Best Management Practice Field Manual for Operations at State of Hawaii Airports

STATE OF HAWAII, DEPARTMENT OF TRANSPORTATION, AIRPORTS DIVISION
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TABLE OF CONTENTS

LIST OF ACRONYMS

AIR-EE	DOTA, Engineering Branch, Environmental Section
AOA	Air Operations Area
AOC	Airport Operations Control
AOM	Airport Operations Maintenance
ARFF	Aircraft Rescue and Fire Fighting
AST	Aboveground Storage Tank
BMP	Best Management Practice
CFR	Code of Federal Regulations
CWB	State of Hawaii, Department of Health, Clean Water Branch
DOH	State of Hawaii, Department of Health
DOTA	State of Hawaii, Department of Transportation, Airports Division
EC	Emergency Coordinator
EPA	U.S. Environmental Protection Agency
GSE	Ground Service Equipment
HAR	Hawaii Administrative Rules
HAZMAT	Hazardous Materials
HEER	State of Hawaii, Department of Health, Hazard Evaluation and Emergency Response
HRS	Hawaii Revised Statutes
LQG	Large Quantity Generator
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
OPA	Oil Pollution Act
OWS	Oil/Water Separator
PBMP	Permanent Best Management Practice
PCB	Polychlorinated biphenyl
PPE	Personal Protective Equipment
SDS	Safety Data Sheet
SDWB	State of Hawaii, Department of Health, Safe Drinking Water Branch
SHWB	State of Hawaii, Department of Health, Solid and Hazardous Waste Branch
SPCC	Spill Prevention, Control, and Countermeasure
SQG	Small Quantity Generator
UIC	Underground Injection Control
UST	Underground Storage Tank
VOC	Volatile Organic Compound
VSQG	Very Small Quantity Generator

Disclaimer

Industrial and commercial activities conducted at airports have the potential to discharge pollutants into the DOTA MS4, drainage system, or State waters. Drainage system may include ditches, canals, inlets, and/or drainage wells (such as UIC wells) Airport tenants (those who lease space(s) from DOTA, sub-lets, service providers, and concessionaires) have a responsibility to prevent or reduce the release or discharge of pollutants generated by their operations at their tenant space(s) and the common use areas of the AOA, such as the ramp or hardstand areas. This Best Management Practice Field Manual for Operations at State of Hawaii Airports (hereafter referred to as "Manual") shall serve as a guidance document for general activities conducted by any and all tenants, concessionaires, and service providers at all State of Hawaii airports. The list of federal, state, and local regulations that apply to environmental compliance at the airports is provided in Attachment I. It is every airport user's responsibility to ensure that their activities comply with all current and applicable environmental laws and regulations, as well as their signed lease agreement or contract with DOTA.

All tenants and/or their contractors, service providers, and concessionaires operating at the airport shall adhere to the following BMPs in their tenant space(s) and common use areas, airport responsibilities as described in HAR Title 19, Subtitle 2 – Airports Division, and pertinent state and federal regulations. In the case of a conflict between tenants and/or their contractors' company policies or procedures and the BMPs provided by DOTA, tenants and/or their contractors shall follow the more stringent BMPs.

Best Management Practices
Good Housekeeping Practices

Description
Various operations conducted at airports have the potential to impact stormwater runoff. Good housekeeping practices are intended to maintain a clean, safe, and environmentally friendly working environment. Implementing good housekeeping BMPs reduces the potential for pollutants to enter the DOTA MS4, drainage system, or State waters.

Limitations
There are no major limitations to the implementation of these BMPs.

Practice		
☐	1	DO NOT overfill dumpsters or leave trash outside of containers. Ensure that materials are properly placed in dumpsters and do not leak to avoid commingling with stormwater runoff. Use leak-proof dumpsters and keep them covered when not in use. If dumpsters are damaged, delivered without lids, or leaking then implement BMPs to prevent and/or contain discharges until dumpsters can be repaired or replaced.
☐	2	Remove and properly dispose of debris and trash from all areas daily. Keep areas exposed to stormwater free of waste, garbage, and floatable debris to these materials from being entrained in stormwater and transported offsite.
☐	3	Schedule regular pickup and disposal of garbage and waste materials.
☐	4	Dry sweep or vacuum all areas to prevent tracking of materials. DO NOT hose down facility floors or outside areas unless a collection method and/or treatment device is implemented to contain wash water. Collection methods and treatment devices may include discharging to an OWS, discharging to an evaporation pond, discharging to a vegetated sump or depression, or collecting with a vac-truck. Properly dispose of collected wash water and dry material to prevent potential impacts to stormwater.
☐	5	Place spill kits in easily accessible areas and keep them stocked. If activities are conducted in areas that pose a potential threat for non-stormwater discharges to enter storm drain inlets, such as fueling activities, it may be necessary to include drain mats or other preventative devices within spill kits to prevent such discharges.
☐	6	Clean up spills and leaks promptly using dry methods such as rags or absorbent material to prevent pollutants from comingling with stormwater and being transported offsite. Properly dispose of spent cleaning materials. Disposal of hazardous spilled substances and spent cleanup materials shall be in accordance with the BMPs outlined in the Solid Waste Storage and Disposal section of this Manual as well as applicable rules and regulations.

