

# MUNICIPAL STORMWATER POLLUTION PREVENTION

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# THE CLEAN WATER ACT

- The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but this Act was reorganized and expanded in 1972 at which time the "Clean Water Act" became it's official name.



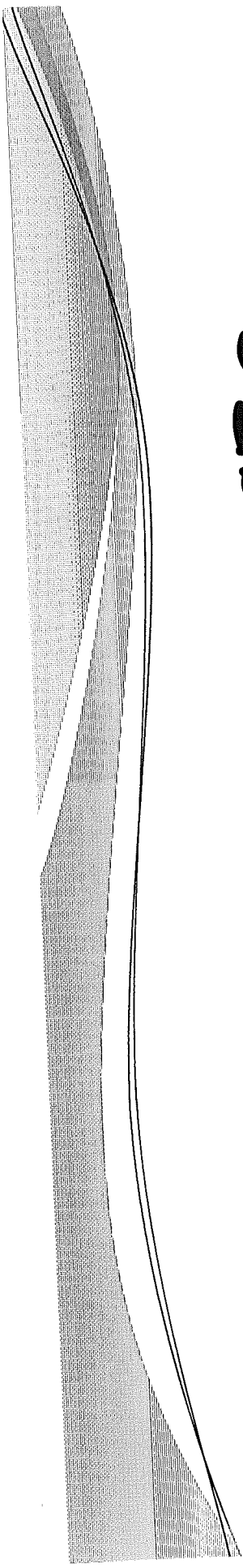
# THE CLEAN WATER ACT

- Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for the industry. They have also set water quality standards for all contaminants in surface water.
- The CWA is the primary federal law in the United States governing water pollution.



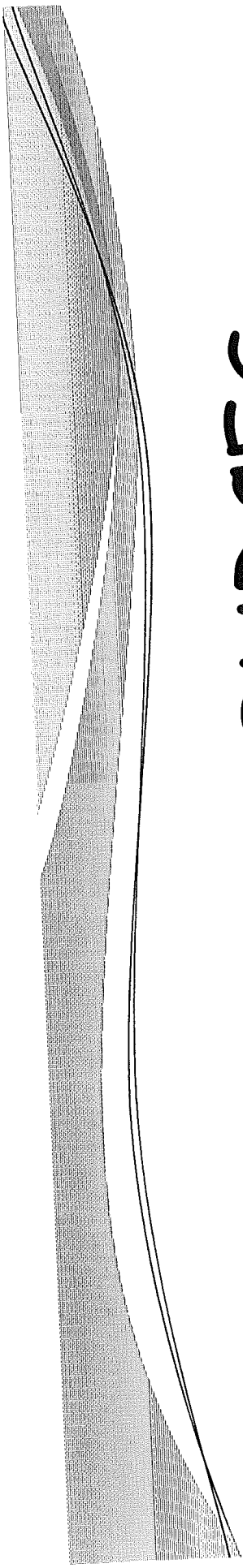
# THE CLEAN WATER ACT

- The Act established the goals of eliminating releases to water of high amounts of toxic substances, eliminating additional water pollution by 1983, and ensuring that surface waters would meet standards necessary for human sports and recreation by 1985.
- Congress chose to define the waters covered by the Act broadly. Although the Act prohibits discharges into "navigable waters" the Act defines "navigable waters" as "the waters of the United States" and makes it clear that the term "navigable" is of limited importance.



