

Your input is critical to protecting your water

The New Jersey Department of Environmental Protection (NJDEP) has revoked and reissued the General New Jersey Pollutant Discharge Elimination System (NJPDES) Permit for Combined Sewer Systems, which requires that all municipalities with combined sewer systems undertake a Combined Sewer Overflow (CSO) Long-Term Control Plan (LTCP).

Combined sewer systems are typically located in older urban areas and were constructed to provide for the transportation of sanitary sewage, industrial discharges and stormwater within the same pipe. The system in your area was designed to transport all dry weather flows, and some wet weather flows for treatment at the Bergen County Utilities Authority. The systems were also designed to discharge excess flows from the combined sewer system as a CSO - discharge into the adjacent receiving waters.

The CSO Long Term Control Plan is a feasibility study to evaluate the means, costs and effectiveness of control alternatives for reducing the frequency and volume of CSO discharges, as well as different levels of pretreatment and disinfection.

To meet the *Public Participation Program*, and other requirements of the LTCP, the Bergen County Utilities Authority, the village of Ridgely Park, the city of Hackensack, and the borough of Fort Lee have joined together to form the Bergen County CSO Group. Each of these entities owns and/or operates various components of a Combined Sewer System.

Hatch Mott MacDonald (HMM) has been retained by the NJ CSO Group to develop, coordinate and implement the *Public Participation Work Plan* as submitted to the NJDEP. The first task in this endeavor is the formation of a *Citizen Advisory Committee (CAC)* to explore issues and options related to Combined Sewer Systems.

The Citizen Advisory Committee is open to any interested person or group.

The *Citizen Advisory Committee* will provide input and recommendations to the Group as the LTCP is being developed. It is anticipated that the CAC will have its first meeting in September 2005 and will meet approximately every three months. In addition the CAC will meet once for a field trip to tour some of the facilities. While attendance at all meetings is not required, it is encouraged that only individuals or groups capable of making a long-term commitment to the CAC consider joining.

The CAC will hear presentations, offer feedback, learn about alternative controls and their estimated project costs and benefits, and ultimately will offer recommendations on what types of controls, if any, should be implemented under the LTCP. The CAC will conclude in January 2007 and a *Public Participation Program Report* will be submitted to the NJ Department of Environmental Protection summarizing the group's findings.

The future of your waterways is in your hands.

If you are interested in participating on the
Citizen Advisory Committee, please contact
Donna Gregory, of Hatch Mott MacDonald.

973.941.9397
donna.gregory@hatchmott.com
973.912.2632

Notifications of interest should be submitted as
soon as possible. You or your organization will
be notified with details about the time and
location of the next meeting.

Bergen County CSO Group

Bergen County Utilities Authority
Village of Ridgewood Park
City of Hackensack
Borough of Fort Lee

The future of
your waterways
is in your hands.

Bergen County CSO
Group

Citizen Advisory Committee Forming

The future of our waterways is in your hands

NJ CSO Group

The NJCSO Group invites all individuals and groups to participate in a Citizen Advisory Committee (CAC) to explore issues and options related to Combined Sewer Systems.

The New Jersey Department of Environmental Protection (NJDEP) has modified the General New Jersey Pollutant Discharge Elimination System (NJPDES) Permit for Combined Sewer Systems, which requires that all municipalities with combined sewer systems undertake a Combined Sewer Overflow (CSO) Long-term Control Plan (LTCP). The CAC is the first step in this endeavor.

The CAC will provide input and recommendations to the NJCSO Group as the LTCP is being developed. The CAC will hear presentations, offer feedback, learn about alternative controls and their estimated project costs and benefits, and ultimately, will offer recommendations on what types of controls, if any, should be implemented under the LTCP.

The CAC held its first meeting in October and will meet approximately every three months. In addition, the CAC will hold workshops and meet once for a field trip to tour some of the facilities. The CAC will conclude in January 2007, and a Public Participation Program Report will be submitted to the NJ Department of Environmental Protection, summarizing the CAC's findings.

Anyone interested in participating on the CAC should contact Donna Gregory of Hatch Mott MacDonald immediately:
T 973.941.9397
E donna.gregory@hatchmott.com
F 973.912.2632

Provide the following information to receive our notifications:

- Name
- Organization & Title (if any)
- Address
- Phone (organization, work or home)
- Fax
- Email address

What is a CSO?

In the 1800s Combined Sewer Systems (CSS) were constructed in urban areas. They were used to convey dry weather sanitary and industrial flows, combined with wet weather storm flows, to the nearest water body. As the urban areas grew larger, the water bodies grew more polluted. In the early 1900s pollution in the waterways was so extensive that it caused the end of recreational uses, such as fishing, swimming and boating.

