Water Pollution Prevention Field Guide

NASA Langley Research Center

Introduction

NASA Langley Research Center (NASA Langley) is committed to protecting local waterways by ensuring that all stormwater runoff--from roadways, operational activities, and construction sites--complies with state and federal regulations. Because the Center is located near significant local waterways, preventing water pollution is a top priority. Continuous monitoring is essential to detect and address potential sources of contamination. While the Environmental Management Office (EMO) provides overall oversight, safeguarding water quality is a shared responsibility. That's why all Center personnel, including maintenance staff, Facility Coordinators (FCs), Safety Heads (FSHs), and Environmental Coordinators (FECs), project managers, and others, play a critical role in identifying and reporting any signs of illegal discharges.

Info

For more information on the Center's Water Quality Program, contact the NASA Langley Environmental Management Office based on latest organizational chart found on Inside Langley.

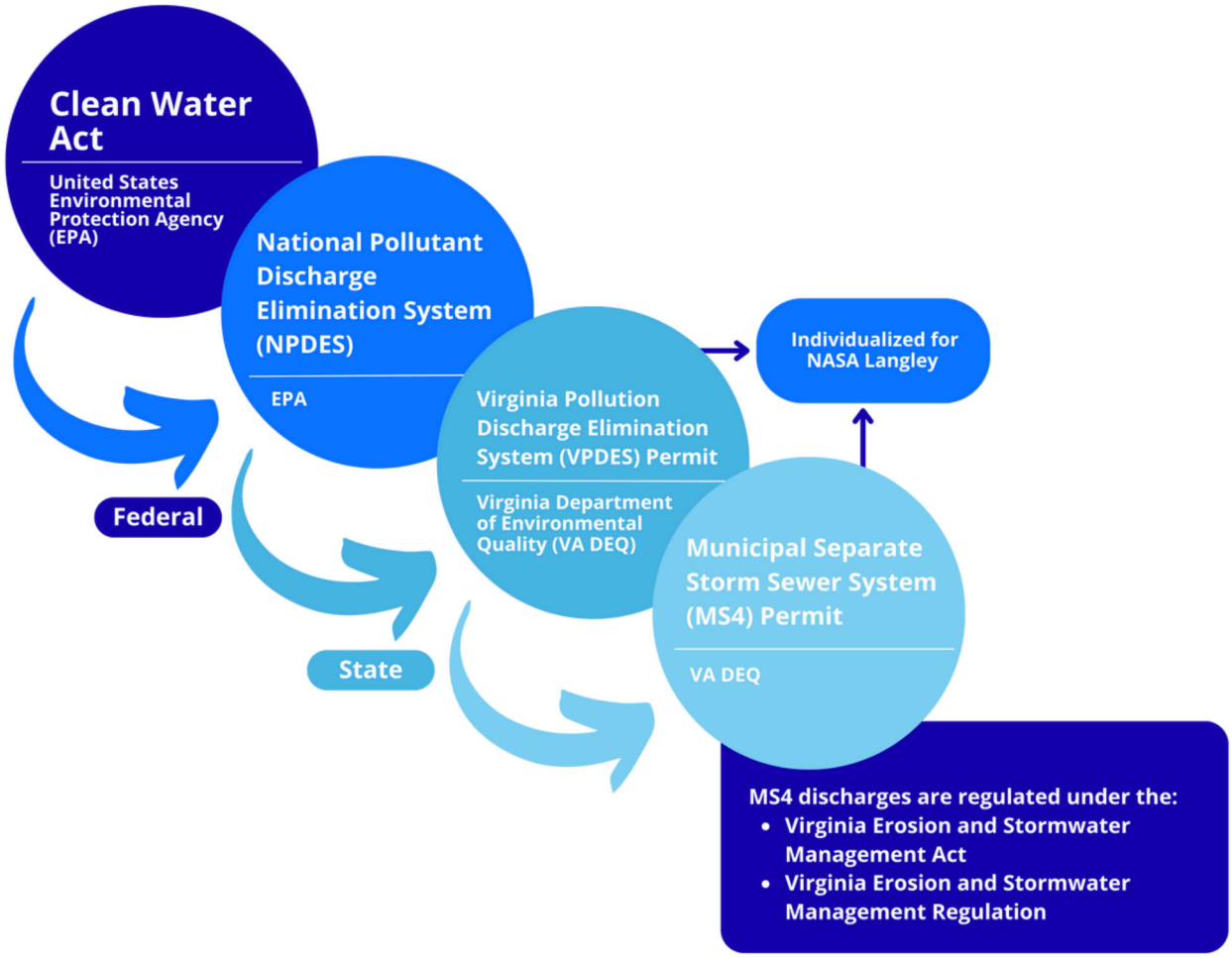
Why A Field Guide?

NASA Langley is regulated by stormwater permits that require a water pollution prevention program that emphasizes outreach and education to support permit goals. This is known as the **Illicit Discharge and Detection Elimination (IDDE) Program**.

To support NASA Langley's IDDE program, this field guide has been developed to provide personnel with the knowledge to detect, identify, and address unauthorized discharges, including illegal dumping.

Environmental Law & Regulations

The graphic below shows how federal, state, and local regulations flow together to shape the requirements NASA Langley must implement to keep our local waterways safe from pollution.



Illicit Discharges - What to Look For

Below are some examples of illicit discharges that have the potential to occur on Center.

