervisor is responsible for the day-to-day operations of vehicle/equipment repair, maintenance, and washing and the central garage in general.

### D. Best Management Practices (BMP):

*(THE FOLLOWING BMP'S ARE RECOMMENDED TO BE IMPLEMENTED TO THE MAXIMUM EXTENT PRACTICABLE)*

#### OPERATIONS

- Institute a preventive maintenance program to minimize fluid leaks and equipment failures. Inspect vehicles and equipment frequently for leaks, collecting leaks with pans or absorbent, and repairing leaks.
- All routine vehicle maintenance and repairs at (municipality) facilities are performed indoors. On occasion and when necessary, outside maintenance work will be performed in a paved area with provisions made to contain and clean up all drips and spills.
- Use non-hazardous, environmentally safe products when possible. Avoid use of chlorinated organic solvents.
- Environmentally safe detergents are used instead of caustic cleaning solutions.
- Flammable liquids are kept in a vented fire-rated cabinet.
- All supply material and waste containers are marked clearly and properly to identify the contents.
- Keep material safety data sheets (MSDS) for chemicals onsite for information on reportable spill quantities, proper handling and health and safety.



- All supply material and waste containers are stored under cover to prevent contact with rainfall; or when uncovered, containers are clean and sealed.
- Tops of containers have absorbent mats and are free of standing liquid, and stored containers are kept closed.
- Waste oils, filters, antifreeze, and other wastes are collected in designated, labeled containers and recycled to the maximum extent practicable.
- Wheel weights are kept in a container marked "scrap lead".
- Records of waste pick-ups are logged and maintained in file.
- Drain pans are labeled for specific types of fluid. Use pans under vehicles and equipment with fluid leaks. Always use drip pans when making and breaking connections.
- Used oil filters should be gravity drained for 24 hrs with the anti-drain back valve or filter dome punctured to facilitate the draining process. Crushing the oil filter and recycling is preferred.
- Batteries, waste oil, etc. having spill/leak potential are stored indoors and are in secondary containment, when possible.
- Neutralizer and absorbent are kept by both new and used batteries.
- All floors are clean of oil and grease.
- Immediately clean up all spills of chemicals or vehicle fluids using dry methods (absorbents), minimizing the use of water whenever possible.
- Vehicle operators should be instructed to remain with the vehicle during fueling, and not to top-off the fuel tank to avoid overflows and spills.
- For painting or sanding activities outdoors, use a tarp enclosure to contain and capture material. Collect and dispose of paint chips and sand blast waste in the trash for non-lead-based paint, or evaluate lead-based paint for hazardous waste disposal.
- Keep the facility and surrounding area clear of litter.

## SPILL PREVENTION

- Spill control plans should be in place with procedures for proper spill response to minimize environmental impacts. SPCC plans must meet regulatory criteria in 40 CFR 112 for sites with a storage capacity over 660 gallons oil in one container or 1,320 gallons on site.
- Procedures for loading, unloading and transfer operations should be developed to prevent overfilling and spills.
- In areas where spills could occur, such as fueling and loading areas, keep spill kits with absorbent materials nearby and display signage indicating the location of those spill kits. Storm drain plugs or covers are recommended to prevent the flow of spilled material from entering the storm drain.
- For fueling areas, post signs that state "no topping off".
- Regularly inspect all tanks and containers to ensure physical integrity.
- Maintain equipment to ensure the proper operation of automatic shutoff devices on pumps and, overfill protection and spill buckets on tanks.
- Emergency phone numbers are clearly posted in the shop and near material storage areas.

## FACILITY

- All floors in work areas are sloped to floor drains that are connected to an MSD-approved sediment /oil trap prior to discharge into the sanitary sewer system. Trap is pumped out quarterly, or as needed.
- A site-plumbing schematic showing all drains, traps, and shut offs for utilities should be posted in shop. Employees should be made aware of sanitary and storm sewers to ensure all wastewater is discharged to the sanitary sewer.
- Storm drains/inlets can be labeled to help protect from improper usage.
- All above ground storage tanks have secondary containment in accordance with SPCC requirements and are covered with a roof. If containment is not roofed, inspect accumulated rain water for contamination prior to discharge.
- Fueling areas are recommended to be designed with a roof to prevent contact with stormwater. The area should be graded and sloped to direct stormwater runoff away from the site and to prevent runoff from flowing over the fueling area.
- Stormwater treatment devices can be used to treat runoff from fueling areas.
- "No smoking" signs are posted in the shop, and near hazardous waste and flammable material storage areas. Verify that fire extinguishers are charged and inspected yearly.

### E. NPDES Permit status:

### F. Training:

Training on stormwater BMPs will be provided to mechanics, storekeepers, material handlers, laborers, equipment operators, janitors, and management staff working at facilities identified in Section B. All employees will be provided safety training and training on written procedures pertaining to general housekeeping. Implement monthly safety meetings to include environmental training and HAZMAT training.

## Chapter 4- Cleaning and Maintenance of Roadways, Highways, Bridges and Parking Facilities

### A. Description of Activities:

Most highway agencies and municipalities are responsible for the cleaning and maintenance of roadways, highways, and parking facilities under their maintenance purview. Activities include, but may not be limited to, street sweeping, flushing, applying surface seals, patching, snow removal, and emergency response to spills and accidents.

Street sweeping operations normally involve self-contained and powered collection devices, utilizing belt conveyors or vacuum systems. This work may be performed on a scheduled basis, or when requested, and is usually conducted on roads with curbs where debris can accumulate in the gutter line.

Many agencies flush bridge decks and parking structures in the spring to remove de-icing chemicals and to clean the drainage structures. Also, flushing operations are performed on sections of pavement where mud or debris accumulates after flooding, creating hazardous conditions.

Bridge decks and parking structures are normally sealed on a five-to-seven year cycle to protect the concrete and steel reinforcement from corrosive elements.

Patching operations involve the preparation of potholes and the fill of either hot mix or cold patching material.

Highway agencies plow and salt the roadways under their maintenance jurisdiction during winter snow events. Typically, 200 to 400 pounds of salt per lane mile is used to de-ice the pavement. Other chemicals, such as calcium chloride, are used when prevailing temperatures fall below 20° Fahrenheit.

Most highway agencies are required to respond to emergency situations involving spills and debris from vehicles. This work is performed if it is determined that the material which will be removed from the public road right-of-way is of a non-hazardous nature. Hazardous material is handled through hazardous material removal procedures not specified in this chapter.

### B. Locations:

All local road networks or public parking structures of University City. The Street Maintenance Division is responsible for the signing, marking and maintenance of all 96.6 miles of public city-controlled streets and related facilities, including repairs, traffic control, street sweeping, leaf collection, and snow/ice removal. In addition, this division is responsible for the maintenance of bridges and other structures.



### C. Responsible Parties:

The Director of Public Works has authority over all local roads and parking facilities. Local roads and parking facilities are actively managed by the Superintendent of Streets.

### D. Materials/Supplies Acquisition, Storage and Usage:

Large quantities of materials are expended in the performance of work. Some material is purchased and used immediately, while other material is stockpiled. Agencies working within the constraints of their budget weigh fiscal responsibility against the immediate and long-range needs for such materials, and adjust their purchasing habits accordingly.

### E. Waste Generation, Storage, Disposal, Recycling:

A certain amount of construction spoil and waste is generated during the performance of maintenance operations on our road network. Recycling methods are employed if they are determined to be cost-effective; however, in many instances, waste material must be removed from the work site by various disposal methods.

### F. Best Management Practices (BMP):

#### MAINTENANCE

- If certain road maintenance activities are prone to produce pollutants that can be carried off with stormwater runoff, schedule these maintenance activities during times of dry weather if possible.
- Capture scrapings/rust/dirt/sandblasting grit/over spray/drips, etc., from preparation and painting of bridges/structures/traffic control devices.
- For steel girders on bridges, utilize certified inspectors to inspect for lead based paint on structures older than 1978. Use only state certified removal contractors for lead based paint abatement.
- Used asphalt is recycled when it is cost-beneficial.
- Block scuppers and drains when sealing bridge decks.
- On asphalt overlays, ensure stormwater drainage capacity of curbs and inlets is maintained by milling down into the street at the curb, or using open graded thin bonded overlay.
- Comply with St. Louis County or municipal land disturbance ordinances and programs implemented under the St. Louis County Phase II Stormwater Management Plan. For projects less than the land disturbance program thresholds, employ BMPs for erosion and sediment control.
- All construction or maintenance activities that excavate in or discharge any dredge or fill material into a "water of the United States", which includes ditches, creeks, rivers, lakes, ponds and wetlands, requires a Corps of Engineers 404 permit and a MDNR 401 water quality certification. Examples of construction or repair activities requiring a permit include: bridge work, culverts under road crossings, dredging or placing rip rap in creeks. See Appendix 5-F1 for a summary of permit requirements.



#### DE-ICING

- Use calibrated chemical applicators for salt and brine applications.
- Minimize the use of salt without compromising public safety.
- Stop salt feed on trucks at stop signs, where equipped.
- Stored salt is on an impervious surface and is covered.
- As available, use road weather information such as weather forecasts, meteorological data, and pavement sensors to maximize the efficiency and effectiveness of resources.

#### CLEANING

- Remove as much mud, grit, salt and debris as possible (by scraping, brooming, etc.) prior to roadway flushing on bridges.
- Evaluate the need for street sweeping to remove grit and trash at facility parking lots and roadways within jurisdiction. Implement street sweeping, when feasible, focusing on heavy traffic patterns, seasonal variations (spring/fall), and problem areas. Record the volume of trash/debris removed to identify the priority of areas being cleaned and the effectiveness of resources used. Investigate to determine sources of litter in areas of excessive accumulation.
- The environmentally preferred sweepers are those with an integral collection device and fugitive dust control. Properly dispose of trash/debris as indicated in Section E above.
- Do not hose down parking lots in a manner that discharges wash water to the storm drain untreated.

#### G. NPDES Permit status:

N/A

#### H. Training

Employees involved in Street and Highway maintenance and repair will be trained on the BMPs in this chapter.

## Chapter 5- Maintenance of Parks, Green Spaces, Trails and Landscaping

### A. Description of Activities:

University City has 20 green spaces totaling 201 acres of land that consist of parks, trails, and walkways.

University City has responsibility for the development and maintenance of recreational areas and green space within the city, including neighborhood and regional parks, community gardens, bike and walking paths, linear parks, trees, public facility landscaping and public street right-of-way landscaping. The city promotes an interconnected system of open space and trails that facilitates active and passive recreational opportunities for the community.

The creation and design of parks and open space can assist in management of stormwater by providing green infrastructure and a means of absorbing rainwater, slowing its release in to streams, storing, filtering and slowing stormwater runoff down and thus preventing or reducing flash flooding downstream. Local governments have an opportunity to use their park lands to benefit the environment and to demonstrate best practices for stormwater management.

Maintenance activities include mowing of grassy areas, pruning trees, removing fallen limbs, mulching, emptying trash receptacles, trail maintenance (repairing asphalt bike path and walking trails), routine cleaning of park restrooms, and parking lot maintenance.

### B. Locations:

- Ackert Park (includes Ackert Walkway) – 6600 Delmar Blvd. 3.5 acres
- Eastgate Park- Northeast corner of Vernon and Eastgate- 0.93 acres
- Flynn Park- Bounded by Pershing, Midvale and Kingsbury- 6.61 acres
- Fogerty Park- 1500 block of North 82<sup>nd</sup> Blvd- 11.80 acres
- Greensfelder Park- West of 8333 Fullerton- 6.75 acres
- Greenway South- South from 6600 Kingsbury to Millbrook- 0.809 acres
- 170 Bike Trail (Great Rivers Greenway) – situated on the east side of 170 between south of Delmar and Olive Blvd – 10.5 acres
- Heman Park- Bounded by Midland, Olive, Purdue, Pennsylvania, and Vernon- 85.26 acres
- Kaufman Park- Mulberry and Blackberry- 7.77 acres
- Kingsland Park- Kingsland at Chamberlain- 0.84 acres
- Lewis Park- Delmar at Yale- 4 acres
- Janet Majerus Park- Raymond and Partridge Avenues- 4.5 acres
- Metcalfe Park- Canton and North & South Roads- 12.19 acres
- Millar Park- Canton and North & South Roads- 12.19 acres
- Mona Trail – starts at the east end of 7800 block of Shaftesbury running east to the dead end of Warder Ave. turning Northwest along Mona Drive – 2 acres



- Mooney Park- Jackson Avenue, Delmar to Amherst- 5.2 acres
- Joseph L. Adams Park- Bid Bend, south of Forsyth- 1.6 acres
- Rabe Park- Midland at Canton- 2.0 acres
- Ruth Park Golf Course – 8210 Groby Rd. – 70 acres
- Ruth Park Woods- 1018-1094 McKnight Rd- 26 acres
- Wilson Buyout – Beginning west side of Midland Blvd. along the east side of Wilson Ave. and on the west side of River des Peres – 3.5 acres

#### C. Responsible Parties:

The Director of Parks, Recreation, and Forestry has authority over all parks. Parks are actively managed by the Superintendent of Parks Operations.