In response, interceptor sewers were built to convey the sanitary and industrial flows to newly built wastewater treatment plants located downstream of the cities. The interceptor sewers and treatment plants were sized to treat all of the dry weather flows and a portion of the wet weather flows. Regulators were installed on the outfalls. These regulators were designed to divert all the dry weather flows to the interceptor sewer. During a rainfall event the regulators would divert the combined dry weather sanitary and wet weather storm flows to the interceptor up to its capacity. If flows exceeded the capacity of the interceptor sewer, the regulator would then divert the excess flow to the river. These discharges were called combined sewer overflows (CSO).

NJ CSO Group:
Passaic Valley Sewerage Commissioners
Borough of East Newark
Town of Harrison
Town of Kearny
North Bergen MUA
Bayonne MUA
City of Paterson
Town of Guttenberg
Jersey City MUA

The Federal Water Pollution Control Act Amendments of 1972 and 1977, known as the Clean Water Act, established the goal of making all rivers fishable and swim-able. The Act established water quality criteria for receiving waters as well as a permit system regulating the discharges to the receiving waters. The primary goal of the Clean Water Act was directed to upgrading wastewater treatment plants to secondary treatment or better. As existing treatment plants were upgraded and new treatment plants built, the quality of the receiving waters began improving.

While the quality of receiving waters was improving, they still were not meeting water quality standards. In 1995, all CSO discharges were also brought

into the discharge permit system under the General NJPDES Permit for Combined Sewer Systems. The purpose of this permit was to reduce the pollutant loadings of CSO on the receiving waters.

In 2004, the NJDEP mandated that all municipalities with CSS, undertake a Combined Sewer Overflow Long Term Control Plan (LTCP). The LTCP is a feasibility study to evaluate the means, costs and effectiveness of control alternatives for reducing the frequency and volume of CSO discharges.

The requirements of the CSO LTCP include:

- A Public Participation Program, where Citizen Advisory Committees are formed to understand the issues, explore options and offer comments for

consideration by the NJDEP.

- Evaluate pre-treatment and disinfection alternatives for CSO for various discharge objectives.
- Evaluate various control alternatives to reduce the frequency of overflows to zero, three, seven, twelve and twenty overflow events per year.
- Evaluate controls needed to increase the transportation of additional flow to the Wastewater Treatment Plants, to two, four, six and eight times dry weather flow.

The LTCPs must be completed and submitted to the NJDEP by January 2007. Once the LTCPs for all the CSO communities are received, the NJDEP/EPA will determine what controls will be mandated. The process may take decades to complete.

For more information on CSOs:

Combined Sewer Overflow: General Permit
www.state.nj.us/dep/dwq/gp_cso.htm

Surface Water Quality Standards
www.state.nj.us/dep/wmm/sgwqt/2004swqs.pdf

Manufacturers of CSO Equipment:
www.johnmeunier.com
This site includes information on Fluid-sep Vortex Separators and Actiflo Ballasted Flocculation.
www.cdstech.com
This site includes information on Mechanically raked screens, San-sep and Flocc-sep.

TOPICS FOR THE FIRST 5 CAC MEETINGS:

- (1) Introduction.
- (2) Water Quality issues.
- (3) Alternatives & progress of consultants.
- (4) Review of recommendations.
- (5) Feedback & suggestions from the CAC.

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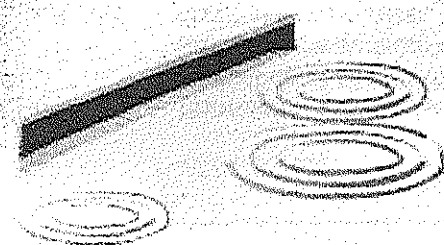
After the Storm

For more information contact:

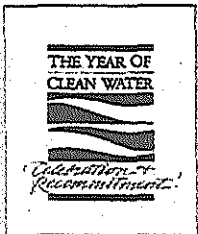
or visit

www.epa.gov/npdes/stormwater

www.epa.gov/nps



EPA 833-B-03-002



*Homeowner's Guide to
Understanding Stormwater*



HTTP://www.epa.gov
Printed With Vegetable
Ink Post Consumer
Recycled Paper



Recycle or properly dispose of household products that contain chemicals, such as insecticides, pesticides, paint, solvents, and used motor oil and other auto fluids. Don't pour them onto the ground or into storm drains.

Lawn care

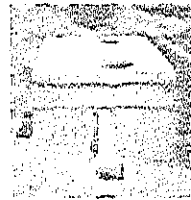
Excess fertilizers and pesticides applied to lawns and gardens wash off and pollute streams. In addition, yard clippings and leaves can wash into storm drains and contribute nutrients and organic matter to streams.



- ◆ Don't overwater your lawn. Consider using a soaker hose instead of a sprinkler.
- ◆ Use pesticides and fertilizers sparingly. When use is necessary, use these chemicals in the recommended amounts. Use organic mulch or safer pest control methods whenever possible.
- ◆ Compost or mulch yard waste. Don't leave it in the street or sweep it into storm drains or streams.