Best Management Practices
Good Housekeeping Practices
(Continued)

Practice		
☐	7	Perform PBMP inspections, at a minimum annually, and perform maintenance as required. Document and maintain records of all PBMP inspections and maintenance. Refer to the *PBMP Fact Sheet* or more information.
☐	8	Identify DOTA MS4 structures, drainage system, or State waters in each work area and prevent non-stormwater discharges into them.
☐	9	Inspect storm drain inlets regularly for sediment build-up or debris accumulation. If the build-up and/or accumulation is not a result of tenant activity, notify AIR-EE of the storm drain structure(s) that require cleaning. Otherwise, it is the tenant's responsibility to ensure that all storm drain inlets and catch basins are maintained within their space(s).
☐	10	Inspect and maintain tenant-installed BMPs (e.g., drain guards, inlet inserts, catch basin inserts, biosocks, etc.). Report abandoned or unmaintained DOTA-installed BMPs to AIR-EE.
☐	11	Divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff to minimize the discharge of pollutants.
☐	12	Perform daily facility inspections to verify that good housekeeping practices are being followed by facility personnel.
☐	13	Maintain records for all permits and plans for a minimum of five years.
☐	14	At a minimum, one person from each facility must complete the annual Environmental Compliance Program Training video and survey. This training covers BMPs listed in this Manual. If only one person completed the training, they will be responsible for training other employees as necessary and keep a roster of all personnel trained. Please view the video and take the survey, all of which can be found at the following link: Annual Environmental Compliance Program Training
☐	15	Identify all chemical substances used in maintenance activities, compile SDSs for hazardous chemicals, and store SDSs where chemicals are used in an accessible location for employees. SDSs provide both workers and emergency responders with the proper procedures for handling hazardous substances and identify potential threats to personal health and the environment.

Best Management Practices
Aircraft, Vehicle, and Equipment Maintenance and Repair

Description
Routine maintenance on aircraft, vehicles, and equipment must be done for proper operation and to prevent leaks and spills. Additionally, emergency maintenance of aircraft and equipment outside of tenant spaces may be required. Maintenance and repair activities may include fluids removal, engine and parts cleaning, and/or tire repair and replacement. These activities present a potentially significant source of contaminants due to the harmful materials used and the waste generated. These BMPs are designed to prevent or reduce pollutants associated with maintenance and repair activities from entering the DOTA MS4, drainage system, or State waters.

Limitations
Only emergency repair may be conducted in the common use areas of the AOA. All other maintenance and repair activities must be conducted in appropriate areas of the tenant facility.

Practice		
☐	1	Maintain aircraft, vehicle, and equipment used at the facility or in the common use areas of the AOA and keep in proper operating condition. Inspect aircraft, vehicles, and equipment periodically for leaks and immediately implement appropriate leak protection measures if a leak is observed, and repair as soon as possible.
☐	2	Perform aircraft, vehicle, and equipment maintenance and repair activities indoors or under cover whenever possible and ensure that all maintenance and repair activities are conducted away from the DOTA MS4, drainage system or State waters. If emergency maintenance is conducted within the common use areas of the AOA, BMPs must be in place. Perform an area inspection and clean up after maintenance is conducted.
☐	3	Store damaged and/or leaking aircraft, vehicles, and equipment indoors whenever possible. When a drip or leak is identified, use drip protective measures to prevent contact with ground (indoors or outdoors). If a drip pan is used outdoors, clean the drip pan regularly to prevent overflow, especially during rain events. DO NOT leave leaking aircraft, vehicles, and equipment parked within the common use areas of the AOA overnight.
☐	4	Remove fluids and batteries from damaged and/or salvage aircraft, vehicles, or equipment before storage. Store damaged and/or salvage aircraft, vehicles, or equipment under cover, if feasible, until repair or disposal. Inspect, at least monthly, for signs of deterioration.
☐	5	Use drip pans, tarps, or other liquid containment measures whenever fluids are being removed to capture releases and prevent stormwater pollution. Clean the drip pans, tarps, or liquid containment measures before they are full and properly dispose of the contents.
☐	6	Prior to fluids transfer, closely examine the container(s) to be used for transfer. Carefully transfer fluids over pavement or concrete surface using a funnel or nozzle to a designated storage container as soon as possible.

Best Management Practices
Aircraft, Vehicle, and Equipment Maintenance and Repair
(Continued)

Practice		
☐	7	Store used, cracked, or damaged batteries under cover and within secondary containment measures.
☐	8	Store drums with capacity of 25 gallons and above containing liquid materials and waste indoors or under cover and within secondary containment. Store smaller containers of liquid materials and waste indoors or under cover. If not indoors, store within secondary containment.
☐	9	Properly empty and clean drip protection measures (i.e., drip pans) regularly and ensure all containers at the facility are properly covered and closed when not in use.
☐	10	Store storm drain protection materials, such as impermeable berms or drain mats, nearby to protect storm drain inlets in the event of a spill.
☐	11	Designate areas for parts cleaning. Allow parts to drain over solvent tank or drip pan. DO NOT wash or rinse parts outdoors and do not allow solvent to drip or spill onto the floor. Remove any parts that are dipped in liquid slowly to avoid spills. Provide secondary containment for drums of solvent with capacity of 25 gallons and above.
☐	12	Use dry methods such as dry sweeping, vacuuming, or wiping with rags or absorbent materials to clean all areas and properly dispose of collected materials and spent cleaning materials. Washing may only occur in areas where there is a collection method and/or treatment device that contains wash water. Ensure all wash water is properly disposed of and has no potential to impact stormwater.
☐	13	Dispose of liquid wastes properly. DO NOT pour liquid waste into floor drains, sinks, outdoor storm drain inlets, or other storm drains or sewer connections.
☐	14	Maintain stocked spill kits throughout the facility, especially in maintenance areas, to prevent discharges to the DOTA MS4, drainage system, or State waters in the event of a spill. Refer to the BMPs in the Spill Prevention and Response section of this Manual.
☐	15	Ensure that the PBMPs installed at the tenant facility for stormwater management, such as OWSs, storm drain inlet inserts, etc. are operating as designed. Conduct inspections, maintenance, and/or repairs as needed.
☐	16	Inspect maintenance areas regularly for proper implementation of BMPs.
☐	17	Conduct employee training, as described under the Good Housekeeping Practices section of this Manual, at a minimum annually, or as required.