#### D. Best Management Practices (BMP):

(THE FOLLOWING BMP'S ARE RECOMMENDED TO BE IMPLEMENTED TO THE MAXIMUM EXTENT PRACTICABLE)

##### PARK DESIGN AND SITING

- Creating undeveloped, natural open space and preserving established trees and other natural vegetation, particularly around natural drainage areas, such as creeks, is recommended. Tree buffers and tall grass filters around streams improve water quality, slow runoff and prevent erosion. A minimum buffer width of 50 feet is recommended.
- Avoid site development and placing facilities in the flood plain.
- Design park sites to preserve natural resources such as wetlands and existing natural draining areas, minimizing their loss and maintaining existing trees and a riparian corridor next to creeks to the degree possible. Minimize creek crossings, and place them only after consideration of the stream features to enable natural flow.
- Design landscaping that uses native vegetation to reduce the need for irrigation, fertilizer and pesticide. Select plants appropriate for site conditions for sun, moisture, and soil type.
- Utilize low impact development to minimize impervious surfaces, See Chapter 5.
- In designing stormwater drainage facilities, use the following BMPs to improve the water quality of site drainage and slow the release of water to streams: wet detention ponds, micro detention basins, wetlands, rain gardens, vegetative filter strips and riparian buffers along streams, structural filter systems, pervious pavement and green (vegetated) roofs. The use of swales instead of curbs along roads and parking lots is beneficial to filter pollutants and reduce the volume and rate of stormwater flow. Fact Sheets on stormwater management practices are available from the Stormwater Manager's Resource Center at the following web site:  
<https://www.sustainable.org/environment/water/319-stormwater-managers-resource-center-smrc>

##### COMMUNITY PROGRAMS



- Sponsor activities and annual events that involve the general public, schools, watershed groups, stream teams, etc., providing hands-on activities that promote water quality in their adopted parks and greenways. Typical activities include: field trips, cleanups, educational programs, restoration projects, stream monitoring, storm drain marking, and trail projects.
- Organize or participate in reforestation programs, planting native trees to buffer streams, create shade, and beautify parks. Support community volunteer group efforts in these programs.
- Require pet owners to pick up and properly dispose of pet waste in parks. Provide pet waste scoop dispensers and signage in parks to notify visitors of the requirement.
- Control wild geese populations near lakes with “no feeding the geese” signs and ordinances. Other techniques to control populations include habitat modification by increasing shoreline vegetation height, scare tactics or relocation.

#### PARK/LANDSCAPE MAINTENANCE

- Remove litter and debris regularly.
- Properly dispose of yard waste, for example, by composting. Do not dump yard waste into creeks.
- Minimize mowing of open space sites, depending on site objectives.
- Mow grass higher and leave grass clippings on the lawn to retain moisture and provide nutrients.
- Remove exotic invasive vegetation and replace with native plantings as resources are available.
- Perform soil tests to determine the optimum fertilizer application rate.
- Apply fertilizer only in cool weather, preferably fall. Avoid application before a rain, and do not apply fertilizer at rates higher than indicated in on label instructions. Apply slow release fertilizers such as methylene urea, IDBU or resin coated fertilizer.
- When disturbing land, such as clearing vegetation and destroying the root zone, employ BMPs for erosion and sediment control. For details concerning these BMPs, see the SWPPP link on the following web page:  
<https://www.stlouisco.com/YourGovernment/PublicWorks/Permits/LandDisturbance> All construction or maintenance activities that excavate in or discharge any dredge or fill material into a “water of the United States”, which includes ditches, creeks, rivers, lakes, ponds and wetlands, requires a Corps of Engineers 404 permit and a MDNR 401 water quality certification. Examples of activities that require a permit include: placing culverts in creeks, constructing outfalls, and stream restoration activities. See Appendix 5-F1 for a summary of permit requirements.

#### INTEGRATED PEST MANAGEMENT

- Use Integrated Pest Management (IPM) techniques to minimize the use of pesticides. Pesticide application should be timed carefully and combined with other pest management practices. Pests and their development stage should be identified accurately and pesticide applications made only when necessary, using the least amount needed and the least toxic product for adequate pest control.

- Use mechanical controls to keep pests in check, such as species specific, pheromone-based traps. Remove pests by hand. Eliminate conditions favorable to pests and place barriers to control pests and weeds.
- Use natural, biological controls, when feasible, including natural enemies of pests, such as: predators, parasites, pathogens, pheromones, and juvenile hormones.
- Reduce the risk of West Nile Virus by reducing stagnant water (mosquito breeding grounds) caused by cans, containers and tires present in litter and junk piles. Keeping stormwater drainage gutters and drains clean will also reduce conditions suitable for mosquito breeding. Refer to MU Extension IPM Guides at: <https://ipm.missouri.edu/pubs/> Minimize the use of herbicides through an Integrated Pest Management technique for weed control. This includes practices that keep plants healthy, such as selecting disease and pest resistant varieties and maintaining good growing conditions. For turf grass, prevention of weed infestation begins with practices to promote healthy grass through proper planting, watering, fertilizing, mowing, aerification, and thatch control. Refer to MU Extension Publication IPM1009: <https://extension2.missouri.edu/MX399>

#### PESTICIDE/HERBICIDE USE

- When pesticide or herbicide use is required, select pesticides carefully, avoiding highly water soluble and very environmentally stable products to minimize potential for leaching from soils into waterways. Environmentally friendly products readily degrade in the environment and/or bind to soil particles.
- Consider the vulnerability of the area in which pesticides are applied, avoiding areas with streams, ponds, sinkholes or wells. Sinkholes are an environmentally sensitive area, because they allow surface water to reach groundwater quickly with little natural soil filtering.
- Apply pesticides when the target pest is at its most vulnerable life stage, and use site specific rather than wholesale application.
- Read pesticide labels carefully for information and restrictions about the rate, timing, and placement of the pesticide in that container. Calibrate equipment to apply at the proper rate. Apply when the threat of rain is low to avoid wasting material and washing pesticide into the waterways. Carefully calculate how much pesticide concentrate is needed to treat the specific site with the equipment being used, to eliminate disposal of excess spray mix.
- Store pesticides in their original containers in a cool, well-ventilated building with a concrete floor. Handle pesticides carefully to avoid spills.
- Dispose of pesticide waste properly, following label instructions.

#### LAND DISTURBANCE

- Comply with St. Louis County or municipal land disturbance ordinances and programs implemented under the St. Louis County Phase II Stormwater Management Plan. For projects less than the land disturbance program thresholds, prevent erosion of soil from bare ground at the site by employing erosion and sediment control BMPs, such as: soil stabilization with mulch or seeding, settling basins, sediment traps, vegetated buffer strips, and silt fencing for perimeter controls. For details concerning these BMPs, see

the SWPPP link on the following web page:

<https://www.stlouisco.com/YourGovernment/PublicWorks/Permits/LandDisturbance>

E. NPDES Permit status:

F. Training:

All employees directly involved in the design, construction and maintenance of landscaping, trails, green spaces and parks will be trained on the BMPs in this chapter. Affected employees will likely be: facility engineers, park management, equipment operators, gardeners, laborers, and contract operations providing these services.



## Chapter 6- Transfer Station Solid Waste Management Plan

### 1.0 Operations

#### 1.1 Solid Waste Inspection, Acceptance, Handling, and Removal

##### *Vehicle Scaling*

All vehicles delivering or shipping waste will cross the University City Transfer Station scale. The scale software and hardware equipment located in the Sanitation office will account for all inbound and outbound waste shipments. All weights will be monitored electronically by computerized software located in the same office. In the event that a trailer is loaded beyond the weight limit for roadway passage, the trailer will be required to return to the transfer station building and unload the necessary material.

##### *Monitoring and Inspections*

Prohibited and unacceptable waste materials will be restricted from the University City Transfer Station through appropriate signs at the entrances to the site and through visual inspection by personnel. Facility personnel shall be thoroughly trained in the handling of acceptable/unacceptable waste and in all aspects applicable to their job. All personnel involved in handling of material at the site will be trained to identify unauthorized material, and carry out the appropriate measures as required by University City Transfer Station policy in accordance with Local, State and Federal Regulations. Unacceptable waste that is discovered prior to unloading will be turned away. If unacceptable waste is discovered after it has been unloaded it will be isolated and removed by owner. If the owner cannot be identified, the unacceptable waste will be isolated and removed within 24 hours for putrescible waste and within 7 days for non-- putrescible waste by a City staff, or authorized contractor that is capable of handling said material.

The Transfer Station equipment will be monitored and inspected for malfunctions, wear, operator errors and spills or discharges that may cause an impact on the environment or public safety. Any identified hazards revealed by the inspections will be immediately remedied. If a potential hazard is imminent or has already occurred, action will be taken. The corrective actions will be reported to the appropriate agency, when applicable. All inspections will be recorded and kept on site.

##### *Determination of Acceptable Waste*

The Transfer Station operation will accept non-hazardous residential waste, yard waste, tree brush in limited quantity, batteries and tires generated by on-site fleet maintenance staff to be recycled. Construction and demolition debris may be accepted by various University City divisions on a temporary basis only. Hazardous and infectious wastes such as asbestos, radioactive and nuclear wastes as well as chemicals, and railroad ties will not be accepted at the Transfer Station. Signs will be posted at the entrance to the site indicating that these materials are unacceptable

## 1.2 Recovered Material Inspection, Acceptance, Handling and Removal

- The City of University City will accept electronic components for recycling during special fairs or recycling events only. The acceptable items will include monitors, laptops, notebooks, scanners, printers, all in-one computers, fax machines, and televisions. The material will be sorted, separated, placed on a pallet and shrink wrapped for delivery to market. The material will be occasionally stored in the area formerly used as the Material Recovery Facility. In addition, solid waste supplies such as lids, containers, wheels, and carts may be stored in the same location.
- The City of University City has implemented a refuse cart recovery program. Trash carts are repossessed by the city if a resident fails to pay for trash service over an extended period of time. The carts are removed from the homeowner's property and stored at the Central Garage Facility until the responsible parties' bill is paid in full or a pay agreement is established.

## FACILITY ACCESS AND HOURS OF OPERATION

### 1.3 Hours of Operation

The City of University City hours of operation to receive materials are Monday through Friday from 7 a.m. to 3:30 p.m. and on Saturday after a holiday from 7 a.m. to noon. The Residential Recycling Drop-Off center is open 24 hours to receive acceptable recycling materials.

## 2.0 Facility Signage

- All storage areas will be clearly marked with the appropriate signage.
- Access to the Facility will be controlled by signage. The signs shall be displayed prominently at the front and rear site entrances. A sign will display the following information:
- "This Facility accepts: Municipal Solid Waste (MSW), non-hazardous residential and commercial recyclables, pre-sorted loose recyclables, newspapers, magazines, junk mail, OCC, old office paper/computer paper, all colors of food/beverage glass containers, aluminum, steel beverage cans, PET (clear/green beverage), HDPE (natural, pigmented, blown containers only), and bulk steel/metals.
  - "WARNING: Transporting any unauthorized hazardous waste to this facility for disposal is prohibited by law. Persons violating this prohibition are subject to Civil and Criminal Prosecution."
- Additional Facility signage will direct incoming loads to the appropriate processing area. The hours of operation and emergency telephone numbers shall also be posted.



## 2.1 Control of Employee and Public Access

Access will be controlled to periods when responsible operating personnel are on duty in accordance with the facility operation hours indicated above. The facility is enclosed with all processing and tipping area contained within the building. The facility will be closed and locked at the end of each operating day. Office and operations personnel shall prohibit any unauthorized access and shall record all incidences of unauthorized access.

Vehicle access to the site is limited to two roadways. Access to and from the roadways are restricted by fencing and a gate. The entrance gates shall be closed and locked at the end of each operating day.

Outside storage of recyclables will be either enclosed in 30-yard roll-off containers or secured by a tarpaulin.

All visitors will be required to check in at the appropriate office. A sign indicating this will be posted in the parking area. Employees will walk from the parking area to the office prior to the start of the day.

## 2.2 Control of Collection Vehicle and Transfer Trailer Access

To control access to the site, a two-way entrance will be used by collection vehicles, transfer trailers, employees and visitor vehicles. The entrance gate will be closed and locked during non-- operational hours.

## 2.3 On-site Roadways and Parking Areas

The parking area will be able to accommodate personal vehicles, city vehicles, equipment, and buses. All inbound collection vehicles and trailers, after crossing the scale, will travel south in a counter-clockwise direction towards the tipping floors.

After tipping and transfer operations have occurred, vehicles will move in a southerly manner to exit.

## 2.4 Facility Supervision

Personnel are required to be on-duty at all times during operation of the University City Transfer Station. In addition, a minimum of one supervisor will also be on-duty the entire working day. All personnel will be qualified and have the necessary licenses required by Local, State, and Federal regulations. Movement of traffic on-site will be controlled by University City Transfer Station personnel and appropriate traffic signage. The City Transfer Station will have suitable fencing and locking gates to prohibit unauthorized entry to the site during periods of Facility closure.

## 3.0 Facility Personnel and Equipment

### 3.1 Facility Personnel

#### Preliminary Staffing Plan



POSITION	NUMBER	DESCRIPTION
Manager	1	Supervise all facility operations, transfer station & MRF; hires personnel, assist in long range planning of city operations; administers and assist in accounting and data management activities; supervise reporting and inspections.
Crew Leader(s)	2	Assists Manager in day to day facility operations. Supervise crews, write reports.
Heavy Equipment Operators	9	Operates processing equipment, inspects, and assists in collection of MSW in the field. Performs routine preventive maintenance.
Transfer Trailer Drivers	2	Hauls MSW and Residuals to Landfill. Maintains Transfer Station equipment, inspects loads processed at Transfer Station.

Note: Personnel may be added or subtracted as required for efficient facility operations.

### *Facility Supervision*

All operations at the University City Transfer Station will be performed under the Sanitation Manager. These personnel will have the responsibility of insuring the Transfer Station is in compliance with the University City Transfer Station maintenance manual and all other applicable Local, State and Federal regulations.

### 3.2 MSW Transfer Facilities Equipment

University City solid waste processing transfer station will use the following on-site equipment for receipt, storage, transfer and housekeeping functions.

1. Scale (10' x 65' pitless truck platform type)
2. Front-end Loaders
3. Cardboard Compactor (1)
4. Semi-Tractor
5. Close Top Trailers
6. Open-top Roll-off Containers
7. 1.5 c.y. - 5 c.y. containers
8. Forklift Truck
9. Solid Waste Compactor (1)
10. Fire extinguishers will be located on/near all equipment
11. Street Sweeper

### 3.3 Storm Water Drainage Management

Storm water runoff from the site currently drains from the East to the West where there is a drainage channel flowing North to South. The developed site shall include a series of storm water inlets.

Contamination of surface water shall be prevented through the design of the building floors and through regular cleaning of area.

The Facility will have a roof gutter system at the perimeter of the eave. The pitched roof will direct the rain water to the gutters at the eve of the Facility.