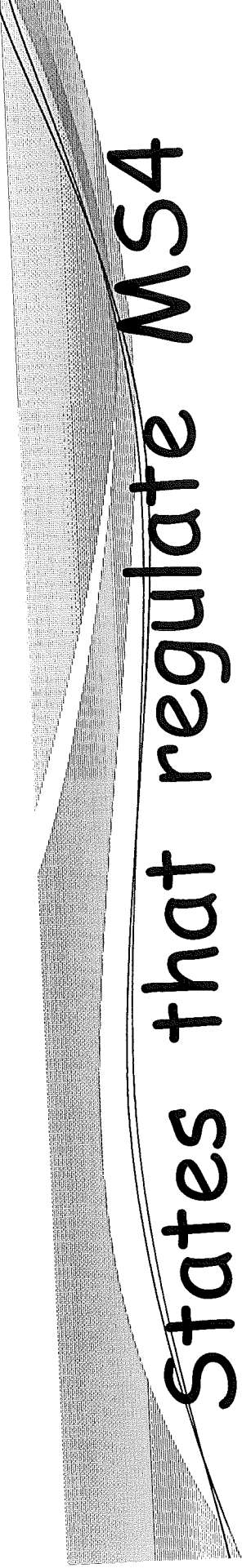
# POINT SOURCES

- The 1972 Act introduced a permit system for regulating point sources of pollution. Point sources include:
- Industrial facilities (including manufacturing, mining, oil and gas extraction, and service industries).
- Municipal governments and other government facilities (such as military bases).
- Some agricultural facilities, (such as animal feed lots).



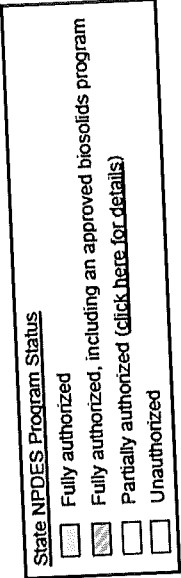
# POINT SOURCES

- Point sources may not discharge pollutants to surface waters without a permit from the National Pollution Discharge Elimination System (NPDES).
- This system is managed by the EPA in partnership with the state environmental agencies.
- Within this permit system the Municipal Separate Storm Sewer System (MS4) was developed as the result of amendments to the Act in 1987.



# States that regulate MS4 facilities

- The EPA has authorized 45 states (Missouri included) to issue permits, through the Department of Natural Resources directly to the discharging MS4 facility and to regulate the MS4 program.

