

Large Regional Airport Installs AbTech's Catch Basin Inserts to Protect Surrounding Waterways and Minimize Environmental Impacts

Case Study

Large Regional Airport Environmental Management System

A large regional airport, providing corporate aviation, light general aviation, and commercial airline services with related aviation support facilities, contacted AbTech to improve their plan to protect waterways surrounding the airport from polluted runoff caused by chemicals such as fuel, oil, grease, and de-icing fluid. To minimize these potential environmental impacts, the airport installed AbTech Industries' catch basin inserts in the critical storm drains. The program started in 2002 with 18 Ultra-Urban® Filters, produced by AbTech Industries. Because of the success of this pilot program, there are 54 Ultra-Urban Filters in place today.



Project Challenge

Ten years ago, over 80 governmental agencies and environmental groups signed a historic Memorandum of Agreement to protect New York City's drinking water supply for 9 million New Yorkers without compromising the economic vitality of the watershed communities.

New York City's drinking water supply watershed provides water to one of the most important cities in the world and to many surrounding communities. Because water quality issues go beyond the political or geographical boundaries of any one municipality or agency, many governmental agencies must work together to protect water quality throughout the watershed.

The New York City watershed covers an area of over 1,900 square miles in the Catskill Mountains and the Hudson River Valley. The watershed is divided into two reservoir systems: the Catskill/Delaware watershed located west of the Hudson River and the Croton watershed, located east of the Hudson River.

The two reservoir systems deliver approximately 1.4 billion gallons of water each day to the people in New York City, areas of Orange, Putnam, and Ulster Counties, and much of Westchester County.

Project Description

The program began with the installation of 18 AbTech catch basin inserts. Shortly after installation a jet fuel spill occurred with 100% of the fuel captured in the AbTech filter. This event prompted the airport to expand the AbTech program to 54 AbTech Ultra Urban Filters installed at critical drains surrounding the airport.

Smart Sponge technology has a unique molecular structure based on polymer technologies that are chemically selective to hydrocarbons. Polymers are composed of molecules that chemically react to form large molecules. The non-leaching Smart Sponge permanently bonds with oil, gasoline, and grease, transforming these liquid petroleum hydrocarbons into a manageable solid waste that forms a gel-like structure. The filtration material is recyclable and provides a complete, closed-loop solution for removing pollutants from water. The filter comes in two standard designs; one a modular unit geared toward curb inlet openings, and the other, a single unit designed for typical drop-in catch basin drains.

AbTech Industries' Solution Ideal for Airports

AbTech's Smart Sponge® technology comprises a blend of polymers that effectively absorbs contaminants from water. The airport targeted critical storm drains – curbside, roadside, along taxiway areas, and on the open tarmac. When spills occur within these areas, the filters are used as a first line of defense. Each AbTech filter can handle 5 to 8 gallon spills, which suits the airport's needs because most spills at the facility are less than five gallons.

The airport's environmental officer said that another advantage of the filters is that they are easy to replace and easy to monitor. "We can physically see the filters and can determine the remaining capacity by lifting them out, cleaning out the sediment, and weighing them."





What Others are Saying about the Project

“AbTech catch basin filters are perfect for capturing hydrocarbons, oil, and grease in stormwater runoff. . . We know that despite our aggressive spill prevention and response program, if we don’t get to a spill before it reaches the storm drain, the filters can handle them.”

Airport’s Environmental Officer

For more information about the Smart Sponge® technology,
visit or call **1-800-545-8999**.