Best Management Practices
Aircraft, Vehicle, and Equipment Body Repair

Description

Body repair for aircraft, vehicles, and equipment may only be conducted in permitted paint booths, auto repair shops, or auto body shops. Body repair activities may include sanding, painting, welding, washing, and floor cleaning. The materials and waste generated by these activities have the potential to release pollutants such as oil and grease, organics, heavy metals, toxic chemicals, and paints to stormwater. These BMPs are designed to prevent or reduce pollutants associated with body repair activities from entering the DOTA MS4, drainage system, or State waters.

Limitations

The fire code does not allow sanding and painting activities, unless conducted within an approved and permitted paint booth, auto repair shop, or auto body shop. Tenants conducting these activities must receive permission from the ARFF prior to conducting these activities at their tenant space(s).

Practice		
☐	1	Perform all body repair activities indoors or under cover and within a permitted paint booth, auto repair shop, or auto body shop.
☐	2	Utilize plastic barriers or tarpaulins during blasting or painting operations to contain debris.
☐	3	Sweep, vacuum, or use other dry cleanup methods routinely to pick up dust from dry sanding of primer, metal, or body filler. Keep airborne dust to a minimum by using vacuum attachments on sanding equipment whenever possible or utilize a paint booth. Make extra efforts to thoroughly sweep or vacuum dust prior to mopping.
☐	4	Clean up wet sanding drips with rags or absorbent materials and let them drip dry, sweep or vacuum up the dust, mop the area and dispose of the mop water properly. Disposal of hazardous spilled material and spent cleanup materials shall be in accordance with the BMPs outlined in the Solid Waste Storage and Disposal section of this Manual as well as applicable rules and regulations.
☐	5	Use solvents and coatings with low VOC content, where possible. Use high-transfer efficiency coating techniques such as brushing and rolling to reduce overspray and solvent emissions.
☐	6	Mix paints and solvents in designated areas indoors or under cover away from pervious surfaces and storm drain inlets.
☐	7	Establish and implement effective inventory control to reduce paint waste, including tracking date received and expiration dates.

Best Management Practices
Aircraft, Vehicle, and Equipment Body Repair
(Continued)

Practice		
☐	8	Conduct all priming and painting activities only in permitted paint booths. Uncontained spray-painting activities and painting outside or inside of hangars is prohibited and may be a violation of the fire code.
☐	9	DO NOT use water to control overspray or dust in paint booths, unless the water evaporates in the booth.
☐	10	Store waste paint, solvents, and rags in covered containers to prevent evaporation to the atmosphere.
☐	11	Wash water-based and latex paint brushes, rollers, and other equipment in utility sinks or other locations where wash water is properly contained and disposed.
☐	12	DO NOT clean out brushes, rinse paint containers, or wash paint equipment onto the exposed ground, street, gutter, or into the DOTA MS4, drainage system, or State waters. “Paint out” brushes as much as possible.
☐	13	Properly segregate and label waste paints for disposal in accordance with the BMPs outlined in the Solid Waste Storage and Disposal section of this Manual as well as applicable rules and regulations. Note: oil-based paints are considered hazardous waste per DOH SHWB.
☐	14	Conduct employee training, as described under the Good Housekeeping Practices section of this Manual, at a minimum annually, or as required.

Best Management Practice
Aircraft, Vehicle, and Equipment Washing

Description
Routine washing of aircraft, vehicles, and equipment shall be conducted ONLY at designated wash racks or wash areas. Designated wash racks or wash areas are located inside a building or over an impervious area where wash water can be contained and properly disposed of. Proper disposal methods include discharge to an OWS that drains to the sanitary sewer system, discharging to an evaporation pond and properly disposing of dried materials, or collecting with a vac-truck for proper disposal. Wash water may contain oils, greases, heavy metals, sediments, soaps, and other pollutants that pose a threat to the DOTA MS4, drainage system, or State waters. These BMPs are intended to reduce the impact of Aircraft, Vehicle, and Equipment Washing activities on stormwater runoff.

Limitations
Aircraft, vehicles, and equipment washing shall only be conducted at designated wash racks or wash areas.

Practice		
☐	1	Keep aircraft, vehicles, and equipment clean and in good operating condition. Aircraft, vehicle, and equipment washing activities are NOT permitted in the common use areas of the AOA, unless at designated DOTA wash racks or by written approval from AIR-EE.
☐	2	Ensure tenant installed wash racks or wash areas on tenant spaces are either located in an area where wash water can be contained and properly disposed of, directed to the sanitary sewer system, or in a designated area that AIR-EE has approved in writing.
☐	3	Use detergents that meet EPA's Safer Choice Standard. Please refer to the following link to verify if the product you are using meets this standard: https://www.epa.gov/saferchoice/products.
☐	4	Where applicable, use dry methods to wash aircraft, vehicles, and equipment.
☐	5	Conduct OWS maintenance in accordance with the BMPs outlined in the Solid Waste Storage and Disposal section of this Manual.
☐	6	Ensure OWSs within the tenant space(s) have all applicable permits.
☐	7	Prohibit washing of personal vehicles.
☐	8	Ensure BMPs are implemented while washing at DOTA wash racks or wash areas at the tenant facility.
☐	9	Always use the minimum amount of water and soap needed for all washing activities and avoid over spraying.
☐	10	Conduct employee training, as described under the Good Housekeeping Practices section of this Manual, at a minimum annually, or as required.

Best Management Practice
Aircraft, Vehicle, and Equipment Fueling

Description
During fueling of aircraft, vehicles, and equipment on the tenant space, common use areas of the AOA, or ramp areas, there is the potential for leaked or spilled fuel to contaminate stormwater. The BMPs outlined in this section are intended to prevent fuel spills and leaks and reduce potential spills from impacting stormwater runoff.

Limitations
There are no major limitations to the implementation of these BMPs.

