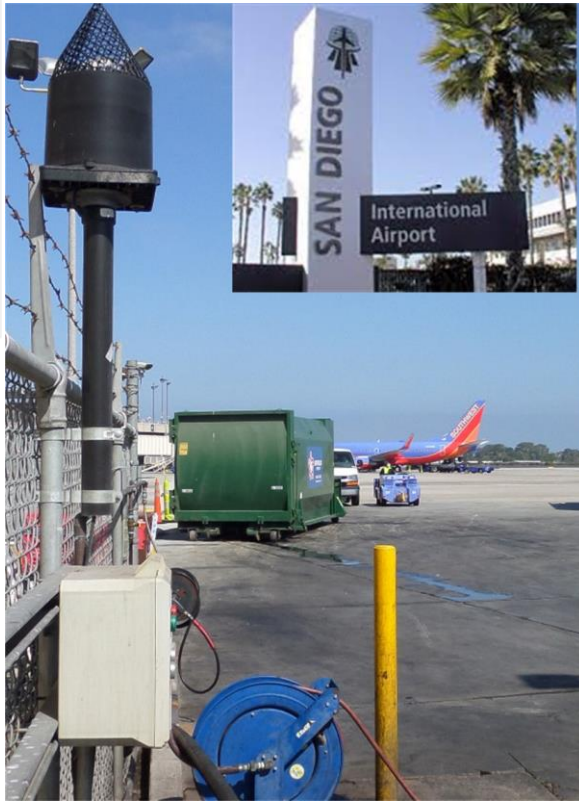


# Automatic Stormwater Diversion System Case Study

**What:** Automatic Stormwater Diversion System  
**Where:** San Diego Airport, California  
**When:** May 1, 2011



A new Attitude Technology Automatic Stormwater Diversion System with a 4" full port ball valve which is activated by an IP68 rated submersible actuator. The actuator is controlled by the Attitude Technology Controller, the brains of the system. The Control Panel is UL listed and with its PLC is field configurable. In this project, an Attitude Technology Rain Gauge was mounted in the area to send a signal to the Controller. In this case, when 1/10" of rain has fallen within a 2 hour time frame, a signal is sent from the rain gauge to the controller. The controller then activates the actuator to close the valve, thus not sending large loads of rain water to the sanitary sewer.

***An automatic solution at an affordable cost was a very attractive addition for the airport personnel to manage the drainage system.***

An Attitude Technology Automatic Stormwater Diversion System, was installed in the trash collection area on the tarmac at the San Diego Airport. The collection area already had an existing valve and clarifier. The normal drainage to this area would go through the clarifier and on to the sanitary sewer; but if the valve was closed, it would seal off access to the sanitary sewer and cause the drainage to overflow the area into the normal tarmac storm drain system. The old valve was manual and it was recognized that during infrequent rain events at the San Diego Airport, there was some risk that the valve would not get turned as often as needed by the maintenance personnel.

Because of long dry periods in this part of the country, another attractive feature to the airport was the automatic exercising function of the system. If rain has not fallen for 7 consecutive days, the system will automatically exercise the valve to a fully closed and then back to fully open position. Where there could be problems with the valve if left uncycled for months at a time, this automatic exercise will keep the valve working for years.

Now when large rain events occur at the San Diego Airport, maintenance personnel can focus on other issues, knowing the drainage is automatically being directed to its proper location per existing regulations. The sanitation department is not receiving large volumes of rain water, so their inspectors are satisfied. After the first flush goes to the sanitary sewer, only stormwater goes to the storm sewer satisfying the stormwater inspectors.