

Contaminant Sources

The Piedmont Basin contains a variety of known and potential contaminant sources such as gas stations, factories, landfills, septic systems, and abandoned industrial sites. A contaminant source is a site that has released or has the potential to release hazardous substances to air, soil, groundwater, surface water, or sediment. The potential to contaminate does not mean that the facility has released or will release pollutants to the environment. It only means that the facility uses or generates substances that could negatively impact human health and the environment if the substances were released.

SOLID WASTE

Piedmont residents and businesses together throw away over 800 million pounds of trash each year. Nearly all of this waste is disposed of in landfills. Improperly designed or operated landfills can cause groundwater, surface water, and air pollution and are a potential breeding ground for disease-carrying insects and rodents.



Landfills do not pose the threat to public health they once did thanks to more stringent regulation.

Since the mid-1960s landfills have been regulated by the state to reduce these risks.

Modern landfills regularly cover the waste to control insects and rodents and include a bottom liner to prevent leachate ("garbage juice") from contaminating ground or surface water. Modern landfills also provide gas collection systems to control odors and collect methane. These protective measures can be done most efficiently at large landfills. As a result, where once nearly every community had its own town dump, today there are only two large, modern landfills operating in the Piedmont Basin.



Many of today's contaminant problems are a result of past practices.

HAZARDOUS WASTE

The Piedmont Basin contains approximately 650 small and large businesses that produce and manage hazardous waste. Hazardous waste comes from the processes that supply goods and services we use routinely, from fuels and chemicals to dry cleaners and auto repair shops.

Hazardous waste that is not stored, handled, and disposed of in a safe manner can pollute the land, air, and water, harming people, animals, and plants. The Delaware Department of Natural Resources and Environmental Control helps businesses manage their hazardous waste in ways that prevent the waste from causing harm.

The Department is also helping businesses find ways to produce less hazardous waste, resulting in a cleaner and safer environment for Delaware.

UNDERGROUND STORAGE TANKS

In New Castle County, there are 1,752 underground storage tanks in use at 707 facilities. Most of these tanks are located at gasoline stations. Underground tanks that leak can pollute the groundwater and soil. In fact, 138 leaking underground storage tank sites in the Piedmont Basin are known to have impacted groundwater. The largest concentration of leaking underground storage tanks is in the Christina watershed.

In order to prevent future releases, the Department assures regulatory compliance at operating tank facilities. And when a tank does leak, the Department provides the necessary guidance to clean up those releases.



The state's Brownfields Program is designed to clean up sites suitable for reuse rather than converting open space for development.

SITE INVESTIGATION AND RESTORATION (FORMERLY SUPERFUND)

Historically, the Piedmont Basin has been the most industrialized region in the state. As a result, the majority of the hazardous substance release sites in Delaware are located in this basin. These releases occurred when industries spilled, mishandled, or disposed of the hazardous substances used or generated in their processes. With the growth of New Castle County, many of the sites where hazardous substances have been released are now located in and around urban areas. Due to the liability associated with former industrial sites, or *brownfields*, many businesses have avoided old, abandoned sites, preferring to set up shop in cleaner, previously undeveloped areas called *greenfields*. Rather than continuing to develop



Illegal dumping still remains a problem in certain parts of the state.

new sites, an effort is under way to revitalize the brownfields and prevent the possible contamination of greenfields. Thus, the Department of Natural Resources and Environmental Control established a Voluntary Cleanup Program.

Challenges for the Future

- ◆ Help all Delawareans reduce the amount of solid waste they generate by increasing consumer awareness and encouraging recycling.
- ◆ Encourage all Delawareans to reduce their use of unnecessary hazardous substances and properly use the hazardous substances they must use.
- ◆ Address the cumulative environmental impact of small contaminant sources such as septic systems and underground storage tanks.
- ◆ Clean up contaminated sites and revitalize former industrial sites called *brownfields*.
- ◆ Identify non-reporting sources of contamination.