Septic systems

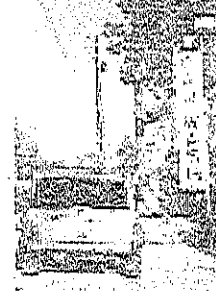
Leaking and poorly maintained septic systems release nutrients and pathogens (bacteria and viruses) that can be picked up by stormwater and discharged into nearby waterbodies. Pathogens can cause public health problems and environmental concerns.



- ◆ Inspect your system every 3 years and pump your tank as necessary (every 3 to 5 years).
- ◆ Don't dispose of

Auto care

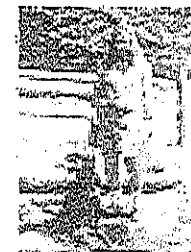
Washing your car and degreasing auto parts at home can send detergents and other contaminants through the storm sewer system. Dumping automotive fluids into storm drains has the same result as dumping the materials directly into a waterbody.



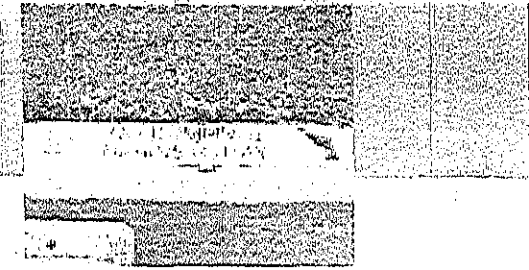
- ◆ Use a commercial car wash that treats or recycles its wastewater, or wash your car on your yard so the water infiltrates into the ground.
- ◆ Repair leaks and dispose of used auto fluids and batteries at designated drop-off or recycling locations.

Pet waste

Pet waste can be a major source of bacteria and excess nutrients in local waters.



- ◆ When walking your pet, remember to pick up the waste and dispose of it properly. Flushing pet waste is the best disposal method. Leaving pet waste on the ground increases public health risks by allowing harmful bacteria and nutrients to wash into the storm drain and eventually into local waterbodies.



Education is essential to changing people's beliefs. Signs and markers near storm drains warn residents that pollutants entering the drains will be carried untreated into a local waterbody.

Residential landscaping

Permeable Pavement—Traditional concrete and asphalt don't allow water to soak into the ground. Instead, these surfaces rely on storm drains to divert unwanted water. Permeable pavement systems allow rain and snowmelt to soak into the ground, decreasing stormwater runoff.

Rain Barrels—You can collect rainwater from rooftops in mosquito-proof containers. The water can be used later on lawns or garden areas.

Rain Gardens and Grassy Swales—Specially designed areas planted with native plants can provide natural places for rainwater to collect and soak into the ground. Rain gardens and grassy swales can be installed along storm drains to filter pollutants out of the water before it enters the storm drain.



Vegetated Filter Strips—Filter strips are narrow areas of native grass or plants created along roads and streams. They trap the pollutants in the stormwater before it flows across driveways and

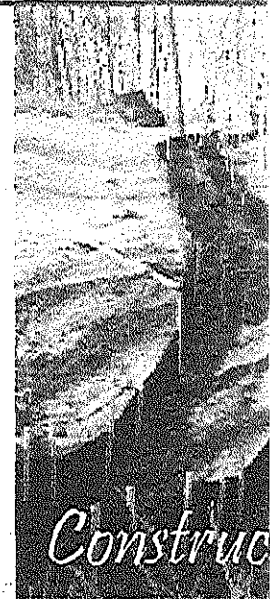


Dirt, oil, and debris that collect in parking lots and paved areas can be washed into the storm sewer system and eventually enter local waterbodies.

- ◆ Sweep up litter and debris from sidewalks, driveways and parking lots, especially around storm drains.
- ◆ Cover grease storage and dumpsters and keep them clean to avoid leaks.
- ◆ Report any chemical spill to the local hazardous waste cleanup team. They'll know the best way to keep spills from harming the environment.

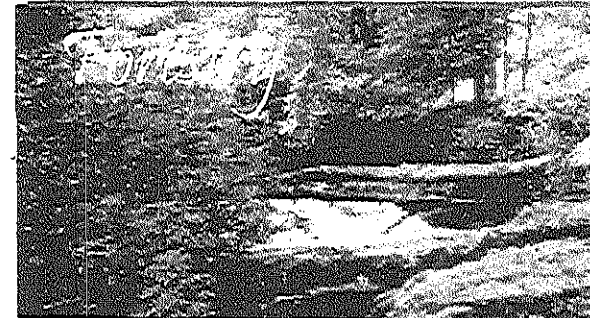
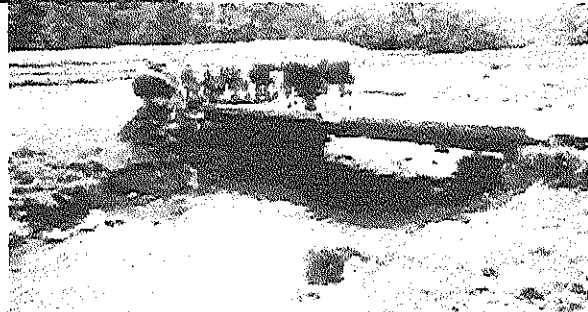
Erosion controls that aren't maintained can cause excessive amounts of sediment and debris to be carried into the stormwater system. Construction vehicles can leak fuel, oil, and other harmful fluids that can be picked up by stormwater and deposited into local waterbodies.

