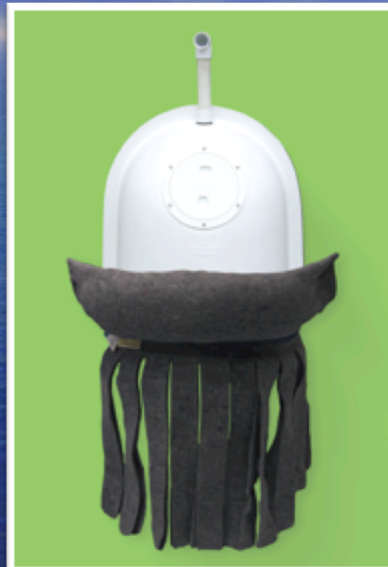


# Structural Stormwater Pollution Reduction and Pre-Treatment Options



**Best  
Management  
Products**

The Storm Water Quality Experts

# An Introduction to **BMP**



- Company founded in 1999.
- Focus on innovative products for the stormwater quality improvement and wastewater industries.
- Feature simple, cost-effective stormwater devices for the Ultra-Urban Environment.
- Our designs focus on... TRASH, FLOATABLES, GROSS POLLUTANTS, SEDIMENT and HYDROCARBONS.
- More than 75,000 SNOUTs installed in all 50 states.



# BMP

The Storm Water Quality Experts





# BMP's Water Quality Components



SNOUT® High Performance  
Vented Hood



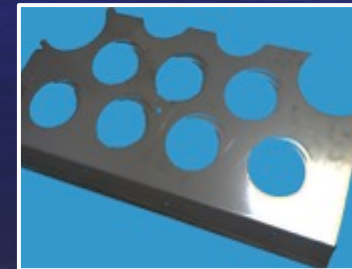
Stainless TrashScreen™



Bio-Skirt® Anti-Microbial Treated  
Hydrocarbon Reducing Skirted Boom



Flow Restrictor



New Turbo Plate™

# The SNOUT® Oil-Water-Debris-Separator

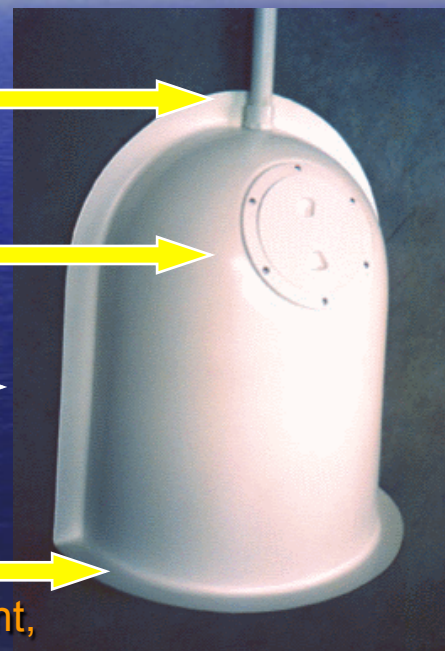
## Innovative Features

Anti-Siphon Flow-Vent  
(improves separation and flow characteristics)

Watertight Access Port  
(easy maintenance)

Mounting Flange with  
Oil-resistant Gasket  
(higher performance oil capture)

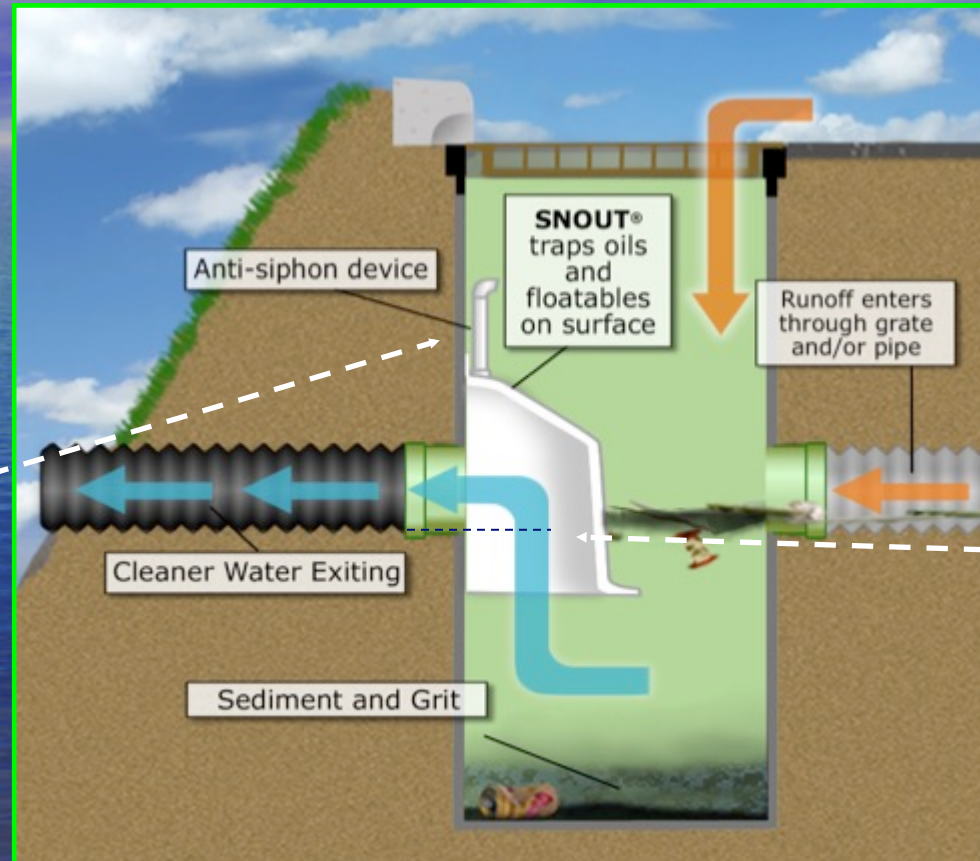
Marine Fiberglass Construction  
(gel-coated, marine grade, chemical resistant,  
many sizes, very strong)



