

## Commercial Redevelopment Site Uses Jellyfish to Treat Stormwater Runoff

Project: Commercial Redevelopment

Location: Newton, New Jersey

Owner: Martin Realty Development & Construction

Product: Jellyfish Filter JF6



A full-service commercial and residential developer installed a Jellyfish Filter to treat stormwater runoff at a commercial bank redevelopment project in Newton, New Jersey. The developer chose Jellyfish to help meet the state's stormwater quality treatment requirements.

The New Jersey Department of Environment Protection's (NJDEP's) stormwater treatment program requires the use of a filtration system prior to infiltration to protect groundwater from pollutants in stormwater runoff. Jellyfish's state-of-the-art verified technology, with NJDEP certification, was identified as the ideal stormwater treatment Best Management Practice (BMP) for this site for several key reasons.

### Tight Site Space a Major Concern

Design and installation consideration was required as a result of pre-existing underground utilities and surrounding infrastructure on an adjacent property. Because space at this location was extremely limited, it was essential to install a small but powerful, performance verified filtration system.

After rejecting larger BMP footprint alternatives due to their unsuitability for the site's space restrictions, the compact, highly-efficient Jellyfish JF6 model was chosen, offering the perfect combination of enhanced treatment flow capacity and a small footprint.

The typical elevation drop design requirement for filtration BMPs is 2 or more feet. Because Jellyfish is typically designed with only 18 inches (457 mm) of "head" or drop to fully operate the system, it fit easily within the site drainage system. In addition, Jellyfish's advanced membrane filtration of very fine sediment particles at a superior treatment flow rate, resulted in a treatment solution that was less than one-third the footprint of the other BMPs considered.

With the smallest footprint, the Jellyfish pre-cast concrete structure's components are significantly lighter, making the unit easier to place with smaller equipment, when compared to other NJDEP-approved filter systems. The Jellyfish unit was much easier to install since



# Jellyfish® Filter

## CASE STUDY

the heaviest lift was less than half the weight of the alternative vault structure considered. This translated into significant time and equipment cost savings for the contractor and developer.

### Easy to Maintain and Low Long-term Cost

Jellyfish's low long-term maintenance costs makes it an extremely attractive choice. In this case, a major reason the Jellyfish was chosen over other filtration BMPs considered was its affordability over the long-term. The Jellyfish JF6 unit installed at the commercial redevelopment site contains only 7, 20-pound (9 kg) cartridges. The alternative filtration device considered required 22 large, 200+ pound (90 kg) cartridges, resulting in a significant savings in life-cycle costs.

Another important consideration was the fact that Jellyfish's cartridges are passively backwashed after every storm, manually rinsed annually during routine maintenance, and do not require annual replacement and disposal. The Jellyfish is also a simple system to inspect as well as maintain. At this site, the maintenance cost of Jellyfish over a three-year period was estimated to be one-third the cost of other filtration BMPs considered.

### Economical Approach

Martin Realty Development & Construction Co., a well-established full-service developer, has been operating in central New Jersey since 1972. President Steve Martin was quite excited about the implementation of the Jellyfish technology. "For us, using the Jellyfish system was more economical, and it met NJDEP requirements. It was also a pleasure to work with Imbrium, with their support at the time of installation of the structure and the filters."

With Jellyfish working quietly underground, owners can be confident that stormwater runoff from the site will be filtered with the best and most cost-effective technology available before being infiltrated back into the groundwater.

### Jellyfish a Popular Choice

The Jellyfish filtration system continues to gain popularity among organizations committed to protecting the environment. Jellyfish is a remarkably compact system that allows well over three times the flow capacity with just one-third the footprint and one-fifth the weight of conventional filtration BMPs. Its unique high surface area membrane filtration tentacles trap over 85% TSS, effortlessly capturing nutrients, metals, neutrally-buoyant particles, oils and saturated hydrocarbon-based particles, making it a cost-effective treatment solution.