Practice		
☐	1	Where possible, perform fueling of aircraft, vehicles, and equipment in designated areas. All fueling activities conducted outside of designated areas are performed away from storm drain inlets, DOTA MS4, drainage system, or State waters.
☐	2	DO NOT top off or allow unattended fueling.
☐	3	During tank filling operations, engage the interlocking brake system and/or chock the wheels of the fueling vehicle to avoid movement. Deploy traffic safety cones or warning signs for safe filling operations.
☐	4	Ensure that containment devices or diversion measures (e.g., storm drain cover, Safe Drain, etc.) are properly implemented during filling of ASTs and USTs. Continuously monitor the filling of ASTs and USTs. If containment devices or diversion measures contain accumulated product, properly remove product according to content specific environmental regulations.
☐	5	DO NOT hose off fueling areas.
☐	6	Post proper fueling and cleanup instructions in fueling areas.
☐	7	Use only dry absorbents or other dry cleanup materials to contain spills. Promptly clean spills with rags or absorbent material, and properly dispose of cleaning materials. For large spills, contact spill response personnel immediately. Refer to the BMPs in the Spill Prevention and Response section of this Manual. Dispose of hazardous spilled material and spent cleanup materials in accordance with the BMPs outlines in the Solid Waste Storage and Disposal section of this Manual as well as applicable rules and regulations.
☐	8	Maintain an adequate supply of spill kits and spill control equipment near fueling areas to enable prevention of pollutant discharge to DOTA MS4, drainage system, and State waters in the event of a spill. Equip fuel trucks and mobile tanks with spill cleanup kits. Each spill kit should include, at a minimum, loose absorbent material or absorbent pads, a broom, and a pan or shop vac to pick up used spill cleanup materials. Additional suggested materials include absorbent booms, drain mats, plugs, or other devices to immediately stop and prevent spills from entering DOTA MS4, drainage system, or State waters.

Best Management Practice
Aircraft, Vehicle, and Equipment Fueling
(Continued)

Practice		
☐	10	Develop and implement a SPCC Plan, if required, based on facility oil storage and operations. Ensure the SPCC Plan is updated at the required frequency or if storage capacity and/or changes to the facility are made in accordance with the SPCC rule. Conduct inspections and training per SPCC Plan requirements at the required frequency.
☐	11	Train personnel who handle oil and hazardous material on proper fueling operations, as well as spill response and reporting procedures at a minimum annually, or as required. Refer to the BMPs in the Spill Prevention and Response section of this Manual.
☐	12	Dispose of the waste resulting from fuel tests and water collected in fuel tanks and hydrant sumps in accordance with the applicable county, state, and federal regulations.
☐	13	Confirm satisfactory operation of leak detection systems and/or pipeline monitoring systems, where installed.

Best Management Practice
Aircraft, Vehicle, and Equipment Fueling
(Continued)

Practice		
☐	14	The tenant and/or their fueling contractors must conduct the following checks regularly in addition to their operational procedures. If the following checks fail, immediately repair or replace defective parts or remove from service until repaired or replaced. Fuel Storage Tanks: 1. Check the general condition of fuel storage tanks for safety defects, damage, corrosion, leaks, and appearance. 2. Check the condition of all fuel hoses and dispensing nozzles for wear. 3. Check piping systems (e.g., pipes, pumps, flanges, couplings, hoses, and valves, etc.) for failure, cracks, and leaks. 4. Check for appropriate monitoring via liquid level indicators or gauges, overfill protection with alarms, and/or leak detection systems. 5. Check that automatic shut off controls on fuel dispensing nozzles are in working condition. 6. Check that bollards/posts surrounding the fuel pumps and tanks are in good condition to prevent collisions during vehicle ingress and egress. Tank Truck or Fueling Vehicle Checks: 1. Check the general condition of tank trucks or fueling vehicles for safety defects, equipment damage, fuel leaks, and appearance. 2. Check the operation of deadman controls, brakes, and/or safety interlock systems. 3. Check the condition of all fuel hoses, swivels, and dispensing nozzles for wear. 4. Check the general condition of grounding reels, cables, clamps, and lift platforms. 5. Verify that fire extinguishers are properly placed with unobstructed access. 6. Verify the satisfactory operation of the emergency shutdown system. Hydrant System Checks: 1. Check the hydrant valve pits for fuel leaks, liquid level, and cleanliness. 2. Check the hydrant valve and components for visual deficiencies. 3. Ensure all emergency fuel shutdown stations have clear access and check if the locator lights are working properly. 4. Verify the satisfactory operation of the emergency shutdown system. 5. Report abnormal pressure/flow recordings in charts because this may indicate leaks. 6. Check the isolation valve pits that control the distribution of fuel, for emergency access, lid condition, fuel leaks, and electrical components.

Best Management Practices
Fertilizer and Pesticide Storage and Application

Description

Fertilizer and pesticide application may be conducted by tenant facility personnel or a hired contractor to maintain landscaping or to eliminate pests at their facility. Improper use of pesticides and fertilizers can lead to the presence of chemicals in stormwater. Pesticides are defined as chemicals used to kill pest animals or plants. They are typically used to control the growth of weeds or other undesirable vegetation. Occasionally, insecticides or rodenticides are used to control an infestation of insects or to prevent the spread of diseases (i.e., mosquito or rodent control). These BMPs are designed to prevent or reduce the impact of pollutants associated with fertilizer and pesticide storage and application on stormwater.

Limitations

Fertilizer, pesticide, and herbicide application should not be conducted during inclement weather or applied within six feet of a waterway or on slopes greater than a three to one ratio.