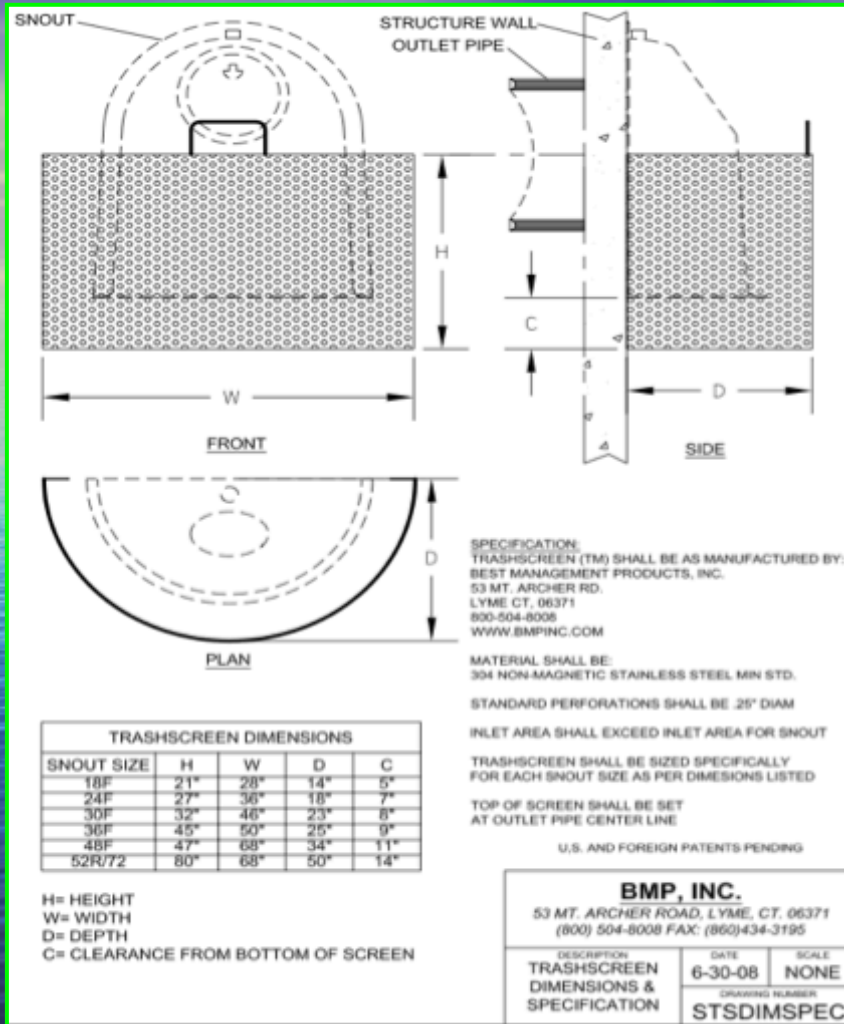


# How the SNOUT Works

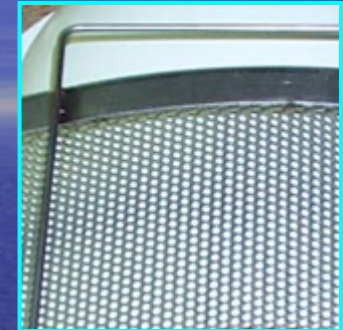
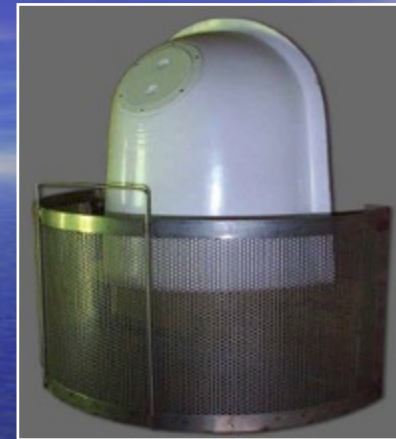
Anti-siphon vent prevents surface pollutants from getting sucked downstream from under the SNOUT\*



\* Static water level will stay at pipe invert due to vent, preventing siphoning from occurring.