### 3.4 Waste Water Management

All free liquids, wash water, etc., generated during daily facility cleaning from within the building will be collected in a fully enclosed sanitary sewer system where it will ultimately be treated and released by St. Louis Metropolitan Sewer District.

In the event of accidental spillage of waste water, the DNR Water Pollution Control Program shall be notified immediately. Any accidental spillage that occurs on the facility site shall be contained and cleaned by trained city personnel or Fire Department.

### 3.5 Air Quality

Emissions are not anticipated to be a problem on-site however, they will be monitored and appropriate corrective actions taken if necessary.

No hazardous gases will be produced or stored at the facility; therefore, there is no possibility of any release. Decertification of white goods (Freon) will be handled by a certified processor.

### 3.6 Vectors

For both the Facility and the surrounding site, a good housekeeping program will be utilized to rid the area of all standing water or potential areas for mosquito infestation. Any spilled material will be promptly removed to preclude any source of breeding for flies and other insects.

All solid waste will be covered after the trailers are loaded, and the Facility will be cleaned daily. The tipping floor(s) will be sprayed and washed daily to ensure good housekeeping practices. Floor sweeping and removal of litter, will minimize the need for pesticides and insecticides and thereby further reduce any potential impact to groundwater or surface water. This task will be completed daily.

The City currently outsources pest control and does not maintain a contract with any given company. A designated contractor performs Vector Control inspections to make sure no problems exist or any further treatments are necessary for rodents.

The City's Community Development Department will also maintain a combination of chemical, physical, and natural vector control measure, as necessary. These will include, but not be limited to, bat stations, perimeter wall spraying, interior fogging, spring traps, glue boards/strips. Natural control measures will include exterior bat and purple martin houses.

Facility vector control/housekeeping records and a schedule of on-site pest control services should prevent any problems with vectors. Also, a Vector Control Contingency Program shall be implemented when necessary to prevent or rectify problems. An assessment shall be made of the operating conditions to see what conditions are being maintained that are favorable for the existence of vectors and necessary corrective action will be taken.

### 3.7 Aesthetics and Housekeeping

On-site personnel will routinely monitor the entire site of transfer station operations. At a minimum, there will be daily cleanup of litter and spillage around the entire facility, as well as the following areas by maintenance crews as part of mandatory housekeeping procedures.



#### Tipping area and Ramp:

- Will be swept, washed, and maintained daily. Keeping area clean from litter, liquids, and debris.

#### Compactor Area:

- Will be maintained utilizing front end loader to collect overflow from transfer trailers. This area will be swept at the end of each shift and all debris will be removed.

#### Yard Area:

- The Central Garage facility will be swept weekly. Litter around the perimeter will be collected and disposed of by staff. All vehicles will be parked on line. Containers will be stored in its designated area

#### White Goods Area:

- White Goods will be collected and stored in the provided roll-off container and delivered to market as needed

#### Residential Recycling Drop -Off Area:

- Will be maintained twice daily at a minimum. All materials will be collected and stored in the appropriate bins and storage containers until time to deliver to market. The drop-off will be swept and clear of contaminants and debris. The recyclable materials will be taken off site within 7 days of acceptance.

#### Housekeeping Standards

- The MSW transfer station and processing area will not store putrescible waste longer than 24 hours and no longer than 7 days for non-putrescible waste. The Tipping floor will be cleaned after each 24-hour period by sweeping of the area.

#### Maintenance Requirements

- The University City Transfer Station equipment will be periodically power-washed or cleaned by other appropriate methods to prevent odors and vectors. All on-site equipment and machinery will be maintained to prevent equipment failure to the maximum extent practicable. Shelter for mobile equipment maintenance and repair will be available on-site. On-site roads and all entrances to the site will be kept passable and safe in all conditions. Sanding or other appropriate measures will be taken when ice is present on-site

#### Facility Drainage

- There will be floor drains located in the Recycling and Process areas of the facility to collect the free liquid and wash water generated during daily facility cleaning. Any fluids which may be contained with the incoming MSW collection vehicles will be directed to the drain located to the south of the Tipping Floor. Any fluids which may be contained within materials which are discharged from the collection vehicles will be power-washed with a hose. During equipment clean-out it will be swept and thoroughly washed down through daily cleanup operations.

The floors have been designed so that once any liquid enters the building it will remain contained within the building perimeter. All floors and open paved surfaces will be cleaned daily by sweeping. Water collected from cleaning the floors and wash down of the equipment will be collected and deposited into one of the floor drains. The University City Transfer Station and Recycling Center will be washed down once a week or when needed weather permitting.

## 4.0 Processed Solid-Waste and Residue Handling

### 4.1 Storage and Removal of Waste

Removal of the acceptable wastes at the University City Transfer Station will occur using a front-end loader. The front-end loader will transfer the waste from the ground to the transfer hopper at the transfer station. The MSW tipping and storage areas will be cleared and all waste will be containerized at the end of each operating day.



Waste spillage from the loading of transfer trailers in the load-out area will be cleaned up using a pay-loader after the loading of the last truck of the day.

#### *Banned Landfill Materials*

One of the principal objectives of the MSW receiving and inspection procedures discussed in this document is to ensure that no banned landfill materials are included in the MSW loaded into the transfer trailers. The following table summarizes how these materials will be handled if they are identified and sorted from the MSW tipping floor:

<b>MATERIAL</b>	<b>PROPER DESTINATION</b>
White Goods	PSC Metals or designated scrap facility
Yard Waste (including Christmas trees)	To be transferred to adjacent yard waste composting nursery facility or other designated area
Whole Tires	Recovered on-site by local tire vendor and no more than 25 tires are stored during a single collection period
Used Oil/Antifreeze	Recovered on-site by R&S Oil Service or City's other service provider
Auto Batteries	Recovered on-site by a designated vendor

#### *Recoverable Waste*

The City collects curbside recyclables (paper, cardboard and commingled containers) with residential MSW. These recyclables will be removed from the curbside and transported directly to vendor. In addition, the city collects bulk items in the spring and fall the following items are collected during this period: white goods, metal, furniture, glass, tables, windows, and doors.

#### *MRF Residual Materials*

Residual Materials generated by Residential Recycling Drop-Off will be accumulated in self dumping containers located inside the facility. This material will then be loaded into Roll-off containers or any other appropriate container for delivery to market. Other materials will be properly stored on pallets for good housekeeping

## 4.2 Safety Operations

The University City Transfer Station safety plan will work in conjunction with City policy and protocol. In addition, local Police, Fire Department, and Health Officials will have the right to immediate access to the Facility.

## 4.3 Emergency Coordinator

The list below contains the name, address and phone number of the person(s) who will act as the emergency coordinator(s) in the event of an emergency on-site.

Tom Brushwood  
1015 Pennsylvania Avenue University City, MO 63130  
(314) 505.8559  
Fax: (314) 862-1241

#### 4.4 Emergency Services Contacts

University City Fire Protection District:	911 or (314) 505-8591
Police Emergency:	911 or (314) 725-2211
Medical Emergency:	911
Environmental Emergency	Designated Emergency Coordinator(s)

#### 4.5 Personal Protective Equipment

All employees will receive on-site safety training in order to acquaint them with the potential problems and safety issues that can arise in the operation of the Facility. All employees will be required to wear hearing protection, safety glasses, and hard hats. Employees handling the MSW or Recyclables will be required to also wear gloves. This does not refer to employees scavenging and is only an acceptable practice as a matter of housekeeping or extenuating circumstances (e.g., policing litter, removing unacceptable waste, etc.). The following personal protective equipment will be made available to all University City Transfer Station and Residential Recycling Drop-Off personnel:

- Rain gear
- Gloves
- Safety Glasses
- Hearing Protection
- Breathing Apparatus
- Hard hat

The personal protective equipment that will be used by each University City Transfer Station employee will depend on their job functions. In addition, barricades, cones, warning signs and warning lights may be utilized as well.

#### 4.6 Safety Training

All University City Solid Waste employees will receive general safety training and training specific to their job responsibilities when first hired and on a continuing refresher basis. General safety training will be based on the applicable Industry Standards. Specific equipment training will be based on data provided by the manufacturer's manuals.

#### 4.7 General Safety Guidelines

The following guidelines will be used to develop an occupationally safe work environment:

- All required safety equipment and clothing will be worn when performing daily work assignments.
- No equipment will be operated by anyone who has not received proper training for it.
- Abuse of tools and equipment will not be permitted.



- Management will be responsible for issuing warnings to their subordinates if they observe unsafe or dangerous conditions. Employees are responsible as well for reporting these conditions to the appropriate supervisor(s).
- All staff will immediately report all accidents and injuries to the appropriate supervisors.
- The safety devices and controls provided shall be maintained in good operating condition and replaced when needed.

#### 4.8 Fire District Services

In the event a fire occurs in the payload of any truck or trailer, the vehicle will discharge the load onto a designated area. Fire services will be contacted immediately. Hoses, fire hydrants or connections will be used to extinguish the fire. The vehicle will be inspected for damage. A front-end loader will be used to reload the material after the material has been extinguished.

In the event a fire occurs on the tipping floor, the hoses and fire extinguishers will be used to extinguish the fire. Fire services will be contacted immediately.

Smoke and fire detection equipment will be designed and installed according to Local and State Regulations. In general, smoke and fire detection equipment will be strategically installed in all occupied areas of the University City Transfer Station and Recycling Center building. Alarm circuits, when energized, will activate enunciators within the Facility.

The following sections below identify the additional on-site fire control equipment. It will be maintained and tested on a schedule basis in accordance with manufacturer and code requirements.

##### *Fire Hydrants*

There are several fire hydrants on site and will be utilized in the event of a fire at the facility.

- 700' from the Northeast corner of the University City Transfer Station and Recycling Center process building.
- 300' from the Southeast corner of the University City Transfer Station and Recycling Center process building.
- 95' to the East of the University City Transfer Station and Recycling Center.

##### *Fire Extinguishers*

Fire extinguishers will be located in the administrative office(s), transfer station processing area and on all rolling stock and equipment.

#### 4.9 Spill Control Equipment

To provide protection in the event of a spill, absorbent materials including sand, oil dri, terra- green (soil, conditioner) or equivalent, and camoil-away will be stored on site in bags. A minimum of 100 pounds of each will be stored in the University City Garage area.

#### 4.10 Internal Plant Radio System



A two-way radio system will be used at the facility. The plant supervisory staff, loader operators, and office personnel will have two-way radios to ensure that communication will occur between different areas of the facility.

#### 4.11 Salvaging

Salvaging/scavenging by visitors and city personnel is strictly prohibited.

#### 4.12 Unauthorized Materials

The Transfer Station is not permitted to handle hazardous or infectious wastes of any kind, including asbestos, medical waste, explosives or radioactive wastes. Signs will be posted at the entrance to the site indicating that these materials are unacceptable. This however does not preclude the possibility that some haulers may knowingly or unknowingly deliver a hazardous material to the transfer station.

- Any vehicle suspected of carrying hazardous materials will be inspected by trained University City Transfer Station personnel. All personnel involved in handling material at the site will be trained to identify unauthorized material and carry out the appropriate measures as identified in this contingency plan.
- If personnel find any evidence of a possible hazardous substance, the vehicle will not be allowed to unload and the DNR will be notified immediately and given details of the situation.
- If a vehicle reaches the transfer station and suspected hazardous substances have been discharged, the material will be confined and isolated for removal by a professional firm licensed for handling of such waste. Then DNR personnel will be notified of this situation.
- Once the material is isolated, routine transfer operations will continue as normal. This material will be removed within 24 hours for putrescible and 7 days for non-putrescible waste.

#### 4.13 Explosion Prevention

No explosive materials of any kind will be accepted at the facility. The potential for receipt of explosive materials does exist and will be minimized through the observation and inspection procedures of incoming loads. Proper procedures will be taken.

1. Material will be observed as it is unloaded into the hopper, as well as during transfer and load-out procedures.
2. Any material that is observed as being potentially explosive or otherwise suspected to be hazardous will be quarantined and handled as "unauthorized waste."

#### 4.14 Evaluation Plan

Evacuation of the Facility will be required in the event of a life-threatening emergency such as fire, explosion, major hazardous substance release or other public safety emergency either on the site or in the immediate vicinity. Depending on the nature of the emergency, incoming waste vehicles would be directed to alternate disposable facilities or the back-up landfill. All equipment will be shut down as quickly as possible. The Emergency Coordinator will provide instructions via the internal radio system. The fire alarm system can be used as well. Non-essential personnel, or all personnel would be directed to a designated off-site secure area by the Emergency Coordinator.

The proposed evacuation routes will utilize new and existing roadways and are designed to move people away from the building as early as possible. The order for evacuation will be transmitted via the internal radio system for the Emergency Coordinator through supervisors to all people on site.

#### 4.15 Records

Status reports will be issued monthly by the Sanitation Manager. The Status Report will identify the actual quantity of solid waste received daily, any major operational problems, complaints or difficulties, and control efforts for vector, odor, dust and litter. Any and all corrective actions recommended and those corrective actions taken will be documented as part of the Monthly Report.

Records concerning volumes of incoming and outgoing loads to a permitted sanitary landfill, productivity reports, disposal billing, and general office records will be maintained. Recycling records will also be maintained as the volumes recycled and disposition of the commodities.

#### 4.16 Contingency Plans

Solid waste shall not be accepted at the Transfer Station if the available storage capacity is full or the facility is expected to be out of operations for more than twenty-four hours. In the event the facility is out of operation for more than twenty-four hours, all incoming trucks will be routed directly to the appropriate landfill. This will continue until the facility is operational again.

### 5.0 Closure Provision

The Saint Louis County Department of Health and all other appointed authorities including Missouri Department of Natural Resource will be notified immediately in the event of closure. Notices will be sent via mail, e-mail, and communicated via telephone where applicable. All haulers and their entities will be notified of the same. Access will be controlled in and out of the facility by the City of University City or any other appointed authority contracted to do such by the City. The appointed authority of these events will be controlled by the Sanitation Manager or any other employee authorized to perform such event.