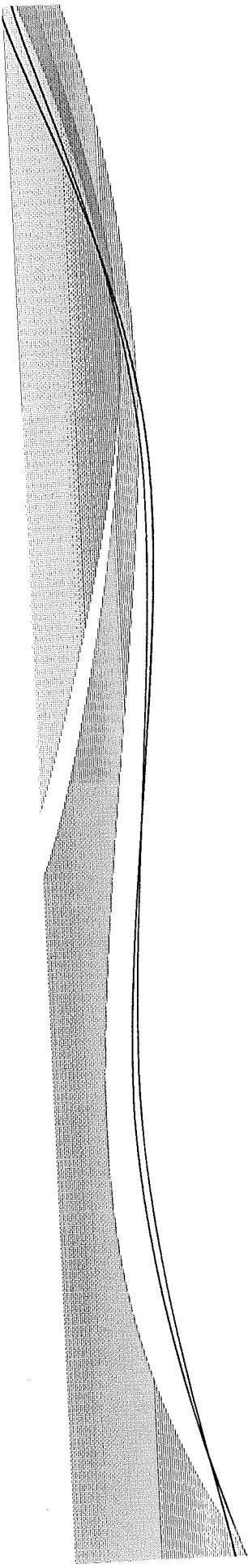




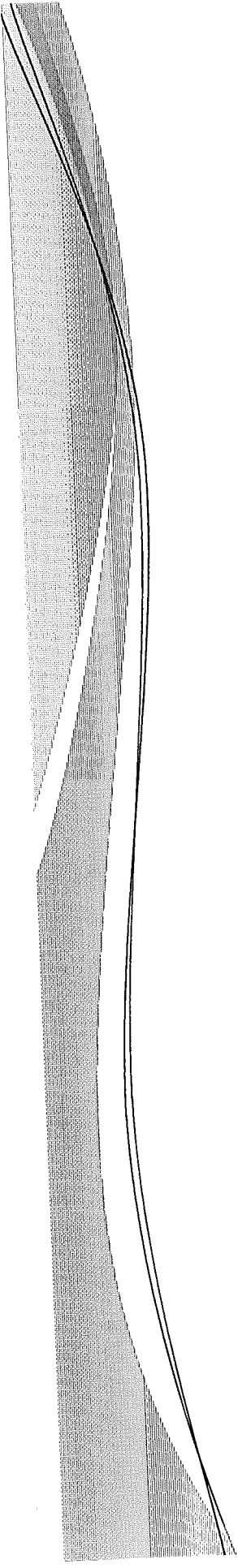


# NON-POINT SOURCES

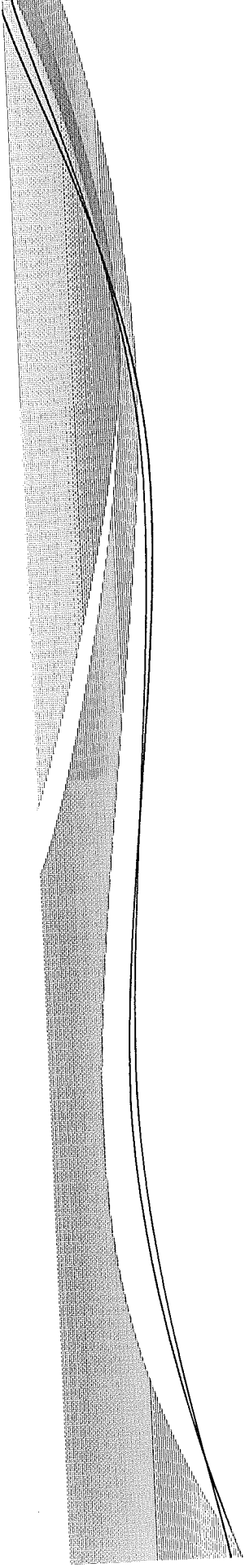
- Congress exempted some water pollution sources from the point source definition in the 1972 CWA.
- These sources were therefore considered to be non-point sources that were not subject to the permit program.



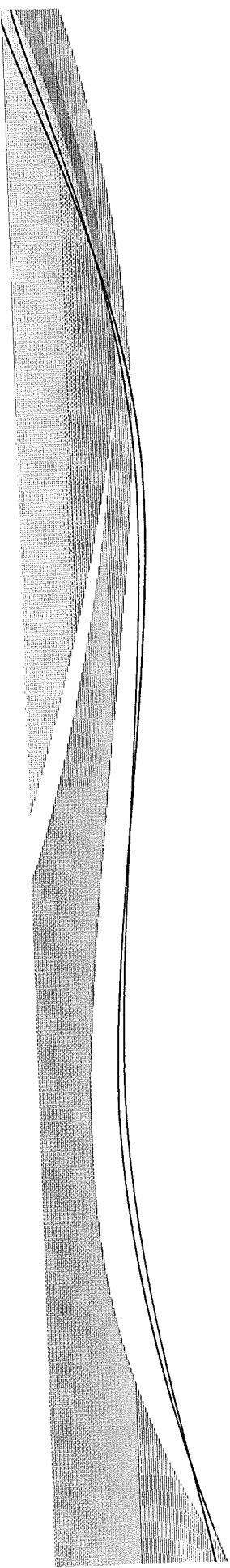
- Agricultural storm water discharges and irrigation return flows were specifically exempted from the permit requirements.
- Congress, however, provided support for research programs through the U.S. Department of Agriculture to improve runoff management practices on farms.



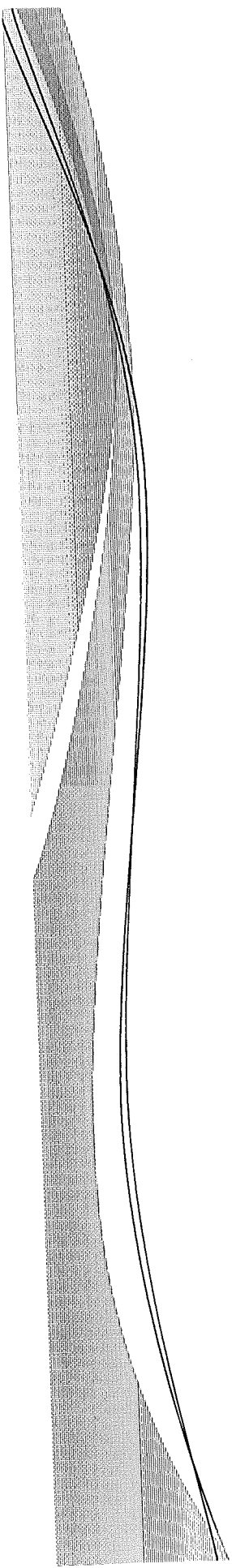
- Storm water runoff from industrial sources, municipal storm drains, and other sources were not specifically addressed in the 1972 CWA.
- EPA declined to include urban and industrial storm water discharges in the NPDES permit program and consequently were sued by an environmental group.
- The courts ruled that these storm water discharges must be covered by the permit program.