# STAINLESS TRASHSCREEN



- Laser cut 304 Stainless Steel for long service life
- Comes standard with .25" perforations, but custom perf sizes are available
- Recognized in CA as a Full Trash Capture Device
- Can be used upstream in conjunction with other "end of pipe" filtration units to reduce burden on devices that have high maintenance demands
- Conversion kits are available for round structures and R series SNOUTs
- Available for 12"-52" SNOUTs
- Custom screens are available

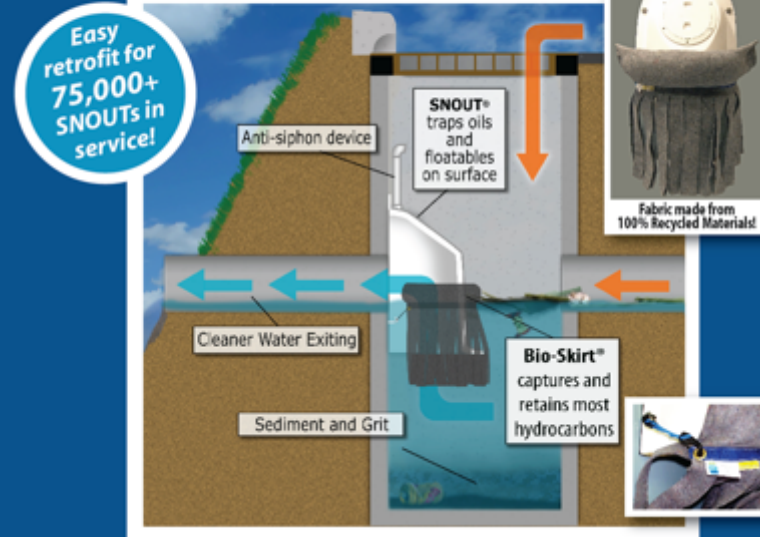




## The Bio-Skirt®

High Performance  
Hydrocarbon Adsorbent

Introducing the Bio-Skirt®  
Cost-Effective Hydrocarbon  
Control for Stormwater Inlets

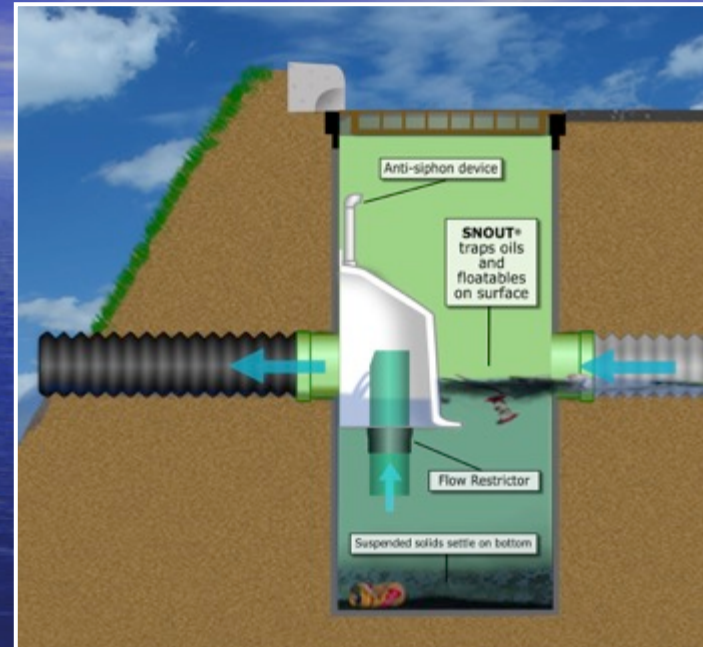
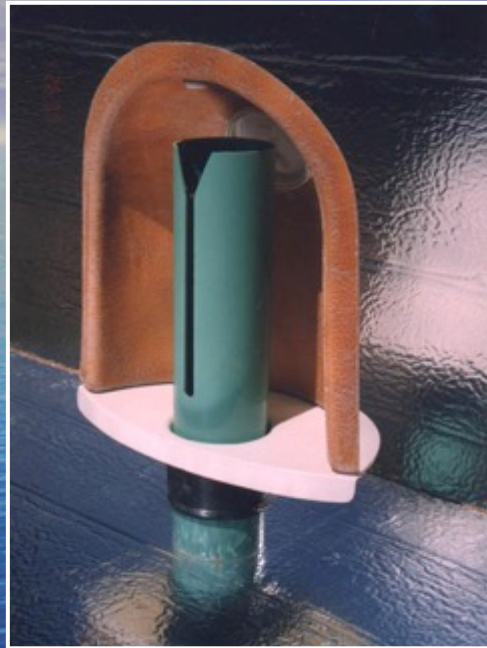


Reduce Hydrocarbons from structures:

- Fueling Facilities (and Convenience Stores)
- Beach or Waterfront Discharges
- Marinas, Ports and Transportation Facilities
- Treated with non-leaching anti-microbial to ensure long service life