## Chapter 7- Water Quality Impact Assessment of Flood Management Project

### 1. Description of Activities:

New flood management projects located within the co-permittee's jurisdiction must be assessed for impacts on water quality. Existing projects must be assessed for incorporation of additional water quality protection devices or practices, where feasible. Flood management projects in the Plan Area can include: regional stormwater control (retention basins, detention basins); flood control levees and associated pump stations; stormwater drainage conveyance capacity improvements; projects involving land buyouts; and designated uses of flood plain land.

Stormwater management projects in both development and re-development will be assessed for water quality impact, according to MSD's "Rules and Regulations and Engineering Design Requirements for Stormwater Drainage Facilities", which address the Stormwater Management Plan water quality requirements under MCM 5. Projects within designated levee districts, such as Monarch-Chesterfield, Earth City and Riverport will be based on the Stormwater Master Plan for these districts. All flood management projects involving channel modification will also be assessed for aquatic and water quality impacts through the Corps of Engineers 404 permit and MDNR 401 water quality certification process.

### 2. Locations:

Existing projects located within the Plan Area include: *(INSERT LIST OF FLOOD MANAGEMENT PROJECTS)*

### 3. Responsible Parties:

All co-permittees that plan, design or install flood management projects are subject to this chapter. MSD has general responsibility for stormwater drainage facilities in the Plan Area. St. Louis County, municipalities, and property owners have responsibility for the drainage facilities not dedicated to, and maintained by MSD. St. Louis County and municipalities maintain control over planning and zoning, land use regulations, and flood plain management through ordinances.

### 4. Materials/Supplies acquisition, storage and usage:

Not applicable. For construction phase of work, land disturbance requirements will apply. See Chapter 2 and 8 for construction and maintenance.

### 5. Waste generation, storage, disposal, recycling:

Not applicable. See Chapter 2 and 8 for maintenance.



## 6. Best Management Practices (BMP):

- Implement and enforce ordinances and/or procedures requiring that water quality factors be incorporated into the design and operation of stormwater/flood control structures.
- Inspect existing flood management facilities on a specified frequency to determine water quality impacts and exploit opportunities for improvement.
- Existing control structures undergoing renovation are modified to the maximum extent practicable to meet new construction criteria in MSD's "Rules and Regulations and Engineering Design Requirements for Sanitary Sewage and Stormwater Drainage Facilities".
- Design new flood management projects to prevent or minimize adverse water quality impacts, exploring alternative programs utilizing non-structural flood damage reduction and stream bank stabilization measures to the maximum extent practicable, such as flood proofing houses, and buy outs.
- Use models based on fully developed conditions, and adopt a free board above base flood elevation for development.
- Identify existing wetlands or other natural open space areas, particularly around streams, and preserve them from development so they can provide natural attenuation, retention or detention of runoff.
- Survey watersheds downstream from proposed projects to determine potential water quality impacts. Design proposed projects to minimize downstream impact.
- Work closely with local governments, environmental organizations and others to develop multi-use open space corridors along streams which will allow for overbank floodplain storage.
- Floodplains are preserved to the maximum extent practicable.
- Use non-structural flood management practices to the maximum extent practicable, utilizing acquisition of flood-prone property where possible.
- Open stormwater conveyance systems are used to the maximum extent practicable to preserve natural conditions and habitat.
- Channel improvement projects are to use natural approaches rather than concrete, riprap or other "hard" techniques to the maximum extent practicable.
- Inlets and outlets from closed portions of conveyance systems are designed to minimize scour and erosion.
- Trash racks are provided at outlet structures of detention ponds and other flood control structures to capture trash and floatables.
- Employ natural solutions and use controls that preserve the hydrology of a site as a first line of flood control to the maximum extent practicable.

## 7. NPDES Permit status

Not applicable

## 8. Training:

Employees and contractors responsible for the planning and design of the flood management projects identified in Section A will be trained on the BMPs in this chapter. In addition, employees performing this work will be familiar with MSD's rules and regulations and engineering design requirements for stormwater drainage facilities.



## Appendices

### Appendix 1-B1: Policies

The City of University City Chapter 230: Solid Waste Collection and Disposal Generally.

#### **Section 230.050. Preparation of Solid Waste for Collection.**

[R.O. 2011 §8.12.100; Ord. No. 6733 §1(Exh. A (part)), 2008]

All solid waste, before being placed in containers for collection, shall have drained from it all liquids. Ashes shall be thoroughly cooled before being placed in a solid waste container. All yard waste shall be separated from all other solid waste and disposed of pursuant to Section 230.090. No person shall dispose of human waste except through the sanitary sewer system, except for disposable plastic diapers which may be placed in solid waste containers if placed in double plastic bags and sealed to prevent offensive odors from escaping therefrom. No person shall dispose of animal waste in solid waste containers unless placed in double plastic bags and sealed to prevent offensive odors from escaping therefrom.

#### **Section 230.060. Solid Waste Containers — Requirements.**

[R.O. 2011 §8.12.110; Ord. No. 6733 §1(Exh. A (part)), 2008]

A. All solid waste containers shall be kept clean and closed while storing solid waste and shall be maintained in good condition. Permanent containers shall be leak-proof, free of rust, and without ragged or sharp edges or any other defects liable to hamper or injure the person handling the contents thereof. Disposable containers as permitted by the Director of Public Works and Parks shall be manufactured of either polyethylene or paper approved and intended for indoor and outdoor storage of solid waste.

B. No person shall damage, destroy, deface, or alter the appearance of any solid waste container.

C. The City shall provide residential solid waste containers, including containers for single-stream recycling, and all solid waste containers provided by the City are and shall remain the property of the City, except as provided under Section 230.140(E)(1)

#### **Section 230.070. Types of Solid Waste Containers — Replacement.**

[R.O. 2011 §8.12.120; Ord. No. 6733 §1(Exh. A (part)), 2008; Ord. No. 6788 §1, 7-20-2009]

A. One- To Two-Family Residential Buildings. For one- and two-family buildings, roll-out plastic carts shall be provided for said waste storage and collections, except where collections are from the alley. Carts shall have a capacity of either sixty (60) or ninety (90) gallons or other size as designated by the Director of Public Works and Parks. The use of sixty (60) gallon carts shall be limited to units occupied by no more than two (2) persons, one (1) of whom is at least sixty-five (65) years of age. Carts shall have wheels, handles, and a hinged, tight-fitting lid capable of containing solid waste and reducing odors, and shall be compatible



with existing City equipment for mechanical lifting and dumping. Carts shall weigh, with contents when full, not in excess of two hundred (200) pounds. Mechanical box-type containers shall be used for alley collections or where permitted by the Director of Public Works and Parks.

B. Three- To Four-Family Residential and Non-Residential Buildings. For three-family and four-family residential buildings, and for non-residential buildings, solid waste shall be stored in a mechanical box-type container or other type containers as designated by the Director of Public Works and Parks. Mechanical box-type containers shall

1. Have a capacity of one and one-half (1½) cubic yards or greater,
2. Have a hinged, tight-fitting lid capable of containing solid waste and reducing odors, and
3. Be equipped with lugs and brackets, permitting City sanitation trucks or private contract haulers to mechanically pick up and remove the content. Roll-out plastic carts may be used for three-family and four-family residential buildings where permitted by the Director of Public Works and Parks.

C. Public solid waste containers may be placed in public places, and the placement of and collection of solid waste from said containers shall be as authorized by the Director of Public Works and Parks. Public solid waste containers placed on City sidewalks, streets, parks and other public places shall be used only for such solid waste as persons may have for disposal while passing along the streets or using the City's parks or other public places. Such containers shall not be used for the disposal of solid waste accumulated in residences or places of business unless a permit is issued by the Director of Public Works and Parks.

D. The Director of Finance shall establish, impose and assess against all property owners benefiting from the City's solid waste collection services a fee reflecting the total cost of replacing roll-out plastic carts, recyclables containers, and dumpsters, and may adjust the fee from time to time as necessary. The fee shall be in addition to the solid waste collection fee established and imposed by the City Council pursuant to Section 230.110(A), but shall be deemed a solid waste collection service fee for billing, collection, enforcement and all other purposes in Article III of this Chapter. All fees collected by the Finance Director pursuant to this Subsection shall be deposited in a fund and used solely for replacing roll-out plastic carts, recyclables containers, and dumpsters.

#### **Section 230.080. Location of Solid Waste Containers.**

[R.O. 2011 §8.12.130; Ord. No. 6733 §1(Exh. A (part)), 2008]

A. No person shall place any solid waste in or on any street, alley, or other public place, or upon any private property, whether owned by such person or not, within the City except in a solid waste container provided by the City or otherwise permitted by this Chapter or the Director of Public Works and Parks.

B. Collection from Street. If the solid waste collection vehicle makes the collection from the street, roll-out plastic carts, recyclables carts, disposable containers, bags and bundled brush and tree trimmings shall be placed on the sidewalk, or if no sidewalk exists or placement on the sidewalk is impracticable, in the street, but as close to the curb as practicable for efficient and safe collection. Solid waste shall not be placed out for collection earlier than 4:00 P.M. on the day before the scheduled collection. Solid waste containers must be restored behind the building line no later than 9:00 P.M. on the day of collection.

C. Collection from The Alley. If the solid waste collection vehicle makes the collection of solid waste from the alley, a mechanical box-type stationary container or containers shall be located, clear of traffic, adjacent to the alley line and shall be located so as to be accessible to collection equipment; however, recyclables containers, yard waste, bulky items, and any other materials designated by the Director of Public Works and Parks shall be collected only from the street except as exempted by the Director of Public Works and Parks.

D. Storage of Solid Waste Containers. Roll-out plastic carts, recyclables carts, disposable containers, bags and bundled brush and tree trimmings shall be stored behind the building line when not placed out for collection. "Building line" means the line parallel to the front lot line and passing through the nearest point of the principal building. "Principal building" means the structure in which the principal use on the lot is located.

#### **Section 230.090. Yard Waste, Recyclables and Prohibited Solid Waste.**

[R.O. 2011 §8.12.140; Ord. No. 6733 §1(Exh. A (part)), 2008]

A. All yard waste shall be separated from all other solid waste, and no person shall dispose of yard waste other than as permitted herein.

1. Leaves and grass clippings shall be stored in thirty (30) gallon biodegradable paper bags approved by the Director of Public Works and Parks. Each yard waste bag shall exhibit a yard waste sticker, which may be purchased at City Hall or other designated locations. The Director shall establish a sticker fee which shall defray the costs of collection. The Director may designate and publish time periods when yard waste stickers will not be required.

2. All tree trimmings, hedge clippings and similar material shall be cut to lengths not to exceed four (4) feet and securely tied in bundles not more than two (2) feet thick before being deposited for collection. A limit of six (6) bundles will be collected from a single household per week. Ties should be heavy twine or similar material but not wire. The City will not collect tree stumps or tree trunks.

3. Plastic bags shall not be used for yard waste.

B. The City shall offer single-stream residential recycling services and shall provide separate recycling containers or roll-out carts. The Director of Public Works and Parks shall promulgate regulations regarding the City's recycling program.



C. The City may offer collection services, or permit private contractor collections, for yard waste collection, in which case the Director of Public Works and Parks shall promulgate regulations regarding same or shall authorize the specific disposition of same, which may be at the cost of the disposer.

## Appendix 1-B2: Policies

### The City of University City Chapter 225: Litter Policies.

#### **Section 225.010. Littering.**

[R.O. 2011 §8.16.010; Prior Code §14-18; Ord. No. 3732 §1; Ord. No. 6192, 1999]

A person commits the violation of littering if he/she throws or places, or causes to be thrown or placed, any glass, glass bottles, wire, nails, tacks, hedge, cans, garbage, trash, refuse or rubbish of any kind, nature or description on the right-of-way of any public road or State highway or on or in any of the waters in this City or on the banks of any stream or on any land or water owned, operated or leased by the City or State, any board, department, agency or commission thereof or on any land or water owned, operated or leased by the Federal Government or on any private real property owned by another without his/her consent.

#### **Section 225.020. Throwing or Depositing Litter in or Upon Public Places.**

[R.O. 2011 §8.16.020; Prior Code §14-18.1; Ord. No. 6192, 1999]

No person shall throw or deposit litter in or upon any street, sidewalk or other public place within the City except in public receptacles for collection, or in official City dumps.

#### **Section 225.030. Placing in Receptacles So as To Prevent Scattering.**

[R.O. 2011 §8.16.030; Prior Code §14-19; Ord. No. 3732 §1]

Persons placing litter in public receptacles or in authorized private receptacles shall do so in such a manner as to prevent it from being carried or deposited by the elements upon any street, sidewalk or other public place or upon private property.

#### **Section 225.040. Sweeping or Depositing Accumulated Litter into Gutters, Etc.**

[R.O. 2011 §8.16.040; Prior Code §14-20; Ord. No. 3732 §1]

No person shall sweep into or deposit in any gutter, street or other public place within the City the accumulation of litter from any building or lot or from any public or private sidewalk or driveway.

#### **Section 225.050. Abutting Owners to Keep Sidewalks Free of Litter.**

[R.O. 2011 §8.16.050; Prior Code §14-21; Ord. No. 3732 §1]

Persons owning or occupying property shall keep the sidewalk in front of their premises free of litter.

#### **Section 225.060. Merchants to Keep Sidewalks Free of Litter.**

[R.O. 2011 §8.16.060; Prior Code §14-22; Ord. No. 3732 §1]



A. No person owning or occupying a place of business shall sweep into or deposit in any gutter, street, or other public place within the City the accumulation of litter from any building or lot or from any public or private sidewalk or driveway.

B. Persons owning or occupying places of business within the City shall keep the sidewalk in front of their business premises free of litter.

**Section 225.070. Throwing or Depositing Litter on Occupied Private Property.**

[R.O. 2011 §8.16.110; Prior Code §14-27; Ord. No. 3732 §1]

No person shall throw or deposit litter on any occupied private property within the City whether owned by such person or not, except that the owner or person in control of private property may maintain authorized private receptacles for collection in such a manner that litter will be prevented from being carried or deposited by the elements upon any street, sidewalk or other public place or upon any other private property.