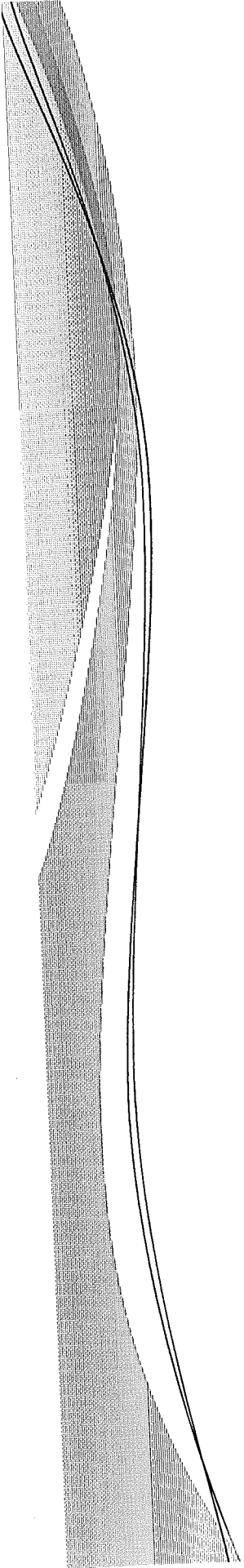
- In the Water Quality Act of 1987, Congress responded to the storm water problem by requiring that the industrial storm water discharges and the Municipal Separate Storm Sewer Systems obtain NPDES permits by specific deadlines.



- This permit program has been implemented in phases. Phase I & Phase II.
- Phase I included the Large MS4's (systems that are located in an incorporated place or county with a population of 250,000 or more) and;
- Medium MS4's (systems that are located in an incorporated place or county with a population of 100,000 to 249,999).



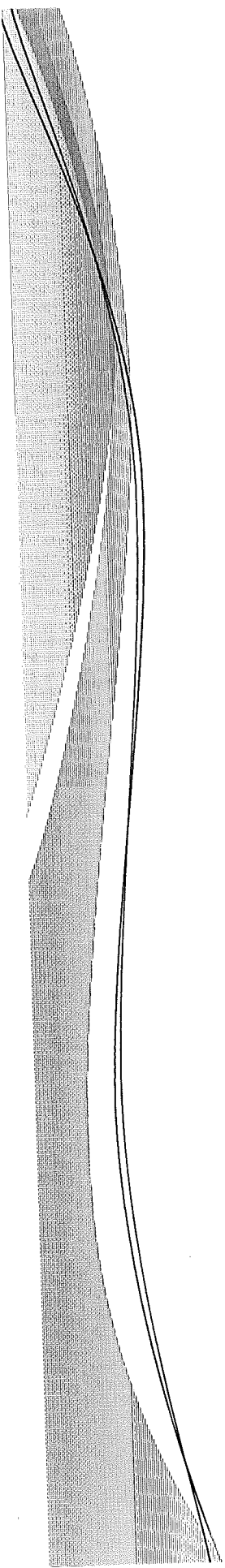
- The Phase I MS4's became regulated in 1990.
- There are 3 Phase I communities in Missouri: Springfield, K.C., and Independence.
- The Metropolitan St. Louis Sewer District successfully petitioned on behalf of the City of St. Louis to be regulated under Phase II.



- Phase II includes small MS4's (systems that are located in an incorporated place or county with a population of 10,000 or more) which of course, is where the City of Nixa falls.