Practice		
☐	1	Store fertilizers and pesticides in accordance with the Container and Material Storage BMPs in this Manual to minimize potential contact with stormwater runoff.
☐	2	Periodically check the condition of containers. Look for leaking or corroded containers, crystallization on covers or bases of containers, or discolored labels. Dispose waste containers properly in accordance with the BMPs outlined in the Solid Waste Storage and Disposal section of this Manual.
☐	3	Use fertilizers and pesticides only where needed in amounts or rates per the manufacturer's recommendations; DO NOT over apply. Calibrate application equipment regularly for proper application and loading rates.
☐	4	Use natural or organic alternatives, if possible.
☐	5	Ensure that all application is a minimum of six feet away from the DOTA MS4, drainage system, and State waters.
☐	6	DO NOT apply fertilizers or pesticides before or during rainfall or high winds or on slopes greater than a three to one ratio.
☐	7	Transfer or mix fertilizers and pesticides above an impervious surface or container; clean up spills immediately.
☐	8	Follow all rules and laws, refer to the Hawaii Department of Agriculture, Plant Industry Division, Pesticide Branch for more information on the following: HRS, Administrative Rules, Chapter 66; HRS, Hawaii Pesticide Law, Chapter 149A; Senate Bill 3095; and Act 45 (2018).
☐	9	Conduct employee training, as described under the Good Housekeeping Practices section of this Manual, at a minimum annually, or as required.

Best Management Practices
Container and Material Storage and Handling

Description
A variety of products and materials that may adversely affect water quality may be stored at tenant facilities or common use areas of the AOA. These BMPs are intended to reduce the potential for the contamination of stormwater by minimizing exposure of such products and materials to stormwater, minimizing hazardous materials used on-site, and training employees in proper handling and use of materials.

Limitations
Materials and waste cannot be stored in the common use areas of the AOA without approval from the AOC/AOM/Security.

Practice		
☐	1	Store materials (e.g., tires, metals, etc.) indoors or in covered areas wherever practical. Store materials in their original or appropriate containers as recommended by the manufacturer.
☐	2	Whenever possible, outdoor storage areas should be situated away from areas prone to flooding and in a location where they will not be accidentally damaged by equipment or vehicles. When storing non-liquid materials (e.g., tires, metals, etc.) outdoors, place off the ground on top of dunnage to minimize contact with stormwater runoff/run-on. Cover materials with a tarp when storing them outdoors, whenever practical, to prevent pollutants from leaching into stormwater or mixing with stormwater runoff.
☐	3	Single-walled liquid storage containers with capacity of 25 gallons or above and used batteries shall be stored indoors or under cover, and within secondary containment measures. Liquid accumulation in secondary containment measures should be minimized, managed, and disposed of properly.
☐	4	Liquid containers with capacity less than 25 gallons shall be stored indoors or under cover within secondary containment measures. Liquid accumulation in secondary containment measures should be minimized, managed, and disposed of properly.
☐	5	Store reactive, ignitable, or flammable materials in compliance with federal, state, and county regulations. Store small containers of flammable materials within flammable storage lockers.
☐	6	Ensure that all liquid containers are closed, secured to prevent movement, stored neatly and away from high traffic areas (if possible) to avoid accidental spills, and properly labeled.
☐	7	Ensure that all empty containers are properly labeled as “empty” when stored on-site.
☐	8	Inspect storage areas regularly. Look for leaking or corroded containers, chemical discoloration, or other changes in the containers or contents that may indicate a potentially hazardous condition or chemical deterioration.

Best Management Practices
Container and Material Storage and Handling
(Continued)

Practice		
☐	9	Maintain an accurate and organized inventory of stored supplies and materials used in the maintenance areas. Compile an inventory of SDSs for all chemicals and maintain them in an accessible location for employees. Periodically review the inventory and properly dispose of materials that are expired or no longer used. Follow manufacturer's instructions regarding uses, protective equipment, ventilation, flammability, and mixing of chemicals.
☐	10	Only purchase and store needed quantities of hazardous materials and use less hazardous alternative materials where possible. Properly dispose of any unusable material, such as dried out paint.
☐	11	ASTs and MSTs shall be kept in good condition (i.e., free of damage with no signs of failure) to prevent potential spills or releases and should be properly labeled. Single-walled ASTs and MSTs must be stored within secondary containment and meet DOT and Airport standards. If possible, a canopy or cover should be installed over ASTs used for fueling or transfer of products.
☐	12	Maintain spill kits where spills may occur (e.g., liquid material storage areas, fueling areas, etc.) or where a rapid response can be made. Spill kits should be stocked in accordance with the BMPs in the Good Housekeeping Practices section; Aircraft, Vehicle, and Aircraft, Vehicle, and Equipment Maintenance and Repair section; and Aircraft, Vehicle, and Equipment Fueling section of this Manual.
☐	13	Use absorbent materials to contain spills where appropriate. Promptly clean spills with rags or absorbent material, and properly dispose of used spill cleanup materials. Disposal of hazardous spilled material and spent cleanup materials should be in accordance with the BMPs outlined in the Solid Waste Storage and Disposal section of this Manual. For spill response procedures, refer to the BMPs in the Spill Prevention and Response section of this Manual.
☐	15	Recycle anti-freeze, used oil, solvents, windshield washer fluid, batteries, degreasers, paints, thinners, etc., as appropriate.
☐	16	Develop and implement a SPCC Plan, if required, based on facility oil storage and operations. Ensure the SPCC Plan is updated at the required frequency or if storage capacity and/or changes to facility are made in accordance with the SPCC rule. Conduct inspections and training per SPCC Plan requirements at the required frequency.
☐	17	Conduct employee training, as described under the Good Housekeeping Practices section of this Manual, at a minimum annually, or as required. Train all employees who work in areas where industrial materials or activities are exposed to stormwater.

Best Management Practices
Solid Waste Storage and Disposal

Description
Some chemicals used at airports require waste management. Improper handling of solid waste may result in contaminants entering stormwater runoff. The potential for discharge of these pollutants can be reduced by using proper solid waste storage, handling, and disposal techniques, as well as reducing the waste generation through reuse and recycling.

