

	Bowling Green, Kentucky Stormwater Best Management Practices (BMPs) Stormwater Pollution Treatment Practices (Structural)	PTP-07
	Activity: Grease Management	
PLANNING CONSIDERATIONS: Design Life: Life Acreage Needed: Low Estimated Unit Cost: Low Annual Maintenance: High		
	Target Pollutants, Pollutant Removal	
	Grease Management promotes separation of grease to limit stormwater pollution. Grease – Separation and Disposal, Management Policy	
Description	<p>Many businesses such as restaurants and food manufacturing generate grease waste during daily operations. The disposal of grease wastes can become a significant source of pollution in streams if not managed properly. Spills, overflows, and leaks occur due to poor maintenance of storage facilities and lack of proper disposal education. This fact sheet addresses proper disposal technique and storage facilities to hold used fats, oils, and grease. In addition to water quality pollution impacts, poor management practices can cause unpleasant odors, attract rodents, and have negative visual effects.</p> <p>As grease spills may cause potential health risks, grease practices should be approved by the Health Department, and sites should be maintained according to any special operating requirements for food service establishments or grease collection systems.</p>	
Suitable Applications	<p>Grease is generated from several different sources, including meat fats, lard, food scraps, sauces, butter or margarine, shortening, and dairy products. Food service industries such as restaurants should implement grease management and staff education to ensure implementation. Grease management implementation is suitable for the following applications:</p> <ul style="list-style-type: none"> ➤ Restaurants ➤ Food Preparation Facilities ➤ Food Manufacturers ➤ Caterers 	

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Approach	<p>Cover and Contain In situations where the grease collection dumpster is located outside, overhead cover in the form of a canopy and containment, via a curb system is recommended.</p> <p>Treat and Discharge For situations where grease has the potential to be released to the ground, a treat and discharge solution is recommended. This could be accomplished by installing a BMP such as a water quality unit (PTP-06) or another BMP designed to remove oils and greases.</p> <p>Internal Grease Management An internal collection system is a closed-loop, grease and oil collection system that utilizes two storage tanks, one each for fresh oil and waste oil. The system directly connects the flow of fresh oil to kitchen oil fryers. Once this oil has been used, the system can directly pump new oil in while the used oil is pumped out. Waste oil and grease is then drained through a filter and to the waste oil storage tank.</p>	
Grease Disposal Procedures	<ul style="list-style-type: none"> ➤ Do <i>not</i> pour grease, fats, or oils down a sink drain or toilet. Grease will solidify and clog sanitary sewer lines, causing waste to back up into a business or residence. ➤ Utilize dry cleanup techniques, including rubber scrapers, paper towels, or kitty litter to absorb/remove grease accumulation or small spills. ➤ Educate staff on proper cleaning and disposal procedures. ➤ Prevent spills by supplying staff with proper tools and materials to transfer grease to a storage bin. Shown in Figure PTP-07-01. ➤ The use of solvents, detergents, enzymes, or hot water does not eliminate the problem of grease coagulation. ➤ Do <i>not</i> pour used grease products into a solid waste dumpster. ➤ Utilize an external storage bin with an overhead cover to collect used grease products. The bin contents should be routinely collected by a contracted grease disposal collector or rendering company. ➤ Locate the external storage bin away from storm drains. ➤ Post clear signage indicating that only grease waste is accepted. ➤ Keep storage bin closed and sealed to prevent leaking of contents or overflow due to rainwater, and attraction of rodents or insects. ➤ Utilize secondary containment measures to keep spills from entering storm drains. Possible secondary containment structures include curbs, double-walled tanks, or vaults. 	
Maintenance	<ul style="list-style-type: none"> ➤ Inspect storage area weekly and following rainfall events ➤ Repair or replace containment structures, perimeter controls, or storage bin as needed 	

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Maintenance

- Inspect storage area weekly and following rainfall events
- Repair or replace containment structures, perimeter controls, or storage bin as needed

Inspection Checklist

- No evidence of external corrosion or structural failure
- No stains or grease accumulation indicating spills or overflows
- No loose fittings or poorly fitted gaskets

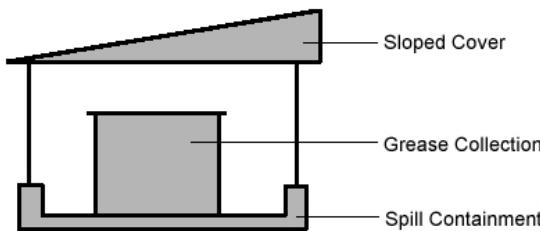


Figure PTP-07-01
Containment for grease disposal

Management Alternatives Exterior containment of grease is one management solution, but other management solutions exist. Alternative grease management techniques that are available include internal collection systems (shown in Figure PTP-07-02). These systems, if properly maintained and installed, may be better suited for restaurants or other food preparation facilities that utilize deep fryers or other cooking equipment using large quantities of oil. These systems are often preferred to minimize spills, transfer containers, and related employee injuries.

An internal collection system is a closed-loop, grease and oil collection system that utilizes two storage tanks, one each for fresh oil and waste oil. The system directly connects the flow of fresh oil to kitchen oil fryers. Once this oil has been used, the system can directly pump new oil in while the used oil is pumped out. Waste oil and grease is then drained through a filter and to the waste oil storage tank.

The system is metered by a service provider who monitors need for delivery of new oil and removal of waste oil. This is performed through a pump system and directly transferred to the delivery/removal truck.

Although the City of Bowling Green does not endorse specific brands or products, one example of an internal collection system manufacturer and provider is Restaurant Technologies, Inc. (RTI). More information about RTI products can be found on their website, www.rti-inc.com.



Figure PTP-07-02
Internal Grease Collection System
Indoor Poly Tank by Restaurant Technologies, Inc. (RTI)