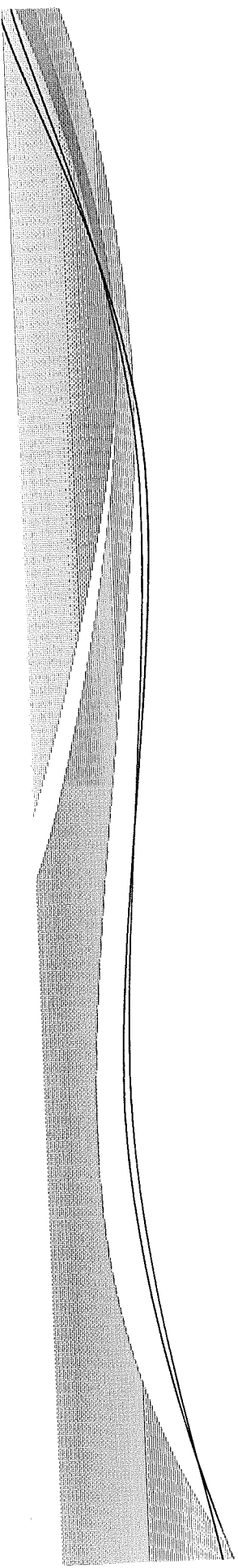
- Phase II MS4's became regulated in March 2003, and required the small MS4's to have a storm water management program in place by March 10, 2008.

- Within these same permit regulations, the City of Nixa (being a regulated small MS4), is required to also develop Pollution Prevention Good Housekeeping procedures for our Municipal Operations and develop an Environmental Awareness, Annual Employee Training Program.



- There are 152 small MS4 programs in the state of Missouri.
- Having said all of that sets the stage for how we arrived at the training video that we are going to see today entitled: Storm Watch, Municipal Storm Water Pollution Prevention.
- This video is designed to show employees how to spot an Illicit Discharge within our own Municipal Operations and around town.





- An Illicit Discharge as defined is: a storm drain that has measurable flow during dry weather containing pollutants and/or pathogens (a bacterium or virus). A measurable flow without pollutants is simply a discharge.
- The other side of this two headed coin is Sediment and Erosion control, on which the video touches briefly, however, that's another day, another meeting, and another video.

# **STORM SEWER, NO DUMPING, DRAINS TO RIVER!**



*The following questions all have multiple choice answers. Please check the best answer for each question.*

1. If a piece of equipment has to be washed or steam cleaned outdoors, how should this be done?
  - a. on a fully contained impervious pad
  - b. over bare dirt so it will be absorbed
  - c. over a storm drain inlet
  - d. in or next to a drainage ditch
2. When using an outdoor solid waste receptacle, which of the following are required?
  - a. leave lids or covers closed while not in use
  - b. move the receptacle indoors
  - c. locate the receptacle on bare ground?
  - d. all of the above
3. Which of the following materials or operations outdoors can cause storm water pollution?
  - a. a spill or leak of diesel fuel
  - b. an open container of paint
  - c. a metal grinding operation
  - d. a broken hydraulic line
  - e. all of the above
4. Which of the following are **not** considered Good Housekeeping practices?
  - a. sweeping up outdoor work areas
  - b. keeping unused containers closed and sealed
  - c. protecting materials from exposure to the weather
  - d. secondary containment structures
5. If materials are stored outdoors, they may be temporarily covered with a waterproof tarp under what circumstances?
  - a. the tarp is regularly checked for tears or loosening
  - b. the tarp is at least twice as large as the material being covered
  - c. the material is stored as far as possible from vehicle traffic
  - d. the material is in open containers