**Section 225.080. Throwing or Depositing Litter on Vacant Private Property.**

[R.O. 2011 §8.16.120; Prior Code §14-28; Ord. No. 3732 §1]

No person shall throw or deposit litter on any open or vacant private property within the City whether owned by such person or not.

**Section 225.090. Preventing Litter from Being Deposited from Vehicle Loads and Tires.**

[R.O. 2011 §8.16.130; Prior Code §14-29; Ord. No. 3732 §1]

No person shall drive or move any truck or other vehicle within the City unless such vehicle is so constructed or loaded as to prevent any load, contents or litter from being blown or deposited upon any street, alley or other public place; nor shall any person drive or move any vehicle or truck within the City, the wheels or tires of which carry onto or deposit in any street, alley or other public place mud, dirt, sticky substances, litter or foreign matter of any kind.

**Section 225.100. Premises to Be Kept Free of Litter.**

[R.O. 2011 §8.16.140; Prior Code §14-30; Ord. No. 3732 §1]

The owner or person in control of any private property shall at all times maintain the premises free of litter; provided however, that this Section shall not prohibit the storage of litter in authorized private receptacles for collection.

## Appendix 1-B3: Policies

### The City of University City Chapter 215: Offenses.

#### **Section 215.530. Littering.**

A person commits the offense of littering if he or she places, deposits, or causes to be placed or deposited, any glass, glass bottles, wire, nails, tacks, hedge, cans, garbage, trash, refuse, or rubbish of any kind, nature or description on the right-of-way of any public road or State highway or on or in any of the waters in this City or on the banks of any stream, or on any land or water owned, operated or leased by the State, any board, department, agency or commission thereof or on any land or water owned, operated or leased by the Federal Government or the City, or on any private real property owned by another without the owner's consent.

#### **Section 215.540. Littering Via Carcasses.**

A. A person commits the offense of unlawful disposition of a dead animal if he or she knowingly places or causes to be placed the carcass or offal of any dead animal:

1. Into any well, spring, brook, branch, creek, pond, or lake; or
2. On any public road or highway, river, stream, or watercourse or upon premises not his or her own for the purpose of annoying another or others.



## Appendix 1-B4: Policies

### The City of University City Chapter 120: Green Practices Commission.

#### **Section 120.230. Established — Composition.**

[R.O. 2011 §2.31.010; Ord. No. 6859 §1, 8-8-2011]

There is established a Green Practices Commission which shall consist of seven (7) voting members who shall be citizens of the City not otherwise connected with the City Government.

#### **Section 120.240. Powers and Duties.**

[R.O. 2011 §2.31.020; Ord. No. 6859 §1, 8-8-2011]

A. The Green Practices Commission shall act in an advisory capacity to the Council.

B. The Green Practices Commission shall make a study of the sustainability practices of the City in the following areas: ecosystems/habitat; water/storm water; air quality/transportation; waste/resource conservation; land use/open space/parks; energy; green buildings. The Green Practices Commission shall have the following powers and duties, including, but not limited to:

1. Establish sustainability goals, prioritize and track progress;
2. Review and advise the City regarding projects and initiatives for all development and redevelopment;
3. Establish a list of prioritized projects to be initiated by the City.

#### **Section 120.250. Qualifications, Appointment and Terms of Members — Filling Vacancies — Officers and Procedure.**

[R.O. 2011 §2.31.030; Ord. No. 6859 §1, 8-8-2011]

A. On the first (1st) day of the month following the adoption of the ordinance codified in this Chapter, the Green Practices Commission shall be dissolved and in lieu thereof the said seven (7) members of such Green Practices Commission shall be the newly appointed members of the Green Practices Commission. Of those first (1st) appointed, two (2) shall be appointed by the Council for a term of one (1) year, two (2) for a term of two (2) years, and three (3) for a term of three (3) years each. Thereafter all appointments shall be made by the Council for terms of three (3) years. Vacancies on the Commission shall be filled by the Council by appointment for the unexpired term. Such members shall be residents of the City and shall have involvement in or professional experience with green practices.

B. At the same time, on recommendation of the City Manager, the Council shall additionally appoint a non-voting member of the Commission from the Public Works and Parks Department of the City, who shall remain a member of the Commission unless removed by the City Manager, with the consent of the Council. The Council shall also appoint one (1) of its own members as a non-voting liaison member of such Commission. Such member shall hold office at the pleasure of the Council.

C. The Commission shall annually elect one (1) of its members Chairperson and one (1) shall be elected Secretary. The Commission shall establish its own rules of procedure.

**Section 120.260. Reports.**

[R.O. 2011 §2.31.040; Ord. No. 6859 §1, 8-8-2011]

The Green Practices Commission shall report to the Council at such times and as often as the Council may request or the Commission may deem necessary, but shall make at least one (1) report annually.

Appendix 1-B5: Policies

The City of University City Code of Ordinances Chapter 210: Animals.

**Section 210.420. Defecation on Private Property, Condominium Common Elements and Public Property Prohibited.**

[R.O. 2011 §6.08.240; Prior Code §5-33; Ord. No. 5169 §1]

It is unlawful for any person owning, controlling, possessing or having the management or care, in whole or in part, of any animal, whether licensed or not, to allow or permit such animal to defecate upon any private property owned by another, condominium common elements, or public property, unless such person shall remove all feces so deposited by such animal.



## Appendix 1-B6: Policies

The City of University City Code of Ordinances Chapter 220: Nuisances.

### **Section 220.160. Certain Stables, Sheds, Etc.**

[R.O. 2011 §8.24.150; Code 1950 §603.11; Prior Code §22-14]

Whenever any stable, stall, shed or compartment, or any yard or appurtenance thereof in which any horse, cattle, cows, swine or any other animal shall be kept, or any place within the limits of the City in which manure or liquid discharges of such animals shall collect or accumulate, and which stable, stall, shed or compartment, or any yard or appurtenance thereof is not kept in a cleanly and wholesome condition, so that no offensive smell shall be allowed to escape therefrom, it shall be deemed a nuisance; provided that nothing in this Section shall be so construed as to include manure deposits upon any private property for the purpose of cultivating the same.

### **Section 220.170. Filthy Water, Nauseous Liquid Waste, Etc.**

[R.O. 2011 §8.24.160; Code 1950 §603.12; Prior Code §22-15]

The accumulation upon any premises, lot or parcel of ground in the City, or the discharge thereof upon any public street, alley or private property, of urine, liquid waste from stables, swill, water from privy vaults, wastewater from sinks, wash water, or any foul or nauseous liquid waste of any kind whatever shall constitute a nuisance.

### **Section 220.180. Lots Containing Offensive Water.**

[R.O. 2011 §8.24.170; Code 1950 §603.21; Prior Code §22-16]

Any lot or piece of ground within the City on which there is a pond or pool of unwholesome, impure, stagnant or offensive water shall be deemed a nuisance.

### **Section 220.190. Dead Animals, Excrement, Filth, Etc.**

[R.O. 2011 §8.24.180; Code 1950 §603.15; Prior Code §22-17]

It is unlawful and deemed a nuisance for any person to deposit any dead animals or excrements or filth from privies or any hay, straw, dirt or rubbish of any kind or description, or any filthy water or manure upon any streets, alleys or public or private property in the City,

### **Section 220.210. Unclean Drains, Tanks, Manure Boxes, Etc.**

[R.O. 2011 §8.24.200; Code 1950 §603.16; Prior Code §22-19]

Any unclean, stinking, foul, defective or filthy drain, ditch, tank or gutter, or any leaking, broken slop, garbage or manure boxes, or receptacles of like character, whenever found within the limits of the City, shall be deemed a nuisance.

### **Section 220.220. Rags, Refuse, Broken Barrels, Etc.**

[R.O. 2011 §8.24.210; Code 1950 §603.18; Prior Code §22-20]

Whenever there shall be found in or upon any lot or piece of ground within the City any dirt gathered in cleaning yards, waste or mills or factories, or any rags, damaged merchandise, wet, broken or leaking barrels, casks or boxes, or any materials which are offensive or tend by decay to become putrid or to render the atmosphere impure or unwholesome, the same shall be deemed a nuisance.

**Section 220.250. Clogged or Stopped Gutters.**

[R.O. 2011 §8.24.240; Code 1950 §603.25; Prior Code §22-23]

It is unlawful and a nuisance for any person in the City to suffer or permit any gutters fronting or adjacent to any lot or premises occupied or owned by him/her to become so clogged or stopped up by an accumulation of filth or mud as to prevent the free passage of water along and through them.

**Section 220.260. Soil Erosion — Depletion of Topsoil.**

[R.O. 2011 §8.24.250; Prior Code §22-24; Ord. No. 4778 §1]

It is unlawful for any person, firm or corporation to maintain any lot, tract or parcel of land in the City in such a manner so as to cause erosion, alteration of the natural topography and grade of land, or depletion of natural deposits of topsoil and other natural materials. If in the determination of the City Forester the only feasible method of soil erosion control is by revegetation, specifications for the work shall provide that the lot, tract or parcel shall be harrowed or raked to establish a seedbed and shall be seeded with grass, permanent pasture mixture, or other approved fast-growing vegetation and shall be repeated as often as necessary until the lot, tract or parcel is stabilized.



## Appendix 2-F1: Sample Recycling Policy

### The City of University City Waste Reduction and Recycling Policy Statement

#### 3. Policy

The City of University City is committed to good stewardship of the environment. A key element of that stewardship is the reduction of the amount of solid waste going from the city into landfills. Solid waste landfills have negative long-range environmental impacts, drain community resources, and have limited capacity to accept the large quantities of waste generated by our society today. The City of University City will make every effort to reduce the solid waste generated at our facilities. Four methods will be used to implement this policy: source reduction, reuse of materials, recycling, and purchase of recycled materials. Every City department and individual employee has a personal responsibility for implementing this policy.

#### 4. Methods to Achieve Solid Waste Reduction

*A. Source Reduction:* All members of the City staff are responsible for implementing operational practices that prevent waste from being produced. Examples include printing reports and documents on both sides of the paper; printing appropriate numbers of documents; using email rather than printed correspondence; and using products that are reusable, refillable, repairable, non-toxic, and recyclable. Products with reusable, returnable packaging or items requiring the least possible packaging should be purchased when practical. Every effort should be made to prevent excess or unneeded materials from being purchased.

*B. Reuse of Materials:* All employees of the City are responsible for reusing products whenever possible. An example would be to use dishes, glasses, and reusable flatware rather than disposable paper and plastic ware.

*C. Recycling:* All City employees are responsible for separating identified recyclable materials and placing them in appropriate recycling containers. City Recycling includes aluminum cans, steel cans, batteries, cardboard, glass bottles and jars, hard back books, newspapers, phone books, catalogs and magazines, brown paper bags, microfiche, news blend, office blend, plastic bottles (#1 and #2 only), Styrofoam and peanuts, toner cartridges, transparencies, videotapes, and additional items as implemented. Facilities Management Recycling includes construction/demolition debris, fluorescent light bulbs, motor oil, oil filters, paint, pallets, refrigerants, scrap metal, solvents, tires, yard waste, and additional items as implemented.

*D. Purchase of Recycled Content Material:* All City departments are responsible for making efforts to purchase and use products manufactured from or containing recycled materials. All recycled content purchases will be reported to the Purchasing Department for record-keeping and reporting purposes.



## 5. Procedures

The Director of Public Works will be responsible for implementing this Policy by:

- A. Designating departments and employees responsible for the task of developing and implementing a waste reduction and recycling program in accordance with this Policy.
- B. Designating personnel in the Purchasing Department to ensure recycled content products are purchased when feasible and that criteria for recycled content products are included in the purchasing bid process.
- C. Designating personnel in Facilities Management to ensure that all new construction includes designated areas for recycling and solid waste collection and removal.
- D. Designating personnel to promote recycling and waste reduction in employee events and materials.
- E. Encouraging all contractors to adhere to City recycling policies and procedures.
- F. Taking other appropriate action as he/she deems necessary to implement this Policy.

Initially approved [date]

Source: <https://legal.uncc.edu/policies/up-713>

## Appendix 2-F2: Sample Green Procurement Policy

### The City of University City Green Procurement Policy

#### 1. Policy Objective

The objective of this policy is to provide direction for greening University City's procurement.

#### 2. Policy Statement

As set out in this Policy, priority in procurement will be given to green products and services, including construction.

#### 3. Definitions

Green procurement is the procurement of products and services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw material acquisition, production, manufacturing, packaging, distribution, operation, maintenance, disposal and re-use of the product or service. Green procurement encompasses the concept of the procurement of goods and services that provide for basic human needs and bring a better quality of life, while minimizing the use of non-renewable natural resources and toxic materials and the emission of wastes and pollutants over the life cycle, so as not to jeopardize the ability of future generations to meet their own needs.

A green product is one that is less harmful than the alternative, having characteristics including, but not limited to, the following:

- Recyclable - local facilities exist that are capable of recycling the product at the end of its useful life.
- Biodegradable - will not take a long time to decompose in landfill.
- Contain recycled material (post-consumer recycled content).
- Minimal packaging and/or for which there will be take-back by the manufacturer/supplier of packaging.
- Reusable or contain reusable parts.
- Minimal content and use of toxic substances in production.
- Produce fewer and/or less polluting by-products during manufacture, distribution, use and/or disposal.
- Produce the minimal amount of toxic substances during use or at disposal.
- Make efficient use of resources - a product that uses energy, fuel or water more efficiently or that uses less paper, ink or other resources.
- Durable - have a long economically useful life and/or can be economically repaired or upgraded.

Sustainable (green) service - A service acquired from a supplier who has a green operational policy and whose internal practices promote sustainability.



Threshold - the dollar value of contracts, above which a formal record is kept on file showing that environmental criteria were considered when requirements were defined.

#### 4. Policy Procedures

Where available and cost effective, green products and services, including construction, that are of equal or better performance and quality, will be purchased. In determining cost effectiveness, a department should consider the costs and benefits that accrue, in the shorter and longer term, to the City of University City.