- Pesticides and Herbicides
- Oil/Fuels
- Chemicals
- Sediment
- Solvents
- Septic/Sewer Wastewater
- Landscape Waste
- Mud
- Cleaning Water
- Trash
- Paint
- Concrete Waste/Washout

Illicit discharges are often accompanied by visible indicators. Here are a few to look out for:

Leaking Dumpster

Spilled Paint

Rainbow Sheen

Bubbles or Suds

Sediment Build Up

Leaking Drums

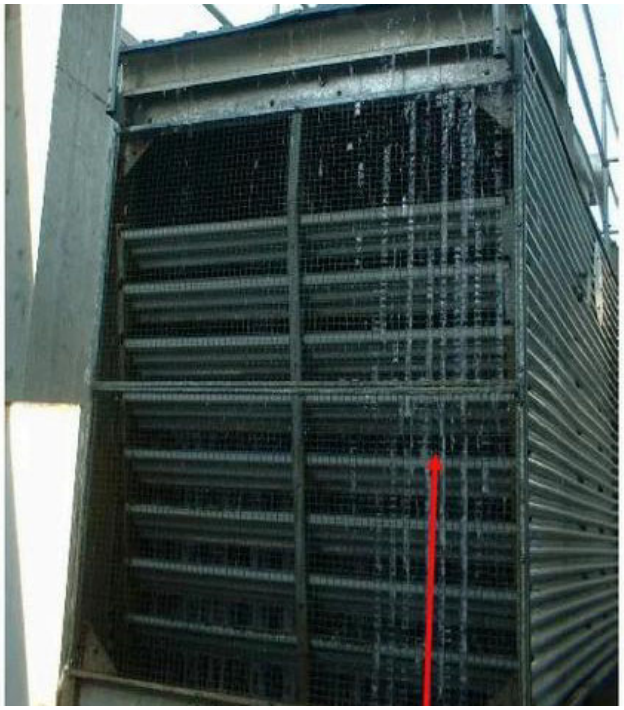
Discolored Water

Concrete Outside Designated Area

Spilled Chemicals

Stained Floor Drain

Muddy Dewatering



Overflowing Cooling Tower

These are just some examples. If you witness any of these, or other out of the ordinary occurrences, please follow the spill response steps in the next section and contact EMO.

Spill Response Checklist

Stage 1: Assess

Ask yourself - Is this an emergency spill (Class II or Major)?

Emergency spills often involve large volumes of material and present significant hazard to personnel and to the environment. Examples include, but are not limited to:

- Release of oil or hazardous material to the environment - water, soil, or air.
- Discharge of oil or hazardous material to adjacent water or land (onsite or offsite).
- Discoloration or oily, rainbow sheen on the surface of water.
- Release exceeds the reportable quantity (RQ) for a regulated hazardous substance.
- Poses a risk to human health such as fire, fumes, non-breathable atmosphere, risk of injury, chemical exposure, etc.

If you determine it is an emergency spill, call the NASA Langley Emergency Dispatcher.

NASA Langley Emergency Dispatcher Number

NASA Langley Land Line : 911

Cell Phone: (757) 864-2222

ONLY if it is possible to do so without endangering yourself or others, you may make a minor effort to:

- Stop the spill (i.e., close a valve)
- Eliminate ignition sources (i.e., push an emergency stop button)
- Initiate containment (i.e., drop an absorbent in front of a drain)

Keep people out of the area, watch for the emergency responders, and direct them to the scene.

If not a emergency spill, then it can be categorized as a minor (Class I or Incidental) spill.

Call your supervisor and continue to follow stages 2-8.

If the situation worsens or you need help, stop and call 911. The NASA Langley emergency responders will assess the situation, act accordingly, and call the appropriate offices as needed.

Stage 2: Identify

Determine the risk. Identify the spilled material. Information can be found on the container label or the Safety Data Sheet (SDS). How much was spilled? Will the spilled material affect human health, the environment, or property? This will help the responders identify the necessary measures to isolate the spill.

Stage 3: Personnel Protective Equipment (PPE)

Wear the correct PPE. To find the correct PPE, see section 8 of the SDS for the spilled material. If the spilled material cannot be identified, stop and call 911.

Stage 4: Contain The Spill

Use absorbents from your nearest spill kit to contain the spill**.** See spill drawings in the GIS system to locate the nearest drains and outfalls. Divert the spill away from drains and waterways by using absorbent socks, pads, or spill blocker dikes.

Stage 5: Stop The Source

Stopping the source of the spill can be as simple as closing a valve, setting a container upright, plugging a leak, or transferring material from a damaged container to a new one. If it has been determined that it is safe to stop the source yourself, and depending on the size and extent of the spill, this may be completed before the spill is contained.

Stage 6: Evaluate And Clean Up

Once the spill is stopped and contained, **reassess the incident and begin spill cleanup**. Call 5-DRUM (or 865-3786) if you need drums and turn in waste containers (via the Waste Disposal Tracking System) for proper disposal.

Stage 7: Decontaminate

Decontaminate the spill site and equipment. Remove or neutralize the materials that are accumulated during the spill. Wash tools or equipment with water or cleaning products so they can be used for the next response. Decontamination water must be properly collected.

Stage 8: Notify, Report, And Restock

Restock your spill kit. Return cleaned tools and equipment to its proper place. Write work orders for any repairs. Think about what could be done to prevent a future spill.

The Environmental Management Office is responsible for notifying and communicating with external government agencies. For minor spills (e.g., you didn't need to call 911), report the incident to the Environmental Management Office at (757) 864-3500.