The solid wastes generated from tenant activities that may pose a threat to stormwater include, but are not limited to, oil-based paints, solvents, thinners, petroleum products, used batteries, anti-freeze, light ballasts, and other chemicals. Waste material categorized as hazardous waste, universal waste, and/or used oil must be managed properly as required by federal and state regulations (Appendix II). It is the responsibility of the hazardous waste generator to make a hazardous waste determination and dispose of the waste properly.

The BMPs outlined in this section are intended to prevent or reduce the discharge of pollutants to stormwater through proper solid waste storage and disposal, and training of employees and subcontractors.

Limitations
All hazardous waste shall be disposed of by a certified hazardous waste hauler.

Practice		
☐	1	Use the entire product before disposing of the container. Minimize use of hazardous materials on-site. Use less hazardous, alternative materials, where possible.
☐	2	DO NOT remove the original product label; it contains important safety and disposal information. If a container is empty, label as such, or properly dispose of it.
☐	3	Maintain good integrity of all liquid waste storage containers (e.g., used oils, hydraulic fluids, spent solvents, waste aircraft fuel). Inspect containers regularly and transfer waste from damaged containers into proper containers that are intact and ensure new containers are properly labeled.
☐	4	Identify, list, and maintain an inventory of all chemical substances present in the facility. Compile an inventory of SDSs for all chemical substances and maintain them in an accessible location for employees.
☐	5	Only purchase and store needed quantities of hazardous materials.
☐	6	Water-based paints should be dried and properly disposed of in dumpsters. Dispose of excess oil-based paints and sludge as hazardous waste.
☐	7	Designate an indoor or covered area for hazardous waste collection.
☐	8	Hazardous waste should be stored in secure, closed containers, and protected from damage. Store hazardous waste containers within secondary containment measures.

Best Management Practices
Solid Waste Storage and Disposal
(Continued)

Practice		
☐	9	Label hazardous waste containers clearly with the words "Hazardous Waste" and the date when the hazardous waste accumulation began.
☐	10	DO NOT mix wastes; this may cause chemical reactions, make recycling impossible, and complicate disposal.
☐	11	Arrange for regular hazardous waste collection before containers reach capacity and as required by hazardous waste generator status.
☐	12	Ensure that hazardous waste is collected, removed, and disposed of only at authorized disposal sites by an approved hazardous waste hauler. DO NOT discard hazardous waste into dumpsters. Maintain disposal manifests for a minimum of three years.
☐	13	Recycle any useful waste such as used oil, spent solvents, used batteries, scrap metal, used oil filters, etc. Filter and re-use thinners and solvents, whenever possible.
☐	14	Store used oil in appropriate closed containers, label containers clearly with the words "Used Oil," and provide secondary containment for containers with capacity of 25 gallons or above.
☐	15	Store universal waste in appropriate containers, indoors or under cover, and label containers clearly with the words "Universal Waste," the material (e.g., "lamps," "batteries," etc.), and the accumulation start date.
☐	16	Store used batteries indoors or under cover and within secondary containment.
☐	17	Store used tires and rusted metal under cover and off the ground, if practicable, prior to disposal.
☐	18	Place spill kits where they are readily accessible.
☐	19	If containers leak or spill, clean up immediately; follow the BMPs in the Spill Prevention and Response section of this Manual.
☐	20	At a minimum, OWSs must be inspected annually and cleaned to remove accumulated oil, grease, floating debris, and sediment in order to maintain proper operation and removal efficiency. Removed materials must be disposed of properly.
☐	21	Conduct employee training, as described under the Good Housekeeping Practices section of this Manual, at a minimum annually, or as required. Train employees on proper waste control and disposal procedures as well as spill prevention and control.

Best Management Practices
Spill Prevention and Response

Description
Spills of materials used and stored at tenant facilities can impact stormwater runoff. The BMPs outlined in this section are intended to prevent spills from occurring and outline procedures to be followed in the event of a spill.

Small spills of oil (less than 25 gallons) can be cleaned up using absorbent materials or other acceptable practices as long as they are cleaned up within 72 hours and do not threaten ground or surface waters. All spills five gallons or more must be reported to Airport personnel according to the *Spill Reporting Fact Sheet* for your airport. Daily inspections of the facility shall be conducted to identify any small spills, which shall be addressed immediately.

In the event of a large or uncontrolled release, the owner or manager of the facility shall act as the Emergency Coordinator (EC). Employees shall follow the BMPs listed below, where practicable.

Limitations
There are no major limitations to the implementation of these BMPs.

Practice		
☐	1	Immediately STOP WORK in the event of a spill and initiate spill cleanup procedures.
☐	2	Determine the source of the release and any hazards present, notifying employees in the vicinity and keeping non-essential employees and visitors away from the spill area. Attempt to turn off the source of the spill, if it can be safely accomplished. If the spill originates from a fuel delivery truck or from an AST fill port, alert the truck operator to stop fuel delivery.
☐	3	Notify Airport Personnel, (ARFF, Code 22, Dispatch, Duty Manager, etc.) according to the Spill Reporting Fact Sheet for the airport. This can be found on the environmental webpage (http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/) under the applicable airport.
☐	4	Prevent vehicles and equipment from driving through the spill area.
☐	5	Protect qualified personnel with appropriate PPE, as required by the SDS, when responding to spills.

