Storm Water

When it rains, runoff picks up and carries a wide variety of pollutants into our storm water system. Pollutants such as bacteria, nutrients, metals, and chemicals are often found in contaminated storm water. This contaminated water then enters our municipal drainage system and ends up in our streams, rivers and lakes. Since most water in our part of Texas is contained in lakes, these pollutants not only affect whether we can safely swim and fish in the water, but the contaminants may be eliminated by expensive processes when treating the water to drinking water quality.

Storm water pollution prevention is a city wide activity. The City has developed a storm water management plan. Almost every department in the City of Irving has specific responsibilities under this plan. The Environmental Compliance Section is responsible for the following activities regarding storm water quality.

- Monitoring
- Enforcement
- Spill Response
- Sources of storm water pollution
- Links

Monitoring

Dry Weather Monitoring

Water ways in the City of Irving are monitored during periods when it hasn't rained. This provides us with knowledge of the baseline water quality. Every year, a portion of the storm water outfalls are assessed to determine if any illicit discharge and improper disposal is occurring. In this manner, the complete storm drain system is completely screened for illegal discharges every five years.

In addition, streams in Irving are monitored on a monthly basis from a total of thirty different sites. Partnering with the Trinity River Authority, we also

participate in the Clean Rivers program. By combining sampling resources with other entities, more detailed information about the water quality in Irving and in North Central Texas is available.

Wet Weather Monitoring

The North Central Texas Council of governments, participating with the cities of Arlington, Garland, Irving, Mesquite, Plano and the North Texas Tollway Authority and the Texas Department of Transportation, has developed and implemented a state approved regional storm water monitoring program. Although not directly participating, the cities of Dallas and Fort Worth are also committing resources to this program. This monitoring program will sample storm water runoff from in-stream sample sites and gather data on the water quality during storm events on a water shed basis. Within Irving, the Cottonwood Creek watershed is being monitored during 2007. In 2008, Delaware Creek will be monitored and Bear Creek in 2009.

Storm events are also monitored by Environmental Compliance staff. A minimum of eight storm events, from 7 different watersheds, are sampled each year. This is accomplished by using mobile, automated sampling equipment.

Enforcement

The Environmental Compliance Section enforces parts of the City of Irving Code of Civil and Criminal Ordinances Part II Chapter 41 Article X. Municipal Storm water Drainage Regulations and Acts Adversely Affecting Water Quality.

Spill Response

Hazardous Materials Spills

Working closely with the Irving Fire Department and Police Department as part of the City Hazardous Materials Response Plan, the Environmental Compliance section maintains an assortment of clean up materials. In the case of small (less than 20 gallons) hazardous materials spills, Environmental Compliance personnel are capable of cleaning up many types of spills. For larger spills or extremely dangerous materials, Environmental Compliance provides technical assistance, as needed, to the Fire Department. EC staff assumes command of the incident site once the clean up phase of the operation is entered. Typically, an environmental contractor is employed to do the actual clean up. Environmental Compliance personnel insure that, while the clean up is taking place, the safety and health of Irving residents is not adversely affected and that the City infrastructure is not impacted.

Sources of Storm Water Pollution

Human and pet waste, fertilizers, and yard clippings such as leaves and grass

Human waste, as well as pet waste, contains disease-carrying bacteria. Raw sewage in our waterways makes water unusable for fishing, swimming, and drinking. In addition, these substances all contain nutrients – another major pollution problem. The nutrients nitrogen and phosphorus not only cause grass to grow, but an excessive amount also causes algae to grow in our waterways. Algae blooms cause fish kills and block sunlight for the underwater vegetation needed by fish for food and other aquatic organisms.

Sediment (soil, sand, silt, clay)

Sediment is easily transported by rain water and acts to clog fish gills, blocks sunlight for underwater vegetation, and destroys fish-spawning areas. It is the largest contributor of storm water pollution by volume.

Automotive products such as motor oil, gasoline and antifreeze; hazardous waste such as cleaners and paints; and pesticides (herbicides, insecticides, fungicides, rodenticides)

These materials are toxic, so they are dangerous to humans and animals as well as to the environment. Antifreeze, although improved, is still a particular hazard to pets and wildlife. Toxics in our waterways can make water unusable for fishing, swimming, and drinking. One quart of used motor oil entering our waterways can contaminate an estimated 1 million gallons of drinking water.

Solid waste and litter

These items decompose in water, removing oxygen needed for aquatic life. Solid waste can also clog the storm water system, contributing to street flooding and flooding of residences. Litter often ends up along the shores of our streams or floating in our lakes.

Links

Link to Texas Clean Rivers Program web page
http://www.tceq.state.tx.us/compliance/monitoring/crp/index.html

Link to EPA Storm Water web page
http://www.epa.gov/ebtpages/watestormwater.html