For all bid solicitations (e.g. requests for proposal, requests for quote, and requests for standing), environmental factors or impact will be considered when requirements are defined. In addition, bid solicitations will include instructions asking bidders to identify any environmental benefits over the life cycle of their products and/or services.

Green procurement principles will be applied to construction projects beginning with the design stage.

Departments will determine the contract dollar value (hereafter referred to as the threshold) above which a formal record is kept on file showing that environmental criteria were considered when requirements were defined. In determining their threshold, departments may wish to consider contracting volumes, training requirements and budgetary constraints.

For all procurement, consideration will be given to environmental factors or impact. For requirements:

A. Valued in excess of a threshold, a formal record of the evaluation will be kept on file. In the case where a green purchase was made, the record will list the environmental criteria included in the bid solicitation. In the case where a green product or service was not acquired, the reasons for not selecting an environmentally preferable product or service will be documented. See Documentation Form attached.

B. Valued at or below the threshold, a formal record of the evaluation is not required.

Each department will be responsible for ensuring that its personnel have sufficient training about the environment and green procurement to carry out the directives in this policy.

#### 5. Guidelines

##### 5.1 The life cycle approach and the environment

Applying the four R's (Reduce, Reuse, Recycle and Recover) at each phase of the material management life cycle helps protect the environment and reduce costs.

##### 5.1.1 Planning



During the planning process, managers will assess the need for a given purchase and, whenever possible,

- Reduce consumption.
- Consider acquiring second-hand or used material.
- Consider products that are less damaging to the environment, such as those made with resource-saving materials or processes.
- Consider the environmental cost of purchases during each phase of the life cycle.

#### 5.1.2 Acquisition

As much as practical, products selected should:

- Be reusable and contain reusable parts.
- Be recyclable and contain recycled materials (e.g. recycled paper, reconditioned laser printer cartridges).
- Include second-hand or used material.
- Use resources and energy efficiently.
- Have a long service life or be economical to repair.
- Contain minimal packaging, or use returnable or reusable shipping containers.
- Be non-toxic and non-polluting.

#### 5.1.3 Maintenance and Operations

A. Ensure that products are properly maintained and used. This will extend the service life of a product. When economically feasible, equipment should be repaired, refinished and reused.

B. Hazardous material must be shipped, stored and handled in accordance with applicable federal and provincial law, and regulations.

#### 5.1.4 Disposal

Consider alternatives to disposing of material, such as reusing, recycling or recovering it. Try to minimize the amount of waste generated.

#### 5.2 Combine environmental actions with fiscal responsibility

A. Government interest in economy of operations is fully compatible with environmental interests. Many sound environmental practices have resulted in savings.

B. Most environmental actions can be phased in gradually without additional cost. When these actions may entail additional costs for the government, managers should accommodate them within existing budgets.

C. Government should lead by example. In light of the volume of government procurement, the government can play a significant role in promoting the development and marketing of

green products and services. As demand for these products and services increase their prices will drop and become more affordable to all consumers.

Source: <https://www.tpsgc-pwgsc.gc.ca/app-acq/ae-gp/index-eng.html>

## Documentation Form for the Evaluation of Environmental Factors

Fill in one of the two sections below:

A) Green Product/Service was purchased.

List all green criteria used in the bid solicitation:

B) Green Product/Service was not purchased.

List reasons why green product/service was not purchased:

<input type="checkbox"/>	No green alternative.
<input type="checkbox"/>	Did not meet operational requirement. Specify in what way: _____
<input type="checkbox"/>	Upfront costs for green product were higher than for non-green ones and no additional funds were available.
<input type="checkbox"/>	Other. Provide details: _____



## Appendix 2-F3: St. Louis County Waste Management Code

St. Louis County Waste Management Code, Chapter 607, contains provisions related to the proper disposal of trash. The County Waste Management Code is effective in all portions of incorporated or unincorporated St. Louis County, except municipalities with populations of 75,000 and an organized health department. Municipalities are encouraged to enact ordinances that correspond to those portions of the Code included in this appendix.

### Waste Management Code, Chapter 607

#### SUBCHAPTER B. DUTIES IMPOSED IN CONNECTION WITH THE GENERATION AND STORAGE OF WASTE ON PREMISES

##### 607.050 On Whom Duties Are Imposed for Storage of Waste.

Section 607.050 through 607.145 describe conditions that shall exist, conditions that must not exist, actions that must be taken and actions that must not be taken, all in connection with the storage and disposal of waste upon the premises where the waste is generated. The persons responsible for seeing that the conditions and actions described in Sections 607.050 through 607.145 are complied with depends upon the type of premises involved, and are described as follows:

1. On residential premises or premises with mixed uses but containing at least one residence, it shall be the responsibility of every person the age of seventeen (17) years or older residing on the premises to see that Sections 607.050 through 607.145 are satisfied with respect to the storage and disposal of residential waste generated on the premises, regardless of whether the noncompliance was occasioned by the action or failure to act of the person charged.
2. On nonresidential premises or premises with mixed uses but containing at least one nonresidential use, it shall be the responsibility of the person in possession of the premises as well as each manager, agent or employee of a person in possession of the premises to see that Sections 607.050 through 607.145 are satisfied with respect to the storage and disposal of nonresidential waste generated on the premises, regardless of whether the noncompliance was occasioned by the action or failure to act of the person charged.
3. On all premises, it shall be a violation of Sections 607.050 through 607.145 to do any act which would make the premises fail to comply with such sections, whether or not the person charged resides on the premises or is in possession of the premises or is the agent or employee of a person in possession of the premises.

(O. No. 23221, 5-29-07)

##### 607.060 Waste Containers Required.

There shall be provided on each premises where waste is generated, whether such premises are residential or nonresidential, containers for the storage of all municipal waste (except bulky waste), yard by-products, and recovered materials. The municipal waste containers shall conform to the requirements of Section 607.070 if for use on residential premises and shall conform to the requirements of Section 607.080 if for use on nonresidential premises. Containers for curbside collection of Recovered Materials and Yard By-products shall conform to the requirements of the person providing collection services. The containers must be sufficient in quantity and size to hold all waste and recovered materials (except bulky waste and demolition and construction waste generated on the premises) between the times when the waste and the recovered materials are generated and removed from the containers and the premises. The premises surrounding the containers shall be maintained in a neat, clean, odor free and sanitary condition.  
(O. No. 23221, 5-29-07)

**607.070 Waste Containers for Residential Waste Other Than from Multifamily Residences of Four or More Units--Use of Waste Containers required.**

Residential waste, other than residential waste from multifamily premises of four (4) or more units or from premises having mixed uses but containing at least one (1) residence, shall be deposited and stored in galvanized metal containers or rubber fiberglass or plastic containers which are nonabsorbent and do not become brittle in cold weather or in plastic containers or plastic bags of not less than twenty (20) gallons nor more than thirty-five (35) gallons in capacity unless container size is approved otherwise by the person that provides hauling services. Containers shall be leak-proof, waterproof, and fly-tight and shall be properly covered at all times except when depositing waste therein or removing waste therefrom. The container, other than plastic bags, shall have handles, bails or other suitable lifting devices or features. Containers shall be of a type originally manufactured for residential waste, with tapered sides for easy emptying. They shall be lightweight and of sturdy construction. Plastic bags used to contain waste shall be of sufficient strength to be used one (1) time to store the waste actually deposited therein. Waste generated on the premises shall be deposited in the containers and shall be deposited in such a manner that the area surrounding the containers and the exterior of any such containers is and remain clean, neat, odor free and sanitary. This section does not apply to demolition and construction waste.

(O. No. 23221, 5-29-07)

**607.080 Waste containers for Nonresidential Waste and Waste from Multifamily Residences of Four or More Units; Use of Waste Containers Required.**

Nonresidential waste and residential waste from multifamily residences of four (4) or more units, as well as residential waste from premises having mixed uses but containing at least one (1) residence, shall be stored in containers which are spill proof, leak-proof, and shall be covered at all times except when depositing waste therein or removing waste therefrom. Waste generated on the premises shall be deposited in the container(s) and shall be deposited in such a manner that the area surrounding the container(s) and the exterior of

any such container(s) is and remains clean, neat, odor free, and sanitary. This section does not apply to demolition and construction waste.  
(O. No. 23221, 5-29-07)

#### 607.100 Waste Not to Be Deposited in Waste Container of Another.

No person shall deposit waste in any waste container other than a waste container on the premises where the waste was generated without the consent of the owner of such waste container.  
(O. No. 23221, 5-29-07)

#### 607.120 Placement of Waste Containers and Bulky Non containerized Waste.

1. Residential waste and/or recovered material containers and bulky/non-containerized waste shall be stored upon the premises where the waste was generated, unless written permission for storage on other premises is obtained from a person having authority to grant such permission. The containers and bulky/non-containerized waste shall be stored at least three (3) feet behind the front of the main residential structure. Waste containers used for the storage of residential waste and bulky/non-containerized waste, other than waste from multifamily premises having four (4) or more units, shall be placed at the curb or mailbox or backyard or side yard as required by the person responsible for collection. Waste and recovered material containers and bulky/non-containerized waste shall be placed at the collection point if in front of the premises or on a street not earlier than dusk of the day prior to the regularly scheduled collection day. Waste and recovered material containers shall be returned to their appropriate storage places following collection and on the same day as collection.
2. Nonresidential waste and recovered material containers, bulk source separated material and bulky/non-containerized waste generated on nonresidential premises shall be stored upon the nonresidential premises where the waste or source separated material was generated, unless written permission for storage on other premises is obtained from a person having authority to grant such permission.

(O. No. 23221, 5-29-07)

#### 607.130 Demolition and Construction Waste.

1. No person shall store in or place additional demolition and construction waste in a mobile waste container which is full.
2. The person who has requested that a mobile waste container be located to receive demolition or construction waste or container be removed from a site shall require that a mobile waste container which is full be removed and the waste deposited at an appropriate facility.
3. Demolition and construction waste shall be stored in a secure container or otherwise secured to prevent dispersal by the wind.
4. Demolition and construction waste shall not be stored in a floodplain unless it is stored in a mobile waste container.



5. A mobile waste container is full if no more waste can be added to it without making it unsafe or illegal to transport.  
(O. No. 23221, 5-29-07)

#### 607.140 Waste to Be Collected.

If waste collection service is reasonably available for a premise where waste is generated, an agreement shall be in effect for the collection of waste generated on the premises with a waste collection service having waste collection vehicles licensed by the Director for the collection, transportation, and disposal of waste. It shall be the responsibility of the property owner and the person generating the waste to assure that an agreement for the collection of waste is in effect.  
(O. No. 23221, 5-29-07)

#### 607.145 Frequency of Pickup.

Residential and Commercial Waste: Waste collection service shall provide for the collection of all solid municipal waste (other than demolition and construction waste and bulky residential waste) from the premises not less often than once per week. In the event no waste hauler serves the area, the Director has determined that collection service is not reasonably available, waste (other than demolition and construction waste and bulky residential waste) must be removed from the premises not less often than once per week, and deposited at a licensed sanitary landfill, waste processing facility or transfer station, unless exempted from the requirement of weekly pickup under the terms of Section 607.145.

(O. No. 23221, 5-29-07)

#### 607.270 Waste Spilled During Transportation.

Waste spilled or blown during the transportation of waste shall be re-collected immediately if such re-collection may be made safely, and as soon as possible otherwise, and placed in the transportation vehicle or mobile waste container by the employees of the waste hauler, or by the person transporting the waste, whether or not such person is engaged in the business of hauling waste and whether or not the vehicle is licensed or required to be licensed under this Chapter.  
(O. No. 23221, 5-29-07)

#### 607.280 Waste Spilled by Hauler During Collection.

Waste spilled or blown during the movement of waste from the point of collection into the waste transportation vehicle shall be re-collected and placed in the transportation vehicle by the waste hauler whether or not the waste was placed by the generator in proper waste containers as required by this Chapter. Waste haulers are not obligated to collect waste that has not been placed in waste containers as required by this Chapter.  
(O. No. 23221, 5-29-07)

## SUBCHAPTER D. DISPOSAL OF WASTE

### 607.310 Waste Must be Deposited at a Licensed Landfill, Licensed Waste Processing Facility, Licensed Transfer Station, Licensed Compost Facility, or Licensed Yard By-Product Compost Facility

1. No person shall deposit waste on any real estate or permit waste to be deposited on any real estate for which there is no valid and current license, and, if appropriate, renewal license, for the operation of a landfill, waste processing facility, transfer station, compost facility, or yard by-product compost facility issued by the Director, nor shall any person deposit waste on or at any such landfill, waste processing facility, transfer station, compost facility, or yard by-product compost facility in a manner which does not comply with the waste facility plan or material facility plan approved by the Director and the license issued therefor by the Director, nor in a manner which does not comply with the provisions of this Chapter describing the manner or operation of the landfill, waste processing facility, transfer station, compost facility, or yard by-product compost facility. Exception: Yard by-products generated and handled as provided in Section 607.1005, Residential (backyard) by-product composting.
2. If the Director has a reasonable belief that waste burial or filling exists on any property not licensed to accept such waste, the Director may require in writing, the exploration and/or the test drilling or excavation of such area for such waste burial or filling. If waste filling or burial is evident, in violation of this section, the Director may require complete removal or other remedial work. Remedial work may also include a correction plan. If the operator or owner or person in possession refuses to correct the condition, the County will be authorized to correct any condition so noticed. Cost of such work shall be collectible under Section 607.770.