6. Under what conditions is it OK to hose down a spill into a storm drain or ditch?
- if the material is non-hazardous
  - if it is raining
  - if your supervisor approves it
  - if it is done immediately after the spill
  - none of the above
7. If a lawn mower has to be greased outdoors, which of the following would help protect storm water?
- perform the operation during dry weather
  - spread a drop cloth underneath the equipment
  - wear safety glasses and rubber gloves
  - all of the above
8. If a dump truck has a leaking hydraulic line, what should be done?
- drain it immediately or move indoors
  - notify the storm water coordinator
  - put a water-proof tarp over it temporarily
  - lock and tag it out
9. Even if you cannot immediately clean up a spill due to the hazards involved, which of the following must be done to help protect storm water?
- notify the emergency coordinator or storm water coordinator
  - evacuate the facility
  - shut down all operations
  - locate the applicable MSDS for the spilled material
10. What are the practices that protect storm water called?
- EPAs
  - MSDSs
  - SOPs
  - BMPs
11. A spill or leak should be cleaned up promptly because....
- absorbents work better on fresh spills
  - spills can be spread by wind or vehicle traffic
  - it is usually more convenient to do the clean-up quickly
  - the spill will evaporate if not cleaned up quickly

12. Under what conditions can tools or equipment be cleaned over a storm drain inlet or in a drainage ditch?
- a. during dry weather
  - b. if your supervisor approves it
  - c. after consulting the Storm Water Pollution Prevention Plan
  - d. if the tool or equipment are cleaned with water only: no detergents or solvents
  - e. none of the above
13. Under what conditions should accumulated rainwater be drained from a secondary containment structure?
- a. the rain water is clean and uncontaminated
  - b. during dry weather only
  - c. it is less than half full
  - d. all of the above
14. If a vehicle had a ruptured hydraulic hose and was leaking fluid, which of the following would be most appropriate?
- a. cover it with a tarp
  - b. move it indoors
  - c. wash it down with soapy water
  - d. none of the above
15. If a fertilizer spreader caused some fertilizer to fall on a paved area, what would be the best way to deal with it?
- a. hose it into the storm drain
  - b. notify the EPA
  - c. sweep or blow it back onto a vegetated area
  - d. ignore it

**Storm  
Watch**

**Municipal Storm Water  
POLLUTION PREVENTION**

Acknowledgment  
of Training

Signature(s) below are acknowledgment that on (date) \_\_\_\_\_,  
these individuals participated in a training session at the (location name) \_\_\_\_\_,  
(address) \_\_\_\_\_,  
given by (print trainer's name) \_\_\_\_\_,  
(print trainer's title) \_\_\_\_\_.

This training session presented information on Municipal Stormwater Pollution Prevention. During this session, I viewed the visual multimedia program:

☐ **Storm Watch: Municipal Stormwater Pollution Prevention**

My signature below affirms that I was given adequate time to ask questions about my particular job activities and how I can best conduct these activities in compliance with the applicable regulations.

PRINT NAME HERE

SIGNATURE HERE

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## Untitled

Reduce Storm Water Pollution and Save Our Precious Resource!

Storm water pollution is undoubtedly a serious cause of concern. But very few of us realize that we contribute to this kind of pollution. There are several factors, such as tipping of litter, chemical pollution, and natural pollution that lead to storm water pollution. It is the duty of each one of us to take measures to keep our waters free from pollution.

Prevention of storm water pollution can be kicked off right from your garage. The most common of all pollutants that pollute storm water is oil spills and oil leaks. It is vital that you check your car or bike, machinery and other oil run equipment for leaks or oil spills often.

Also ensure that you avoid the use of harmful chemicals or detergents for cleaning up oil spill from your garage. Instead use environmentally friendly oil spill cleaners to remove oil spills from the driveway. Oil Gone Easy Home & Driveway S-200, an eco-friendly biodegradable product will help you with this tiring task of oil spill cleanup. Used oil or fluids can be recycled. So avoid dumping into trash or in the storm water drain.

When it comes to your lawn and garden, you have to be careful with the amount of pesticides and fertilizers that you use. Recycling your yard waste and avoiding over watering your plants can help reduce storm water pollution to some extent.

While you begin with your home repair, it is better that you take care of the disposal of the construction residual. There are possibilities of spills and leakages of liquids and oils on the

Untitled  
construction site. Making sure that the oil spills  
are cleaned up immediately is essential.

Storm water pollution by driveway oil spills and  
domestic fuel tank spills are increasingly high,  
thus efficient oil spill cleaner should always be at  
hand. Oil Gone Easy Home & Driveway S-200 is the  
perfect and safe solution to prevent the disastrous  
consequences of oil spills.