Storm Water Pollution Prevention Overview

The following document provides information that may be used to meet storm water pollution prevention training requirements.

What is a Storm Water Pollution Prevention Plan (SWPPP)?

This plan documents storm water discharges and activities that may contribute polluting materials to storm water runoff. The purpose of the SWPPP is to identify storm water discharges, potentially polluting activities, potentially polluting materials, best management practices, and storm water controls.

What activities do the SWPPP and the industrial storm water permit cover?

The industrial storm water permit authorizes the discharge of storm water runoff from certain industrial activities. These activities include landfills, scrap recycling centers, hazardous waste storage facilities, vehicle salvage yards, maintenance activities associated with airfields, and additional activities yet to be identified.

Why is storm water pollution a concern?

Storm water collects harmful chemicals and substances that are present in the environment. Pollutants can be found on the ground, on buildings, in equipment, and around stored materials. Most storm water is untreated and finds its way into our creeks, rivers, lakes, or aquifers. It provides a way for large volumes of pollutants to enter the environment in a short time period.

Potentially polluting materials that may be present in storm water include:

- Petroleum, oils, and lubricants (POL)
- Paints, solvents, and degreasing agents
- Antifreeze, brake fluid, and detergents
- Trash, debris, and grass clippings
- Soils and sediment
- Pesticides, herbicides, and fertilizers

What is involved in storm water pollution prevention training?

Training requirements include common-sense pollution prevention measures. The following topics will be discussed:

- Pollutants of concern
- Best management practices (BMPs)
- Identifying high-risk areas
- Spill prevention and response
- Good housekeeping
- Materials management and handling

What are the major pollutants of concern in storm water runoff?

Oils, Fuels, and Various Petroleum-Based Products: Motor oil, diesel fuel, automotive grease, and other lubricants which contain hazardous constituents that adversely affect the quality of storm water runoff and the environment. They are toxic to many organisms.

Paints, Solvents, and Degreasing Agents: Paints may add color or toxic chemicals to storm water runoff. These contaminants may contain hazardous metals and suspended solids and may be toxic to aquatic life.

Antifreeze, Brake Fluid, and Detergents: Storm water contaminated with these materials may lower the dissolved oxygen levels within a stream that receives storm water runoff. This can adversely affect

the quality of life for aquatic communities. For example, dissolved oxygen levels below three milligrams per liter adversely affect game fish. More tolerant species such as leeches can survive with lower dissolved oxygen levels.

Sediment: Sedimentation of downstream waters can occur over time, even from areas with minor erosion problems. Sedimentation can cause toxicity within aquatic habits. Sediment can be toxic by blocking out sunlight and affecting the growth of aquatic organisms that support the food chain.

Pesticides, Herbicides, and Fertilizers: Approved pesticides and herbicides may be used at Fort Hood. Care must be taken when handling these chemicals because of their toxicity to aquatic species. The over-application of these chemicals does more harm than good. Excess pesticides and herbicides will runoff with storm water and accumulate in the tissues of aquatic organisms at all levels within the food chain. Call the Natural Resources Branch for approved pesticides and application methods (254-287-2885).

How do BMPs help prevent storm water pollution?

BMPs are business practices that minimize the impact of a pollutant on the environment. Some examples of BMPs include:

- Using drip pans to collect POL before it hits the ground
- Having proper containment around hazardous materials and other potential polluting materials
- Practicing good housekeeping measures during work tasks to ensure that materials are contained and handled correctly
- Servicing oil-water separators regularly and using them correctly so that they function properly
- Using pesticides, herbicides, and fertilizers sparingly and according to manufacture's instructions and Fort Hood regulations
- Securing containers correctly
- Responding to spills promptly

Where are high-risk areas located?

BMPs for high-risk areas are based on the chance of a pollutant coming in contact with storm water runoff. High-risk areas may include:

- Loading and unloading operations
- Outdoor storage areas for POL, chemicals, solvents, and vehicles
- On-site used product, waste disposal, treatment, or storage sites
- Cleaning and maintenance areas
- Fueling stations and liquid storage tanks

What is involved in spill prevention and response?

Individuals should be aware of the following in order to help prevent spills and minimize the release of pollutants into the environment:

- What pollutants are present in work areas (POL, battery acid, paint, fuel, etc)
- What tasks could cause spills (moving drums, emptying drip pans, operating equipment with large amounts of POL product, etc)
- Basic spill response procedures (where absorbents are located, how to keep a spill from spreading, notifying proper authorities, etc);
- Where emergency spill response equipment is located
- Operation and maintenance procedures for equipment
- Proper handling, storage, and disposal procedures
- Awareness of known spills, failures, malfunctioning components, and recently developed precautionary measures

Why is good housekeeping important?

Clean and orderly work areas can prevent the accidental releases of pollutants. The following activities are common good housekeeping practices:

- Regularly sweep work areas
- Remove trash and debris from work areas and drainage ditches
- Promptly clean up spilled materials to prevent storm water contamination
- Identify places where brooms, dry-sweep, neutralizing agents, and spill cleanup materials are located
- Post signs reminding employees of the importance of good housekeeping practices
- Know updated or new standard operating procedures
- Provide instructions for securing containers
- Provide a standard procedure for monitoring storage areas for leaks and reporting findings
- Post a regular schedule for performing housekeeping activities

What is involved in the proper handling of potentially polluting materials?

The following activities are necessary when handling potentially polluting materials:

- Provide adequate aisle space, use proper storage techniques, avoid high traffic areas, and segregate materials
- Properly identify toxic and hazardous materials stored, handled, or used on-site
- Follow proper handling and disposal procedures
- Maintain accurate material inventories and prevent overstocking