(O. No. 23221, 5-29-07)

## SUBCHAPTER M. WATERS

### 607.810 Waste Not to Be Deposited in Waters Within County.

No person shall dump or deposit or permit dumping or depositing of any wastes into any stream, spring, body of surface or ground water, whether natural or artificial, within the boundaries of St. Louis County except as provided herein or as allowed by another jurisdiction concerned with matters of health and having authority to regulate such dumping or depositing and which in fact regulates such dumping or depositing

(O. No. 23221, 5-29-07)

## SUBCHAPTER R. PENALTIES AND ENFORCEMENT

### 607.940 Citation for Violations of Provisions of This Chapter; Form of Citation.

1. Any person designated by the Director to enforce provisions of this Chapter may issue a citation to any person when having probable cause to believe that such person has committed a violation of Sections 607.050, 607.060, 607.070, 607.080, 607.090, 607.100, 607.110, 607.120, 607.130, 607.135, 607.140, 607.145, 607.150, 607.181, 607.182, 607.183, 607.184, 607.185, 607.210, 607.230, 607.240, 607.250, 607.260, 607.270, 607.280, 607.290, 607.300, 607.310, 607.340, 607.720, 607.730, 607.740, 607.750, 607.755, 607.760, 607.800, 607.810, 607.860, 607.865, 607.1000, 607.1005, 607.1020, 607.1040, 607.1145, 607.1155, 607.1200, 607.1203 and 607.1205 of this Chapter. The citation shall require the person in whose name the citation is issued to pay a fine either by mail or in person at the offices of the Department of Health within ten (10) days after receipt of the citation. No. 23221, 5-29-07)



## Appendix 2-F4: Model- Litter Control Ordinance

### Description:

Litter found throughout our community often finds its way into our streams, rivers and lakes and detracts from our quality of life. Pollutants carried into our streams, rivers, and lakes by litter, diminish the quality of our water and its aquatic resources. Litter control ordinances provide a prohibition against littering and provide an enforcement mechanism with penalties for dealing with those found littering. This ordinance is modeled on the "Georgia Litter Control Law" (O.C.G.A. § 16-7-40 et. seq.).

Note: Italicized text should be interpreted as comments, instructions, or information to assist the local government in tailoring the ordinance. This text would not appear in a final adopted ordinance.

### 1. General Provisions

#### 1.1 Purpose and Intent

THE PURPOSE OF THIS ORDINANCE IS TO PROTECT THE PUBLIC HEALTH, SAFETY, ENVIRONMENT, AND GENERAL WELFARE THROUGH THE REGULATION AND PREVENTION OF LITTER. THE OBJECTIVES OF THIS ORDINANCE ARE:

- A. PROVIDE FOR UNIFORM PROHIBITION THROUGHOUT UNIVERSITY CITY OF ANY AND ALL LITTERING ON PUBLIC OR PRIVATE PROPERTY; AND,
- B. Prevent the desecration of the beauty and quality of life of University City and prevent harm to the public health, safety, environment, and general welfare, including the degradation of water and aquatic resources caused by litter.

#### 1.2. Applicability

This ordinance shall apply to all public and private property within University City.

#### 1.3. Compatibility with Other Regulations

THIS ORDINANCE IS NOT INTENDED TO INTERFERE WITH, ABROGATE, OR ANNUL ANY OTHER ORDINANCE, RULE OR REGULATION, STATUTE, OR OTHER PROVISION OF LAW. THE REQUIREMENTS OF THIS ORDINANCE SHOULD BE CONSIDERED MINIMUM REQUIREMENTS, AND WHERE ANY PROVISION OF THIS ORDINANCE IMPOSES RESTRICTIONS DIFFERENT FROM THOSE IMPOSED BY ANY OTHER ORDINANCE, RULE OR REGULATION, OR OTHER PROVISION OF LAW, WHICHEVER PROVISIONS ARE MORE RESTRICTIVE OR IMPOSE HIGHER PROTECTIVE STANDARDS FOR HUMAN HEALTH OR THE ENVIRONMENT SHALL BE CONSIDERED TO TAKE PRECEDENCE.

#### 1.4. Severability

If the provisions of any article, section, subsection, paragraph, subdivision or clause of this ordinance shall be judged invalid by a court of competent jurisdiction, such order of judgment shall not affect or invalidate the remainder of any article, section, subsection, paragraph, subdivision or clause of this ordinance.

## 2. Definitions

"Litter" means any organic or inorganic waste material, rubbish, refuse, garbage, trash, hulls, peelings, debris, grass, weeds, ashes, sand, gravel, slag, brickbats, metal, plastic, and glass containers, broken glass, dead animals or intentionally or unintentionally discarded materials of every kind and description.

"Public or private property" means the right of way of any road or highway; any body of water or watercourse or the shores or beaches thereof; any park, playground, building, refuge, or conservation or recreation area; timberlands or forests; and residential, commercial, industrial, or farm properties.

## 3. Prohibition Against Littering Public or Property of Waters

It shall be unlawful for any person or persons to dump, deposit, throw or leave or to cause or permit the dumping, depositing, placing, throwing or leaving of litter on any public or private property in this University City or any waters in this University City unless:

- A. *THE PROPERTY IS DESIGNATED BY THE STATE OR BY ANY OF ITS AGENCIES OR POLITICAL SUBDIVISIONS FOR THE DISPOSAL OF SUCH LITTER, AND SUCH PERSON IS AUTHORIZED BY THE PROPER PUBLIC AUTHORITY TO USE SUCH PROPERTY;*
- B. The litter is placed into a receptacle or container installed on such property; or,
- C. The person is the owner or tenant in lawful possession of such property, or has first obtained consent of the owner or tenant in lawful possession, or unless the act is done under the personal direction of the owner or tenant, all in a manner consistent with the public welfare.

## 4. Vehicle Loads Causing Litter

No person shall operate any motor vehicle with a load on or in such vehicle unless the load on or in such vehicle is adequately secured to prevent the dropping or shifting of materials from such load onto the roadway.

## 5. Violations Enforcement and Penalties

### 5.1 Violations

It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this ordinance. Any person who has violated or continues to violate the provisions of this ordinance, may be subject to the enforcement actions outlined in this section or may be restrained by injunction or otherwise sentenced in a manner provided by law.



## 5.2 Evidence

- A. Whenever litter is thrown, deposited, dropped or dumped from any motor vehicle, boat, airplane, or other conveyance in violation of this ordinance, it shall be prima facie evidence that the operator of the conveyance has violated this ordinance.
- B. Except as provided in subsection (1), whenever any litter which is dumped, deposited, thrown or left on public or private property in violation of this ordinance is discovered to contain any article or articles, including but not limited to letters, bills, publications or other writing which display the name of the person thereon in such a manner as to indicate that the article belongs or belonged to such person, it shall be a rebuttable presumption that such person has violated this ordinance.

## 5.3 Penalties

Any person who violates this ordinance shall be guilty of a violation and, upon conviction thereof, shall be punished as follows:

- A. By a fine of not less than \$25 and not more than \$1,000; and
- B. In addition to the fine set out in subsection 1 above, the violator shall reimburse University City for the reasonable cost of removing the litter when the litter is or is ordered removed by University City; and
- C.
  - 1. In the sound discretion of the court, the person may be directed to pick up and remove from any public street or highway or public right-of way for a distance not to exceed one mile any litter he has deposited and any and all litter deposited thereon by anyone else prior to the date of execution of sentence; or
  - 2. In the sound discretion of the court, the person may be directed to pick up and remove any and all litter from any public property, private right-of-way, or with prior permission of the legal owner or tenant in lawful possession of such property, any private property upon which it can be established by competent evidence that he has deposited litter. Pick up and removal shall include any and all litter deposited thereon by anyone prior to the date of execution of sentence; and,
- D. The court may publish the names of persons convicted of violating this ordinance.

## 5.4 Enforcement

All law enforcement agencies, officers and officials of this state or any political subdivision thereof, or any enforcement agency, officer or any official of any commission of this state or any political subdivision thereof, are hereby authorized, empowered and directed to enforce compliance with this article.

*Official Code of Georgia § 16-7-43(d) provides procedures for local governments to appoint individuals, in addition to traditional law enforcement officials, to enforce the provisions of this ordinance. The District encourages the use of this procedure to appoint individuals involved in*



*public works, code enforcement (including local environmental code enforcement officers) or building inspection to carry out this important function.*

Source: [https://northgeorgiawater.org/wp-content/uploads/2015/05/AppA\\_Ordinances\\_Watershed\\_May2009.pdf](https://northgeorgiawater.org/wp-content/uploads/2015/05/AppA_Ordinances_Watershed_May2009.pdf)

**Additional Ordinance Provisions:**

Handbills – Handbills on public or private property. No person shall tack, stick, paste, or fasten in any manner any handbill or flier containing commercial advertising of a written, printed, or pictorial nature upon any public property within the limits of the City; or, on any motor vehicle, dwelling, or other structure within the City without the consent of the owner or occupant thereof. Such violation constitutes a public nuisance.

## Appendix 2-F5: Model- Nuisance Ordinance for Debris and Yard Waste

AN ORDINANCE AUTHORIZING THE DECLARATION OF PUBLIC NUISANCE FOR AN ACCUMULATION OF DEBRIS ON PROPERTY; PROVIDING FOR REMOVAL AND ABATEMENT OF SAME; AND RECOVERY OF COSTS RELATING THERETO.

WHEREAS, Sec. 67.398, RSMo. Supp 1997 provides the governing body of a city, town or village in St. Louis County may declare the presence of certain debris and conditions upon any property to be a nuisance, and that the costs incurred by the city town or village in removing or abating such nuisance conditions may be recovered from the owner of the offending property either by including such costs in a special tax bill or by having such costs added to the annual real estate tax bill for the property; and

WHEREAS, it is the desire and intent of the [Board of Aldermen/Trustees or City Council] to enhance and protect the public health and safety by providing a process for declaration of such public nuisances and recovery of the costs of removal or abatement of same:

NOW, THEREFORE, BE IT ORDAINED BY THE [Board of Aldermen/Trustees or City Council] OF THE CITY OF UNIVERSITY CITY OF \_\_\_\_\_ AS FOLLOWS:

### Section 1.

Any lot or land shall be a public nuisance if it has the presence of debris of any kind including, but not limited to, weed cuttings, cut and fallen trees and shrubs, overgrown vegetation and noxious weeds which are seven inches or more in height, rubbish and trash, lumber not piled or stacked twelve inches off the ground, rocks or bricks, tin, steel, parts of derelict cars or trucks, broken furniture, any flammable material which may endanger public safety or any material which is unhealthy or unsafe and declared to be a public nuisance.

### Section 2.

When a public nuisance as described above exists, the [code enforcement official] shall so declare and give written notice to the owner of the property by personal service, certified mail, if otherwise unsuccessful, by publication. Such notice shall, at a minimum:

1. declare that a public nuisance exists;
2. describe the condition which constitute such nuisance;
3. order the removal or abatement of such condition within seven days from the date of service of such notice;
4. inform the owner that he or she may file a written request for a hearing before the [code enforcement official] on the question of whether a nuisance exists upon such property; and
5. state that if the owner fails to begin removing the nuisance within time allowed, or upon failure to pursue the removal of such nuisance without unnecessary delay, the [code enforcement official] shall cause the condition which constitutes the nuisance to be removed or abated and that the cost of such removal or abatement may be included in

a special tax bill or added to the annual real estate tax bill for the property and collected in the same manner and procedure for collecting real estate taxes.

### Section 3.

If the owner of such property fails to begin removing the nuisance within the time allowed, or upon failure to pursue the removal of such nuisance without unnecessary delay, the [code enforcement official] shall cause the condition which constitutes the nuisance to be removed. If the [code enforcement official] causes such condition to be removed or abated, the cost of such removal shall be certified to the City of University City clerk and/or [finance officer] who shall cause the certified cost to be included in a special tax bill or added to the annual real estate tax bill, at the collecting official's option, for the property and the certified cost shall be collected by the city collector or other official collecting taxes in the same manner and procedure for collecting real estate taxes. If the certified cost is not paid, the tax bill shall be considered delinquent, and the collection of the delinquent bill shall be governed by the laws governing delinquent and back taxes. The tax bill from the date of its issuance shall be deemed a personal debt against the owner and shall also be a lien on the property until paid.

### Section 4.

This Ordinance shall be in full force and effect from and after its passage and approval by the Mayor.

PASSED BY THE BOARD OF ALDERMEN FOR THE CITY OF UNIVERSITY CITY,  
MISSOURI, THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2000.

Source: St. Louis County Municipal League

### **Additional Ordinance provision for pet waste as a nuisance, in Section 2:**

A dog, cat, puppy, kitten or other animal creates a nuisance if it soils, defiles or defecates on urban property other than property of a person responsible for the animal unless such waste is immediately removed by a person responsible for the animal and deposited in a waste container or buried on ground where the person responsible for the animal has permission or the right to bury it.



## Appendix 2-F6: Model- Animal Waste Ordinance

WHEREAS, accumulation of fecal matter from animals on public property is an unsanitary and noisome condition which interferes with the public's use of sidewalks, parks and other public areas; and

WHEREAS, creation of this nuisance rests with animal owners who do not remove their animals' feces in public areas;

NOW, THEREFORE, THE CITY OF UNIVERSITY CITY DOES ORDAIN;

Section 1. Language in the City of University City Municipal Code, Chapter 6.06, is hereby added to read as follows:

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### **Chapter 6.06 ANIMAL FECAL MATTER**

Sections:

6.06.010 Control of Animals

6.06.020 Removing Fecal Matter

6.06.030 Possession of Removal Equipment

6.06.040 Set Aside Areas

6.06.050 Violation - Penalty

6.06.010 Control of Animals. It is unlawful for the owner of any animal to cause, permit or allow such animal to roam, run, stray, or to be away from the premises of such owner unless the animal is under tethered control.

6.06.020 Removing Fecal Matter. It is unlawful for the owner or handler of any animal to fail to remove fecal matter deposited by their animal on public property or public easement, or private property of another, before the owner leaves the immediate area where the fecal matter was deposited.

6.06.030 Possession of Removal Equipment. It is unlawful for the owner or handler of any animal to fail to have in their possession the equipment necessary to remove their animal's fecal matter when accompanied by said animal on public property or public easement, or private property of another.

6.06.040 Set Aside Areas. The above prohibitions shall not extend to areas set aside and designated by the city as areas where animals can be off-leash for exercise or training.

