Combined Sewer Overflows (CSOs)
Office of Water Quality

Description:
- A combined sewer system is a type of sewer designed to collect rainwater runoff, domestic sewage and industrial wastewater in the same pipe.
- During dry weather, combined sewer systems transport wastewater to a treatment plant where it is treated then discharged into a water body.
- During heavy storms or snowmelts, the capacity of the combined sewer system can be exceeded, causing it to overflow.
- This overflow allows the untreated human and industrial waste materials and debris to discharge directly into nearby streams, rivers and other water bodies without treatment.
- Below is a diagram of how a combined sewer overflow, or CSO, works.

Environmental Impacts:
- The U.S. Environmental Protection Agency (U.S. EPA) reports that CSOs are a problem for approximately 772 communities nationwide.
- Indiana’s portion of this total is 109 communities.
- Surface waters in these communities are adversely affected by the overflow of untreated domestic sewage, and storm water runoff.
- CSOs contain high levels of suspended solids, bacteria, oxygen-demanding organic compounds, and other pollutants.
- The presence of untreated sewage in water bodies exceeds Indiana’s water quality standards.

IDEM’s Role:
- The Indiana Department of Environmental Management (IDEM) is responsible for ensuring that discharges to Indiana’s waters are protective of human health and the environment.
- In 1989, the U.S. EPA established a national CSO strategy, which was updated in 1994.
- Under the strategy, communities submit plans to reduce CSO discharges to IDEM or IDEM and EPA together for review and approval.
- In developing a plan, some communities have chosen to separate formerly combined sewer systems, some have put in separate CSO treatment facilities, some have put in holding tanks to store the CSO flow until it can be put back into the system when the flow has subsided, some have expanded their wastewater treatment plants while some have employed a combination of these options.
- There are 108 of the 109 CSO communities that are under a legally enforceable requirement to develop a plan to prevent the release of untreated sewage.
- 107 of the CSO communities have approved plans.

Citizen’s Role:
- Citizen involvement has been and will continue to be a vital component of the effort to reduce the effects of CSOs on Indiana’s waterways.
- Within their communities, citizens are encouraged to take part in public meetings about CSOs and review proposed long-term control plans (LTCPs).

More Information:
- For more Information, contact IDEM’s Office of Water Quality at (317) 232-8670 or toll free within Indiana at 1-800-451-6027, or visit IDEM’s CSO website at http://in.gov/idem/cleanwater/2455.htm.