Best Management Practices
Spill Prevention and Response Practices
(Continued)

Practice		
☐	6	Confine the spill to prevent further migration using drainage diversion practices and controls, including, but not limited to: • Dike and/or berm the area downgrade from the spill using absorbent booms, sand, soil, or other inert material; • Protect storm drains with drain covers, plastic cover materials, rubber mats, absorbent booms, and/or sandbags; • Divert chemicals from entering DOTA MS4, drainage system, and State waters; • Implement retention techniques such as temporary lined pits; and • Clean the spill with granular absorbent material, absorbent pads and booms, and/or rags.
☐	7	Clean and properly dispose of the accumulated product resulting from the release. Properly collect and containerize the spilled materials, affected media, and used decontamination solutions, and transport off-site in accordance with applicable state and federal regulations.
☐	8	Use the following procedures to clean stained pavement: • Place a berm around the stain to contain liquids generated from cleaning activities; • Scrub the area using a biodegradable detergent or biodegradable degreasing solution; and • Rinse the area while ensuring that all detergent and rinse water is collected in the bermed area and properly removed and disposed.
☐	9	After the spill has been properly addressed, provide a completed spill incident form along with photographic documentation to AIR-EE as soon as possible by emailing to dot.air.environmental@hawaii.gov. The spill incident form can be found on the environmental webpage (http://hidot.hawaii.gov/airports/doing - business/engineering/environmental/) under the applicable airport.
☐	10	Conduct employee training, as described under the Good Housekeeping Practices section of this Manual, at a minimum annually, or as required.

Best Management Practices
Outdoor Loading and Unloading Practices

Description

Loading and unloading activities involving cargo, HAZMAT, aircraft servicing, and waste disposal operations are conducted at common use areas of the AOA and tenant spaces. The loading and unloading of materials usually take place outside; therefore, materials spilled, leaked, or lost during these activities may collect in the soil or on other surfaces and have the potential to impact stormwater runoff. Implementation of these practices will prevent or reduce the discharge of pollutants from the loading and unloading of materials to stormwater.

Limitations

There are no major limitations to the implementation of theses BMPs.

Practice		
☐	1	Perform loading and unloading operations in designated areas, away from DOTA MS4, drainage system, and State waters.
☐	2	Utilize PPE such as eye protection, face shield, rubber gloves, and protective apron when engaging in HAZMAT handling operations.
☐	3	Park trucks or GSE in designated areas that have drainage controls to contain spills or leaks of materials.
☐	4	Limit exposure of material to rainfall, whenever possible, such as only loading or unloading during dry weather or conducting loading and unloading operations under cover. Whenever possible, avoid staging the loading/unloading area near storm drains or cover storm drains during loading or unloading operations
☐	5	Check loading/unloading equipment regularly for leaks. Remove any faulty or leaking equipment from service.
☐	6	Use drip pans underneath hose and pipe connections, access fittings, and other leak-prone spots during liquid transfer operations. Drip pans should also be used for leaking delivery trucks, where appropriate.
☐	7	Conduct regular broom sweeping of the loading and unloading area.
☐	8	Maintain spill kits on all petroleum storage tank trucks as well as near the loading and unloading areas. In addition, place sufficient spill kits where it will be readily accessible.
☐	9.	Conduct employee training, as described under the Good Housekeeping Practices section of this Manual, at a minimum annually, or as required.

Best Management Practices
Triturator Operation Practices

Description
The sanitary sewage and associated rinse waters produced during the servicing of aircraft lavatory facilities must be discharged to the designated DOTA triturator facility. All tenants and applicable personnel are responsible for proper disposal of waste associated with ground servicing of aircraft lavatory facilities. The following BMPs outline the steps for proper operation of the triturator facilities to minimize the risk of a wastewater spill.

Due to the potential for exposure to unknown pathogens, all wastewater spills, no matter how small, must be reported to Duty Manager/Code 22, Ramp Control, dispatch, or ARFF. In the event of a sewage spill, refer to HAR, Title 11, DOH, Chapter 62, Wastewater Systems.

Limitations
There are no major limitations to the implementation of these BMPs.

Practice		
☐	1	Ensure the pit door is open when discharging to a triturator facility.
☐	2	Position the vehicle so that the discharge pipe is centered over the pit to avoid spillage.
☐	3	Some triturators may require the activation of the equipment via a start button. Verify that the triturator equipment is on prior to discharge.
☐	4	DO NOT leave the vehicle unattended while waste is discharging.
☐	5	Use the water hose to push clean water through the interior compartment of the vehicle. Note: the exterior of vehicles should not be washed at the triturator units.
☐	6	Upon completion, check that the discharge valve is tightly closed to prevent releases. In the event of a faulty discharge valve, do not move the vehicle until the discharge valve is repaired or corrected.
☐	7	When discharge is complete, move the vehicle and clean area surrounding the pit, as necessary.
☐	8	Some triturators may require the deactivation of the equipment with a stop button. Verify that the triturator equipment is off prior to departure.
☐	9	Use the following warning signs to check for non-stormwater discharges: • Distinct odor • Black staining inside drainage pipe • Visible evidence of sanitary waste (e.g., toilet paper, gray water)
☐	10	If an accidental spill occurs: Stop, Notify Airport Personnel, and Cleanup. Notify Airport Personnel in accordance with the Spill Reporting Fact Sheet for the airport. This can be found on the environmental webpage (http:/hidot.hawaii.gov/airports/doing-

		business/engineering/environmental/)under the applicable airport. Conduct cleanup in accordance with the Triturator Fact Sheet.
☐	11	Conduct employee training, as described under the Good Housekeeping Practices section of this Manual, at a minimum annually, or as required.