6.06.050 Violation - Penalty. Any person violating this section is guilty of a misdemeanor, and upon conviction shall be punished:

- A. By a fine of not less than twenty dollars or more than fifty dollars for the first offense; or
- B. For the second and subsequent offenses occurring within one year, a fine of not less than thirty dollars or more than one hundred dollars.

The minimum fines provided for by this section are mandatory minimums, and shall not be either suspended or deferred except in cases in which the court determines that the defendant is indigent and unable to pay any fine.

Section 2. Severability. If any section, subsection, paragraph, sentence, clause, or phrase of this ordinance is declared unconstitutional or invalid for any reason, such decision shall not affect the validity of the remaining portions of this ordinance.

Source: MRSC G54-651 ordinance

### **Additional Ordinance Provisions:**

For accumulation of waste on property –

It is unlawful for an owner to allow the accumulation of animal feces in any open area, run, cage or yard wherein animals are kept and to fail to remove or dispose of feces to avoid offensive odors or unsanitary conditions creating a nuisance as determined by the city staff (OR DESIGNATED MUNICIPAL REPRESENTATIVE). It is unlawful for an owner to allow pet waste to be deposited, or cause unsanitary conditions resulting from pet waste, on an adjacent property through stormwater runoff or washing off areas where animals are kept.

For accumulation of Manure –

No organic material, furnishing food or a breeding place for flies, will be allowed to accumulate on the premises. Manure shall not be allowed to accumulate and must be cleaned up on a regular basis sufficient to maintain a sanitary condition satisfactory to the city staff (OR DESIGNATED MUNICIPAL REPRESENTATIVE).



## Appendix 5-F1: Corps of Engineers 404 Permit & MDNR 401 Certification

All construction or maintenance activities that excavate in or discharge any dredge or fill material into a "water of the United States" requires a Corps of Engineers 404 permit and a MDNR 401 water quality certification. The permitting and certification process is shared between the Corps and the MDNR.

If you are considering a project that may involve placing materials in a lake, river, stream, ditch or wetland (including dry streams, ditches or wetlands) contact the Corps to find out if the project you are planning is in jurisdictional waters and is a regulated activity. The Corps has the sole authority to determine whether the activity is regulated; whether a site specific, individual 404 permit is required, or whether a Nationwide Permit (NWP) applies for projects with minor impacts. If an NWP does apply, contacting the Corps of Engineers is recommended to determine thresholds for notification under the NWP, and to obtain additional regional requirements imposed by the Corps' St. Louis Office.

The MDNR requires any project that needs a 404 Permit from the Corps (individual or NWP) to also obtain a 401 Water Quality Certification (401 Certification) from MDNR. The 401 Certification is verification by the state that the project will not violate water quality standards. The department may require actions on projects to protect water quality in the form of certification conditions. For some of the NWPs, the MDNR has published their conditions that must be met in addition to the NWP conditions.

After you contact the Corps about your project and, if applicable, submit an application, they will send you a letter authorizing your project under a particular permit. If the Corp's letter to you indicates that you must obtain an individual 401 certification, you must send an application to MDNR also. If they state that MDNR has 'conditionally certified' your activity, and have enclosed certification conditions, then nothing further is needed.

Questions about permit applicability and procedures for obtaining individual permits can be found by calling the Corps of Engineers at 314-331-8575 or 314-331-8186. Permit application forms and procedures for applying to the Corps and the MDNR can be found on the following web pages:

<https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Obtain-a-Permit/><https://dnr.mo.gov/env/wpp/401/>

The following is a list of NWPs commonly applicable to municipal operations. For most of these NWPs, the MDNR has conditionally certified these activities. The NWPs will list numerous thresholds for applicability and notification in terms of linear feet and acreage of the project.

- NWP 3 Maintenance – repair or replacement of an existing structure, and removal of accumulated sediment or placement of riprap to protect a structure.
- NWP 7 Outfall Structures – construction of new outfall and intake structures, and removal of accumulated sediment blocking these structures.
- NWP 12 Utility Lines – construction, maintenance, and repair of utility lines (sewer, water, electric or communication), including outfalls and excavations for the utility line.
- NWP 13 Bank Stabilization – stabilization projects for erosion protection.



- NWP 14 Linear Transportation – construction or modification of linear transportation crossings, such as bridges and culverts for roads and trails.
- NWP 27 Stream and Wetland Restoration Activities – activities associated with the restoration of former waters, or the enhancement or creation of wetlands and riparian areas, or the restoration and enhancement of streams, including activities associated with flow modification, habitat and vegetation.
- NWP 31 Maintenance of Existing Flood Control Facilities – dredge or fill activities associated with maintaining existing flood control facilities such as retention/detention basins and channels.
- NWP 41 Reshaping Existing Drainage Ditches – dredge or fill activities to modify the cross-sectional configuration of drainage ditches, not modifying capacity beyond the original design.
- NWP 43 Stormwater Management – construction, maintenance, and dredging of stormwater management facilities, such as ponds, detention/retention basins, outfalls, and emergency spillways.

## Glossary: Definitions of Terms Used in This Document

The following definitions are specific to the St. Louis Metropolitan Small MS4 and to University City

**Best Management Practice (BMP)** means: Schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the pollution of streams within St. Louis County from urban runoff. BMPs also include treatment requirements, operating procedures and practices to control site runoff, spillage or leaks, sludge or waste disposal or drainage from raw material storage. BMPs may be structural or non-structural. *(This definition adapted from Section (1)(C)1 of Missouri Stormwater Regulation 10 CSR 20-6.200)*

**Coordinating Authority** means: The municipal entity, which is one of the co-permittees to a state issued Phase II stormwater permit, that is recognized by the Missouri Department of Natural Resources (MDNR) as the party which will coordinate the activities of all of the co-permittees in meeting the requirements of the permit. For the St. Louis County Plan Area, the Metropolitan St. Louis Sewer District (MSD) has been identified in the permit as the coordinating authority for the co-permittees. One of the coordinating authority's responsibilities is to prepare and submit an annual report to the MDNR on the status of compliance of all the co-permittees with the permit and approved SWMP.

**Co-permittee** means: An individual permittee named in a Phase II permit that is issued to multiple entities within a single urbanized area such as St. Louis County. Within the St. Louis County Plan Area, each co-permittee is responsible only for the permit conditions relating to the discharges for which it is the owner or operator and for carrying out the responsibilities for which it has been designated within the SWMP. The co-permittees share in the financial and administrative responsibilities under the permit and cooperate with each other and with the coordinating authority in complying with the terms of the permit and with meeting the commitments in the SWMP. The co-permittees are listed in the SWMP

**Green Procurement** - the procurement of products and services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose.

**Green Product** – a product that is less harmful than the next best alternative, having characteristics such as:

- Being recyclable.
- Being biodegradable.
- Containing recycled material (post-consumer recycled content).
- Having minimal packaging and/or for which there will be take-back by the manufacturer/supplier of packaging.
- Being reusable or contain reusable parts.
- Having minimal content and use of toxic substances in production.

- Producing fewer and/or less polluting by-products during manufacture, distribution, use and/or disposal.
- Producing the minimal amount of toxic substances during use or at disposal.
- Making efficient use of resources - a product that uses energy, fuel or water more efficiently or that uses less paper, ink or other resources.
- Being durable or having a long economically useful life and/or can be economically repaired or upgraded.

**Green Space** - planned and preserved open land; an interconnected system of open land, determined to have cultural, ecological, developmental, agricultural, and/or recreational value.

**Maximum Extent Practicable (MEP)** – the technology-based discharge standard for Municipal Separate Storm Sewer Systems to reduce pollutants in stormwater discharges that was established by CWA §402 (p). A discussion of MEP as it applies to regulated small MS4s is found at 40 CFR 122.34.

**MCMs** means: Minimum Control Measures. The six MCMs are: Public education and outreach; Public participation/involvement; Illicit discharge, detection and elimination; Construction site runoff control; Post-construction site runoff control; and Pollution prevention/good housekeeping.

**Municipal Industrial Facility** means: An industrial facility, as defined in the federal and state stormwater regulations, which is owned or operated by a municipality. The regulations define covered industrial facilities by their Standard Industrial Classification (SIC) codes as published by the U.S. Office of Management and Budget. From this extensive list of covered SIC codes, the following operations have been identified as those most likely to be owned or operated by a municipality: Transportation Operations, Landfills, Hazardous Waste Treatment/Storage/Disposal facilities, Vehicle Maintenance or Fueling facilities, Vehicle Washing facilities, Solid Waste Transfer facilities, Wastewater Treatment facilities, Recycling facilities, Yard Waste/Composting facilities and certain types of Warehousing & Storage facilities.

**Municipal Separate Storm Sewer System (MS4)** means: A conveyance or system of conveyances including roads and highways with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, paved or unpaved channels or storm drains designated and utilized for routing of stormwater which is contained within the municipal corporate limits or is owned and operated by the state, city, town, village, county, district, association or other public body created by or pursuant to the laws of Missouri having jurisdiction over disposal of sewage, industrial waste, stormwater or other liquid wastes and is not a part or portion of a combined sewer system. *(This definition adapted from Section (1)(C)16 of Missouri Stormwater Regulation 10 CSR 20-6.200).* Each of the co-permittees operates its own MS4. In addition, the term is used to refer to the entire St. Louis County Plan Area which is identified in the Phase II permit as the St. Louis Metropolitan Small MS4.

**Municipality** means: Any public entity as described in the definition of Municipal Separate Storm Sewer System. St. Louis County and the Metropolitan St. Louis Sewer District are



considered “municipalities” for the purposes of the Phase II stormwater permit along with the cities, towns and villages who are co-permittees. The Missouri Department of Transportation (MoDOT) is also a “municipality” and operates an MS4 within the Plan Area. However, MoDOT is covered by a separate state permit and is not a co-permittee under the St. Louis Metropolitan Small MS4 permit.

**NPDES** means: National Pollutant Discharge Elimination System. This term was introduced in Section 402 of the federal Water Pollution Control Act of 1972 (last amended in 1987 and now known as the Clean Water Act). Section 402 provides for the issuance of NPDES permits for the discharge of pollutants to waters of the United States and specifies the conditions under which permits may be issued. The 1987 amendments established the phased permitting requirements for municipal stormwater discharges. In Missouri, the Missouri Department of Natural Resources has been delegated the authority to issue NPDES permits.

**Phase I** means: The first phase of the federal stormwater regulations. These took effect December 17, 1990. Phase I regulations provide for stormwater permitting for industrial facilities, for land disturbance sites 5 acres or greater in size and for MS4s having populations greater than 100,000 (medium and large MS4s). Industrial facilities operated by municipalities, regardless of size, are included under Phase I. See definition of “Municipal Industrial Facility.”

**Phase II** means: The second phase of the federal stormwater regulations. These took effect February 7, 2000. Phase II regulations provide for stormwater permitting for MS4s, in urbanized areas as defined by the Bureau of the Census, with populations below 100,000 (Small MS4s) and for land disturbance sites between 1 acre and 5 acres in size. Each of the individual municipal entities within the St. Louis County Plan Area has a population below 100,000 and is, therefore, a Small MS4 subject to Phase II requirements.

**Phase II Permit** means: Stormwater permit # MO-R040005 issued by the Missouri Department of Natural Resources to the St. Louis County co-permittees. This permit was issued pursuant to the provisions of Missouri Stormwater Regulation 10 CSR 20-6.200.

**Plan Area** means: The portion of St. Louis County served by separate storm sewers and within the corporate boundaries of the Metropolitan St. Louis Sewer District. The Plan Area includes the cities, towns and villages who are co-permittees as well as unincorporated St. Louis County. The Plan Area is identified in the Phase II permit as the St. Louis Metropolitan Small MS4.

**Recycling Facility** means any co-permittee-owned or operated facility which collects, for recycling, common household recyclables such as paper, plastic, glass, cardboard, etc. or which collects and processes yard wastes for use as mulch or compost.

**Separate Storm Sewer** means: A pipe, conduit, conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels or storm drains) designed and intended to receive and convey

stormwater and which discharges to waters of the state and which is not part of a combined sewer system.

**Stormwater** means: rainfall runoff, snow melt runoff and surface runoff and drainage.

**Stormwater Management Plan (SWMP) or Plan** means: The Plan developed for the St. Louis County Plan Area by the St. Louis Municipalities Phase II Stormwater Planning Committee and approved by the Missouri Department of Natural Resources through the issuance of NPDES permit MO-R040005.

**Sustainable (green) Service** - A service acquired from a supplier who has a green operational policy and whose internal practices promote sustainability.

**Threshold** - the dollar value of contracts, above which a formal record is kept on file showing that environmental criteria were considered when requirements were defined.

**Urban Runoff** means: Stormwater and other runoff from streets, parking lots, rooftops, residential, commercial and industrial areas and any areas that have been rendered impervious through development activities. Such runoff becomes contaminated with fertilizers, pesticides, vehicle drippings and emissions, animal wastes, street litter, yard wastes, silt, chemical spills and other urban wastes. These contaminants are carried through the separate storm sewers and discharged into area streams where they degrade the water quality, harm aquatic life and other wildlife, reduce aesthetic and recreational values and make the waters unsafe for human use.

*(EACH CO-PERMITTEE CAN ADD DEFINITIONS OF ANY TERMS APPLICABLE TO ITS SPECIFIC NEEDS.)*

## **For More Information...**

- Metropolitan St. Louis Sewer District – Stormwater management BMPs  
<https://www.stlmsd.com/what-we-do/stormwater-management>  
<https://www.stlmsd.com/what-we-do/what-can-i-do>
- MDNR Stormwater Information Clearinghouse  
<https://dnr.mo.gov/env/wpp/stormwater/>
- Spill Response and Reporting – For EPA contacts and reporting instructions:  
<https://readycontainment.com/technical-library/epa-emergency-spill-response/>  
MDNR contact and reporting instructions: <https://dnr.mo.gov/env/esp/esp-eer.htm>
- EPA - Stormwater BMPs  
<https://www.epa.gov/npdes/national-menu-best-management-practices-bmps-stormwater#poll>
- Stormwater Waste Management Guidance – Pollution Prevention Guidance publications:  
<https://www.epa.gov/p2>