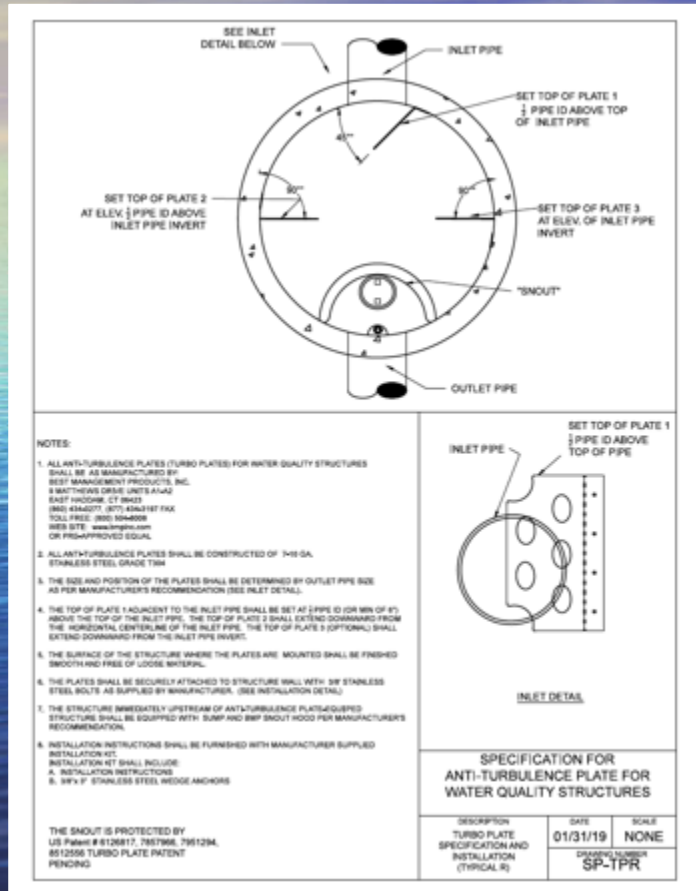
# SNOUT Flow Restrictor



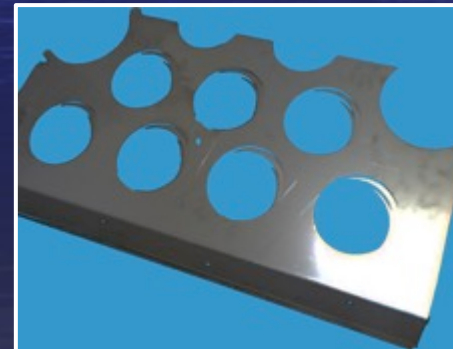
Controls discharge rate out of structure. Provides nearly clog-free quantity control (unlike an orifice plate or Frop-Tee). Volume, velocity, and temperature can have a major impact on water quality. Controlling these factors is necessary for optimal pollution control. Excel worksheet available to model flow rates.



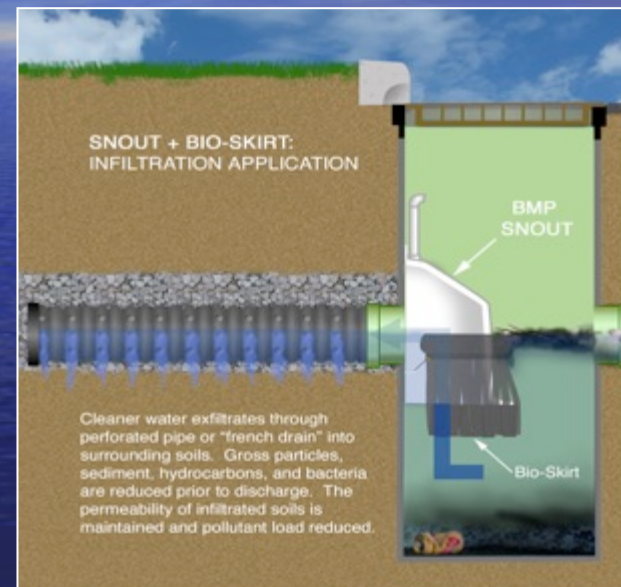
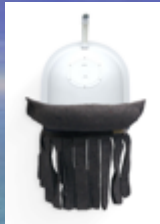
# New Turbo Plate™



- Product in Beta Testing
- Reduces turbulence in structure
- Works for round or rectangular structures
- Two Turbo Plates (min.) for each structure
- Four models currently available
- Designed to maximize sediment capture and retention
- Should be available with sizing and performance model in summer of 2019



**GOOD DESIGN IDEA:** Specify SNOUT and Bio-Skirt as a standard practice prior to discharge into any underground storage system or a pond to reduce maintenance.  
CAD and PDF files furnished by BMP Available.



Service life of basins are dramatically increased. The load of sediment, trash and gross pollutants stay in structures rather than accumulating in ponds, chambers, pipes and bio-infiltration systems. Nobody wants a bio-swale to be a "trash-swale!"



# Specialty SNOUTs and Risers



Split SNOUTs in 18, 24 and 30" for retrofits.