ATTACHMENT I
LIST OF APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS APPLYING TO ENVIRONMENTAL COMPLIANCE AT AIRPORTS

LIST OF REGULATIONS

Code of Federal Regulations (CFR)

29 CFR § 1910 (Subparts G, H, I, J, and K) Occupational Health and Environmental Controls, Hazardous Materials, Personnel Protective Equipment, General Environmental Controls, and Medical and First Aid

29 CFR § 1910.1200 OSHA Hazard Communication Standard

40 CFR § 110 Discharge of Oil

40 CFR § 112 Oil Pollution Prevention (SPCC/Oil Pollution Act [OPA] Plans)

40 CFR § 117 Determination of Reportable Quantities for a Hazardous Substance

40 CFR §§ 122–124, 401 National Pollutant Discharge Elimination System (NPDES) Regulations for Stormwater Discharges

40 CFR §§ 260–263 Hazardous Waste Management System

40 CFR § 273 Universal Waste Management

40 CFR § 279 Used Oil Management

40 CFR § 280 Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks (UST)

40 CFR § 355 Emergency Planning and Notification

40 CFR § 370 Hazardous Chemical Reporting: Community Right-to-Know

40 CFR § 372 Toxic Chemical Release Reporting: Community Right-to-Know

40 CFR § 761 Toxic Substances (Polychlorinated biphenyls [PCBs])

49 CFR § 110.3 Discharge of Oil

49 CFR §§ 171–173, 175, and 177 Hazardous Materials Regulations (DOT)

Hawaii Administrative Rules (HAR)

HAR § 11-54 Water Quality Standards

HAR § 11-55 Water Pollution Controls

HAR § 11-58.1 Solid Waste Management Control

HAR § 11-62 Wastewater Systems

HAR § 11-104.1 Management and Disposal of Infectious Waste

HAR §§ 11-260–263 Hazardous Waste Management

HAR § 11-273 Universal Waste Management

HAR § 11-279 Used Oil Management

HAR § 11-281 Underground Storage Tanks

HAR § 11-451 State Contingency Plan

HAR § 19 Department of Transportation, Airports Division

Hawaii Revised Statutes (HRS)

HRS § 128D Environmental Response Law
HRS § 128E Hawaii Emergency Planning and Community Right-to-Know Act
HRS § 174C State Water Code
HRS § 261 Transportation and Utilities
HRS § 342D Water Pollution
HRS § 342G Integrated Solid Waste Management
HRS § 342H Solid Waste Pollution
HRS § 342I Special Waste Management
HRS § 342J Hazardous Waste
HRS § 342L Underground Storage Tanks
HRS § 342N Used Oil Recycling

ATTACHMENT II
SUMMARY OF FEDERAL AND STATE REGULATIONS FOR SOLID WASTE MANAGEMENT

SUMMARY OF FEDERAL AND STATE REGULATIONS FOR SOLID WASTE MANAGEMENT

Solid waste is defined in 40 CFR § 261.2 and can be further classified into hazardous waste and non-hazardous waste. Hazardous waste is defined in 40 CFR § 261.3, as well as HAR § 11-261-3. Hazardous wastes are divided into listed wastes, characteristic wastes, universal wastes, and mixed wastes. It is the responsibility of hazardous waste generators to make a hazardous waste determination and dispose of hazardous waste properly. The identification and listing of hazardous waste and standards applicable to hazardous waste generators are available in the 40 CFR §§ 261 and 262 as well as HAR §11-261 and HAR §11-262. The facility can determine their hazardous waste generator status based on the following table:

Table 1 – Hazardous Waste Generator Status, Quantity, and Accumulation Time

Hazardous Waste Generator Status	Quantity of Hazardous Waste Generated Per Calendar Month	On-site Accumulation Time
Large Quantity Generators (LQGs)	• ≥ 1,000 kg or > 1 kg of acute hazardous waste • > 100 kg of acute spill residue or soil *No on-site accumulation limits*	≤ 90 days
Small Quantity Generators (SQGs)	• > 100 kg and < 1,000 kg *Never accumulate more than 6,000 kg at any one time*	≤ 180 days or ≤ 270 days (if hazardous waste is shipped 200 miles or more)
Very Small Quantity Generators (VSQGs)	• ≤ 100 kg • ≤ 1 kg of acute hazardous waste • ≤ 100 kg of acute spill residue or soil *≤ 1,000 kg or ≤ 1kg acute hazardous waste or ≤ 100 kg of acute spill residue or soil*	None

Universal waste, as defined in 40 CFR § 273 and HAR § 11-273, includes batteries, some pesticides, mercury containing equipment (mercury thermostats), and bulbs (lamps and light ballasts). The universal waste rules are not applicable to the VSQGs of hazardous waste. Universal waste handlers are classified into small-quantity universal waste handlers and large-quantity universal waste handlers. A small-quantity handler of universal waste means a universal waste handler accumulates less than 5,000 kilograms total of universal waste (i.e., batteries, pesticides, or thermostats, calculated collectively) at any time (HAR § 11-273-6). A large quantity handler of universal waste means a universal waste handler who accumulates 5,000 kilograms or more total of universal waste (i.e., batteries, pesticides, or thermostats, calculated collectively) at any time (HAR § 11-273-6). This designation as a large-quantity handler of universal waste is retained through the end of the calendar year in which 5,000 kilograms or more total of universal waste is accumulated.

Universal waste must be managed in a way that prevents release of any universal waste or component of a universal waste to the environment. Universal waste must be labeled or marked to identify the type of universal waste as follows: Universal Waste – Batteries, Universal Waste – Lamps, Universal Waste – Pesticides, and Universal Waste – Mercury Containing Equipment or Universal Waste – Mercury Thermostat. Universal waste can be stored for one year starting from the date the universal waste was generated. A large quantity universal waste handler is not required to maintain their waste manifest;

however, they are required to keep basic shipping records (40 CFR § 273.39). A small quantity universal waste handler is not required to maintain their waste manifest or basic shipping records (40 CFR § 273.19).

Used oil, as defined in 40 CFR § 279.1 and HAR § 11-279-1, is regulated under the 40 CFR § 279, HAR § 11-279, and HAR§ 11-261-6(a)(4). Containers and aboveground tanks used to store used oil as well as fill pipes used to transfer used oil into USTs at generator facilities must be labeled or marked clearly with the words "Used Oil." Additionally, used oil generators are subject to all applicable SPCC requirements (40 CFR § 112). Used oil generators are also subject to the state's UST standards and any applicable federal standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste.