May 23, 2006

Mayor Thomas Vogel

Borough of Point Pleasant Beach

416 New Jersey Ave.

Point Pleasant Beach, NJ 08742

Dear Mayor Vogel:

Thank you for inviting Clean Ocean Action to attend the April 4th City Council Caucus session. The presentation given by Ocean County Engineer, Ron Lotrecchio on the Maryland Ave. discharge pipe was interesting and informative.

I have reviewed the water quality data on the discharge collected by CME Associates on October 8, 2005, along with previous bacteria data collected by Ocean County Health Department (OCHD). Both of these data sets indicate a significant bacteria problem in the stormwater. Bacteria levels reported by the Ocean County Health Department reveal Enterococci bacteria levels that are four times higher than the level that triggers beach closures (PPB Discharge = 450 colonies/100ml, Daily Max for Beach Closure = 104 colonies/100ml). The CME results indicate very high values for Biological Oxygen Demand (BOD) for both samples taken (Sample C = 156 mg/L and Sample E = 72.0 mg/L). BOD measures the rate of oxygen consumption by micro-organisms (including bacteria) in the water sample, it is used as an indicator of water quality and moderately polluted rivers usually have a range between 3-8 mg/L, so as you can see, the water discharging from the outfall pipe appears to be significantly degraded, most likely due to very high levels of bacteria. The CME data also identified high concentrations of lead and oil/grease. The county engineer described a situation where excess storm water overwhelms the current system requiring the water to be rerouted onto the borough's beach. Therefore, the borough must address both issues of reducing the contaminant load and the volume of water that enters the stormwater system.

The discharge is coming from the stormwater elimination system, which indicates that all three of these contaminants originated on land and/or city streets and enters into the storm drains during storm events. The borough has the opportunity to address these specific problems and to develop/design/implement solutions through adoption of an effective Stormwater Management Plan (SWMP). Not only is a SWMP the solution to this exact scenario but also they are required by law. More importantly, effective stormwater management reduces flooding, sediment loading into waterways, beach closures and eutrophication of lakes.

Specifically in this instance, adopting a good SWMP will save the borough money in the long run by reducing street flooding and the flow of contaminated sediment into Lake Louise, Twilight Lake and the Lake of the Lilies as well as eliminating the unsightly and unhealthy conditions at the Maryland Avenue beach.

The first step is to identify potential sources within the drainage area. There are many different sources including:

1) large grassy areas (pets, geese-bacteria),
2) dog parks (pets-bacteria),
3) illegal cross-connections,
4) large parking lots (oil/grease and lead), and
5) vehicle/equipment storage areas (oil/grease and lead).

This preliminary step may identify some simple things that can be done to reduce run-off. For example, a comprehensive inspection of the borough maintenance yard often reveals vehicles leaking oil, unsecured/poorly contained storage of salt, used oil, paint, etc. A thorough clean-up and continued upkeep can eliminate sources of contaminants with little or no cost to the borough. Increasing the frequency of street sweeping will remove lead and oil/grease from the roadways before they can enter the stormwater system.

Clean Ocean Action encourages you to engage the public in your efforts. Many people are not even aware of the direct connection between what they do in their own yards and what is happening on the beach several miles away. Public education is the key to helping citizens understand the relationship between the brown sludge that stains their beach and feeding the geese, failing to clean up after their pet, improperly disposing of used oil or over fertilizing their lawns. Adopting pet waste ordinances and wildlife feeding restrictions are only effective when they are strictly enforced and followed up with education and outreach. Providing pet waste stations in popular parks and natural areas that include pet waste bags and receptacles for disposal often make the difference between people picking up after their pets or just leaving it behind.

At the same time, the borough should consider additional measures to further reduce flooding and contaminant loading. There are both structural and non-structural Best

Management Practices (BMPs) that can be required through the adoption of city ordinances or implemented by the city itself, in order to reduce flooding and loading of bacteria, lead and oil/grease from the streets and into the stormwater system.

Structural BMPs include filtration systems that can be placed in the collection system (most likely at the well in the pump house) to remove contaminants before the excess water is discharged onto the beach. There are several different engineered filtration systems, many of which are designed to handle large volumes of water. These options are worth further exploration, as they may be a very viable option for the borough.

In addition, there are also non-structural BMPs that not only address contaminant loading, but also reduce stormwater volume. Reducing volume will result in multiple benefits to the borough, including:

1) reducing street flooding,

2) reducing discharge of excess water onto the beach, and

3) promoting ground water recharge.

Requiring a vegetative buffer between large grassy areas and the street, which would slow down the sheet flow of water off the lawn and help remove bacteria and contaminants through uptake from the plants, can significantly reduce run-off. Encouraging citizens to plant rain gardens and/or native vegetation in place of large areas of grass will also reduce run-off, as would reducing/limiting the amount of impervious cover through the use of turf block, pavers and gravel, in place of concrete and asphalt.

The topic of stormwater management is expansive and I have only described a few of the actions/options available to the borough to manage the specific issues. There are many resources available to assist the borough on this important issue, including a Stormwater Management Guide that Clean Ocean Action has put together. This guide is in draft form but I have included a copy as I feel it still contains valuable information, even in its current form. The guide also contains a list of additional resources that I would encourage the borough to utilize.

It is important for the borough of Point Pleasant Beach to regard the state requirement to adopt a Stormwater Management Plan as an opportunity to resolve a persistent flooding

and beach discharge problem. There may even be funding opportunities available to the Borough through the New Jersey Department of Environmental Protection's Stormwater Management Office (http://www.state.nj.us/dep/watershedmgt/financial_resources.htm).

Thank you for the opportunity to assist the city council of Point Pleasant Beach Borough as you move ahead on this important environmental issue. I hope this information will be useful. Please feel free to contact me if I can be of any further assistance as Clean Ocean Action is always interested in helping municipalities improve ocean water quality.

Sincerely,

Jennifer Samson, Ph.D.

Principal Scientist

Clean Ocean Action

E-mail attachment: Clean Ocean Action's Draft Stormwater Management Guide

cc: Ralph Coscia, Citizen's Rights to Access Beaches (C.R.A.B.)