18R10 XD



LP318F



Riser Sections



Large SNOUTs

# The SNOUT is Easy to Install



**Empty Structure is Prepared**



**SNOUT is Trial Fitted over Pipe**



**Holes Drilled for Anchor Shields**



**SNOUT is Bolted to Wall with Gasket on SNOUT Flange**



**Structure is Ready for Service usually within 1 Hour**


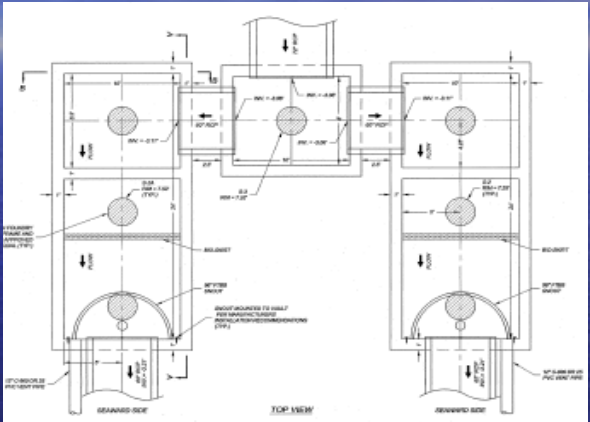



**The SNOUT Trapping Floatable Oil and Debris**

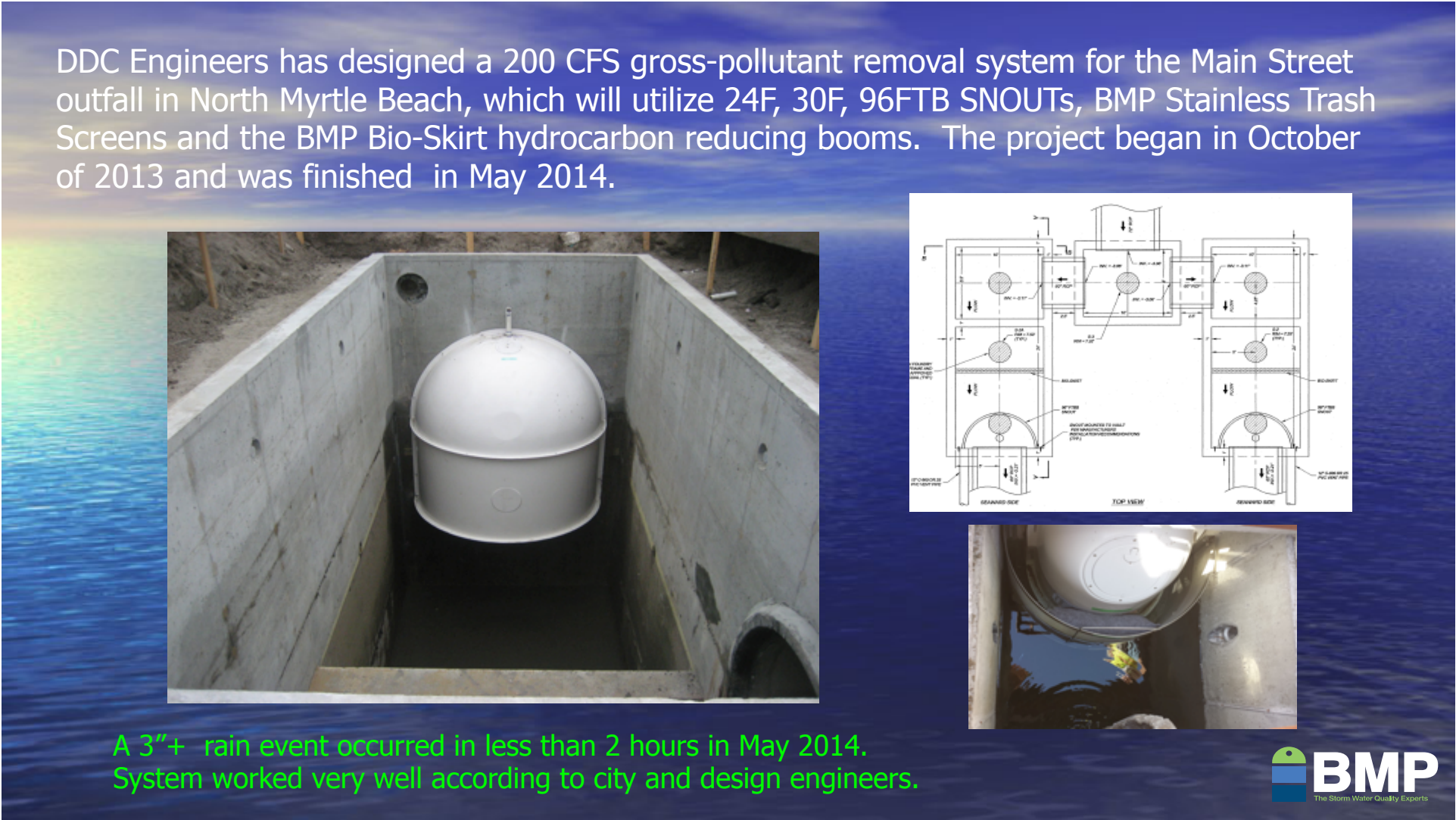
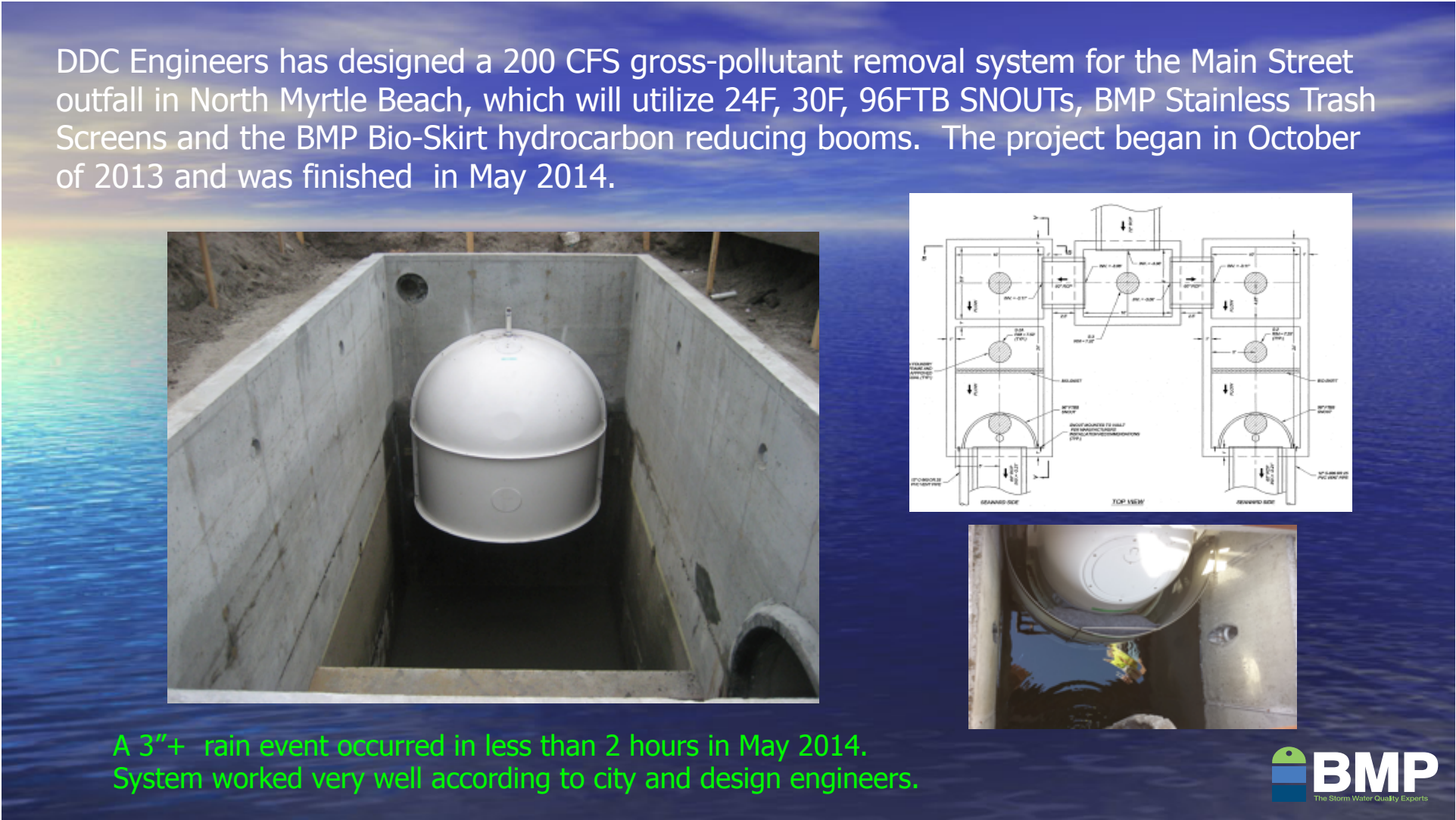
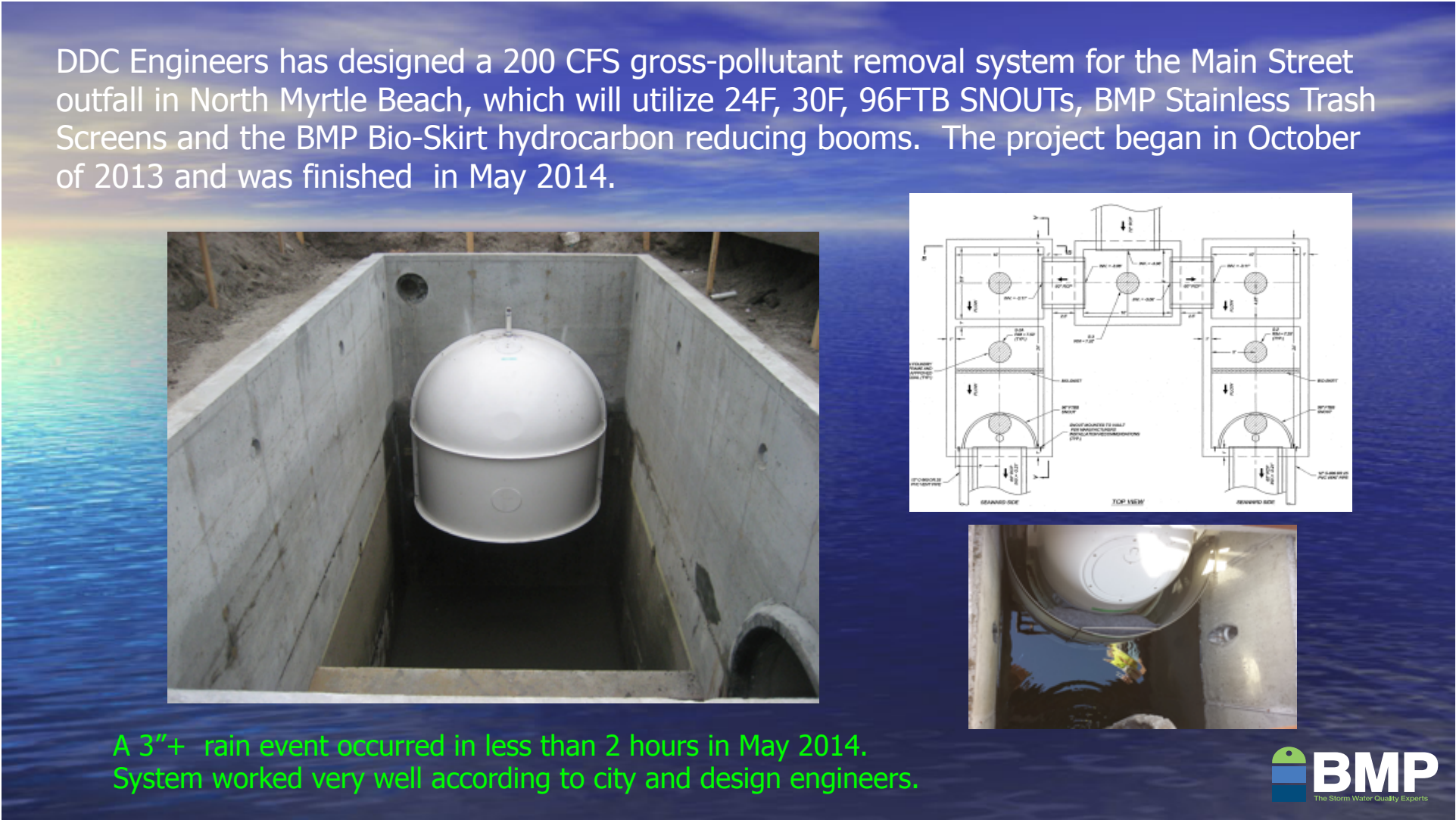

*Include note on plans to put SNOUT in structure BEFORE top slab with frame and grate are in place!*




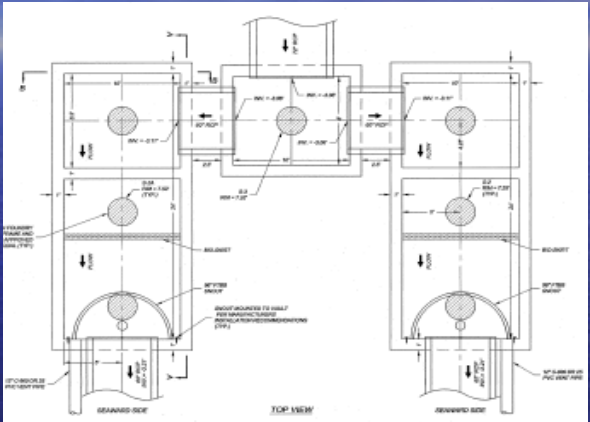

DDC Engineers has designed a 200 CFS gross-pollutant removal system for the Main Street outfall in North Myrtle Beach, which will utilize 24F, 30F, 96FTB SNOUTs, BMP Stainless Trash Screens and the BMP Bio-Skirt hydrocarbon reducing booms. The project began in October of 2013 and was finished in May 2014.




A 3"+ rain event occurred in less than 2 hours in May 2014. System worked very well according to city and design engineers.



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# Simple Proof– Two Structures, Same Site, Same Time, Different Results...



Inlet shown with no SNOUT that flows into structure with SNOUT. Water clear, no oil, little trash.



Structure with SNOUT stopping trash, oil and debris from upstream.

Site is in West Valley City, Utah.



# BMP's products get frequent coverage in the trade media. The cover story below was for *The Municipal Magazine* Waste and Water Management Issue

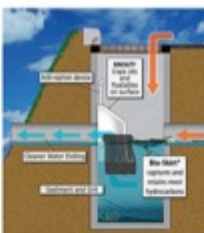


## Tackling stormwater pollution is a team effort

By TIM KIMMEL, Lead Designer, Deep Blue, Inc.