- ◆ Divert stormwater away from disturbed or exposed areas of the construction site.
- ◆ Install silt fences, vehicle mud removal areas, vegetative cover, and other sediment and erosion controls and properly maintain them, especially after rainstorms.
- ◆ Prevent soil erosion by minimizing disturbed areas during construction projects, and seed and mulch bare areas as soon as possible.



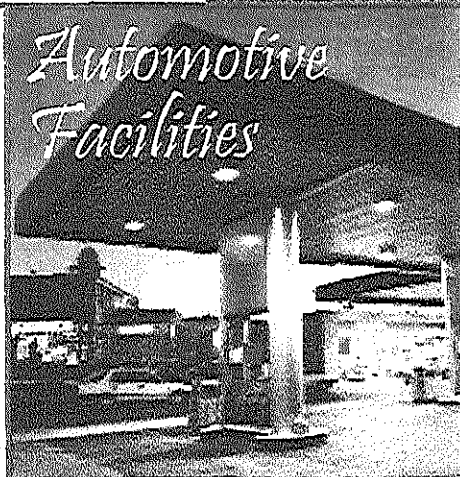
Lack of vegetation on streambanks can lead to erosion. Overgrazed pastures can also contribute excessive amounts of sediment to local waterbodies. Excess fertilizers and pesticides can poison aquatic animals and lead to destructive algae blooms. Livestock in streams can contaminate waterways with bacteria, making them unsafe for human contact.

- ◆ Keep livestock away from streambanks and provide them a water source away from waterbodies.
- ◆ Store and apply manure away from waterbodies and in accordance with a nutrient management plan.
- ◆ Vegetate riparian areas along waterways.
- ◆ Rotate animal grazing to prevent soil erosion in fields.
- ◆ Apply fertilizers and pesticides according to label instructions to save money and minimize pollution.



Improperly managed logging operations can result in erosion and sedimentation.

- ◆ Conduct preharvest planning to prevent erosion and lower costs.
- ◆ Use logging methods and equipment that minimize soil disturbance.
- ◆ Plan and design skid trails, yard areas, and truck access roads to minimize stream crossings and avoid disturbing the forest floor.
- ◆ Construct stream crossings so that they minimize erosion and physical

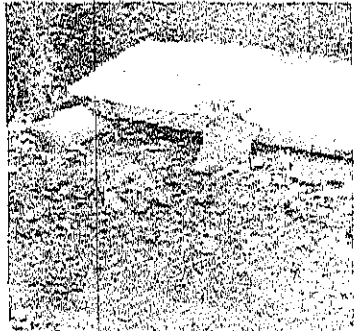


Uncovered fueling stations allow fuel to be washed into storm drains. Cars being repaired can leak fuel, oil, and other fluids that can be picked up by stormwater.

- ◆ Clean up spills immediately and dispose of cleanup materials.
- ◆ Provide cover over fueling stations or retrofit facilities for spill containment.
- ◆ Properly maintain fleet vehicles

What is stormwater runoff?

Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground. Impervious surfaces like driveways, sidewalks, and streets prevent stormwater from naturally soaking into the ground.



What are the effects of stormwater runoff?



Stormwater can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly to a lake, stream, river, wetland, or coastal water. Anything that enters a storm sewer system is discharged untreated into the waterbodies we use for swimming, fishing, and providing drinking water.

The effects of pollution

Polluted stormwater runoff can have many adverse effects on plants, fish, animals, and people.

- ◆ Sediment can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment also can destroy aquatic habitats.
- ◆ Excess nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms can't exist in water with low dissolved oxygen levels.
- ◆ Bacteria and other pathogens can wash into swimming areas and create health hazards, often making beach closures necessary.
- ◆ Debris—plastic bags, six-pack rings, bottles, and cigarette butts—washed into waterbodies can choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds.
- ◆ Household hazardous wastes like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life. Land animals and people can become sick or die from eating diseased fish and shellfish or ingesting polluted water.



- ◆ Polluted stormwater often affects drinking water sources. This, in turn, can affect human health and increase drinking water treatment costs.

