

Bio Clean Environmental Works to Mitigate Stormwater Pollution in Valley Center

Road Improvements Call For Stormwater Filtration Improvements

Bio Clean Product Instrumental in Installation

The Situation

In December 2005, the County of San Diego Department of Public Works started Phase 2 of the Valley Center Road Improvement Project. The project entails the construction of four new street lanes on Valley Center Road. Completion is scheduled for late summer 2009.



Adding lanes increases the amount of impervious surface area (water cannot penetrate the ground). When impervious surface area is increased, pollutant loads and volume of water run-off are increased. In addition to the heightened pollutant loads and volume of run-off,

the impervious surfaces have the potential to greatly accelerate downstream erosion as well as potential to impair stream habitat in natural drainages.

The Challenge

Studies have demonstrated a direct correlation between the degree of imperviousness of an area and the degradation of its receiving waters. These impacts must be mitigated by requiring appropriate pollution prevention controls to keep runoff clean for the life of the project.

Streets comprise up to 70% of a community's total impervious land surface and are almost always connected to the underground stormwater system. The combination of large, directly connected impervious area with the pollutants generated by automobiles makes the street network a principal contributor to pollution.

Under the National Pollutant Discharge Elimination System (NPDES) permit, San Diego County is required



About Bio Clean

Bio Clean Environmental, Inc. has been in the stormwater filtration industry since 1998, providing highly efficient pollutant-reducing systems to the western region including California and Hawaii. Based out of Oceanside, CA, the company leads the industry in system quality, design and dependability. Bio Clean meets and exceeds the strict and ever changing water quality regulations to keep our environment clean and our water safe. For more information on Bio Clean, visit www.biocleanenvironmental.net

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to develop, administer and implement a stormwater management program in order to reduce stormwater pollution to the maximum extent possible. Controlling urban runoff pollution after construction is critical. Site specific treatment control measures are necessary.

Debris, chemicals, trash, sediment, leaves, and other pollutants that enter storm drains in streets travel to lakes, rivers, and streams. Storm drain catch basins should be cleaned and maintained in order to prevent this pollution from entering waterways. Storm drains can also be retrofitted with devices to filter out pollutants and protect water quality.

The Solution

The project contains approximately 88 catch basin structures along the curb side of the newly widened road to collect stormwater runoff. The best way to filter the polluted stormwater entering the catch basins is to retrofit these structures with a catch basin filter.

Several varieties of catch basin inserts exist for filtering runoff. Inserts to remove oil, chemicals, debris, and sediment can improve the efficiency of catch basins.

The County of San Diego assessed the features of several brands of catch basin filters. They were looking for three important features: durability, ease of cleaning and performance.

One design, available by Bio Clean Environmental, offered multiple advantages over other types of catch basin inserts. The Bio Clean Curb Inlet Basket is the only insert made from stainless steel and marine grade fiberglass. Other filter systems contain nets and fabrics which are prone to rip and tear over time.

The construction of the Bio Clean insert ensures that it will continue to operate effectively for several decades. The standard warranty in the industry for catch basin inserts is one year; the warranty on the Bio Clean insert is 5 years.

The Bio Clean Curb Inlet Basket comes standard with a patented shelf system that is designed to minimize the time it takes to clean and maintain the filter basket. The minimum maintenance time for the Bio Clean insert will provide long-term cost savings to the County.

Since 1994 the Bio Clean Curb Inlet Basket has been helping public agencies and private developers comply with stormwater regulations. The system has proven effective at removing total suspended solids, hydrocarbons, trash and debris, heavy metals, and nutrients.

The Results

Bio Clean Environmental Services, Inc. retrofitted all 88 catch basins along the Valley Center Road construction project. The County of San Diego was able to find an easy to maintain, reliable, and effective solution to a potentially harmful situation. The downstream waters will not be negatively affected by the construction, increased traffic, or consequential pollutants, as the harm will be mitigated by a state-of-the-art filtration system proven to greatly reduce stormwater runoff pollution