In the last 15 years, even small municipalities have had to take big steps to combat the threat of pollution from stormwater runoff. The push came with the U.S. Environmental Protection Agency National Pollution Discharge Elimination System Phase 2 Rules, promulgated in 1990. The rules address the problem of polluted runoff, which continues to be a leading cause of degraded water quality in our nation's lakes, streams, beaches and waterways. They require communities to adopt stormwater best management practices to improve their water quality.

Recently, the EPA announced that it is determining whether subsuming a wet step to Phase 2, instead focusing on actions that can help communities without challenges or the best of both. The idea is to give localities more flexibility to build stormwater programs and get them closer to complying with the goals of the Clean Water Act. During this 15-year water quality effort, hundreds of engineers and communities in the U.S. successfully employed single devices made by Best Management Products Inc., of



Florida. "All devices are not what people want to see in the water, and we've added this extra measure of quality control. It's making an impact," Sankoff added. "BMP's has installed nearly 1,000 Bio-Skirts and over 300 Bio-Skirts in the last 15 years. Looking to 2015, we estimate that the hundreds of best structures in Florida Beach are keeping more than half a million pounds of trash and debris out of the water on an annual basis."

**"In public works, simple is almost always better. It's hard to find a simpler concept than these Bio-Skirts."**

Spine, Conn., to combat stormwater pollution. It all starts with a great plan. Tim Sankoff, PE, CEM, principal and director of municipal services for DCC Engineers Inc., in North Beach, N.C., has been using BMP's Stormwater quality Bio-Skirts for more than 10 years. In primary municipal engineers for cities in southern Florida, including North Beach, North Miami Beach and South Beach, Sankoff notes that keeping the Bio-Skirts clean is a big drive for DCC's maintenance division.

"We know people visit the beach to have a good time. Part of that means kids are doing a lot of sitting, drinking and dropping at our business waterfront venues, all while walking from place to place. With that activity comes trash and debris. Nothing says it doesn't flow to our waterways and the beach is a critical part of our stormwater planning," Sankoff said. "We put Bio-Skirts on most of our projects. The first one we used was back in 2001, and we haven't stopped since. In public works, simple is almost always better. It's hard to find a simpler concept than these Bio-Skirts."



Q171: This image is of a deep ramp catch basin with Bio-Skirts and the Bio-Skirt design provided.

Q172: A Bio-Skirt and Bio-Skirt catch basin were used in North Miami Beach, N.C. (Image provided)

**"We have been employing Bio-Skirts in hot spots where there is a lot of traffic or parking facilities. Oil sheens are not what people want to see in the water, and we've added this extra measure of quality control. It's making an impact."**

Q173: A Bio-Skirt in North Beach, N.C., keeps trash, debris and oil out. (Image provided)



On a recent project in North Miami Beach, Sankoff used BMP's Bio-Skirts and installed them in a deep ramp catch basin. These Bio-Skirts are often, at risk with each other. Eventually, BMP makes them up to 10 inches with that can handle them in excess of 100 cubic feet per second, while still allowing for water quality control. Two of these large Bio-Skirts were needed for the Main Street project.

Implementing the plan is the most critical step. Frank Dignati, PE, is the public works engineering manager of North Miami Beach, where he's been for the last 10 years. He's been in charge of the biggest challenges BMP has with stormwater runoff. Dignati stated, "Obviously water quality is one of the biggest concerns we are dealing with, but we have an ISO (and suspended solids), with and debris."

Residents and visitors also notice the city's stormwater quality efforts. "They see two debris and trash on the beach because it's not allowed to reach the beach. The city performs street sweeping, but we notice how much we do to keep the litter out of the catch basins, traps, basins and other items that people throw away and up in the dunes. That's why we use the Bio-Skirts. Bio-Skirts in our basins, especially around Main Street, which is a busy area where the possibility of pollution loading is a lot higher," he added.

Maintaining, of course, is key to long-term success. A lot that Sankoff handles, PE, president of Stormwater Management and Consulting in West Valley, N.C., knows well. The first maintenance schedule of structures with Bio-Skirts in the field should begin. The idea here is that service crews that these structures keep undegraded stormwater facilities much cleaner, prolonging their service life.

"We notice that pollutants are not going to be seen, but they maintain, oil or diesel fuels — anything that requires filtration, filtration or phytoremediation — prevents them from being caught with trash and debris," said T. J. Sankoff, president and co-founder of BMP Inc. "Whether it's a treatment tank that contains low impact development concepts to reduce runoff and structural elements to reduce the trash and debris, the customer engineer who designs a sustainable system, the municipality that implements the design, or the crew that follows through with a construction maintenance program, it's a team effort." BMP looks at the company as part of that team.

"Many of our customers want us on the team. We have more than 10,000 installations in North America, and we get more inquiries and projects coming our way every day," said Sankoff. BMP has a long-standing offer for any municipality that has not used a Bio-Skirt before — it will give you the first one for free, no strings attached. Find out more about the "Free and Clear" program on the company website. It's an offer that is hard to refuse and that is sure to keep BMP busy. ■



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