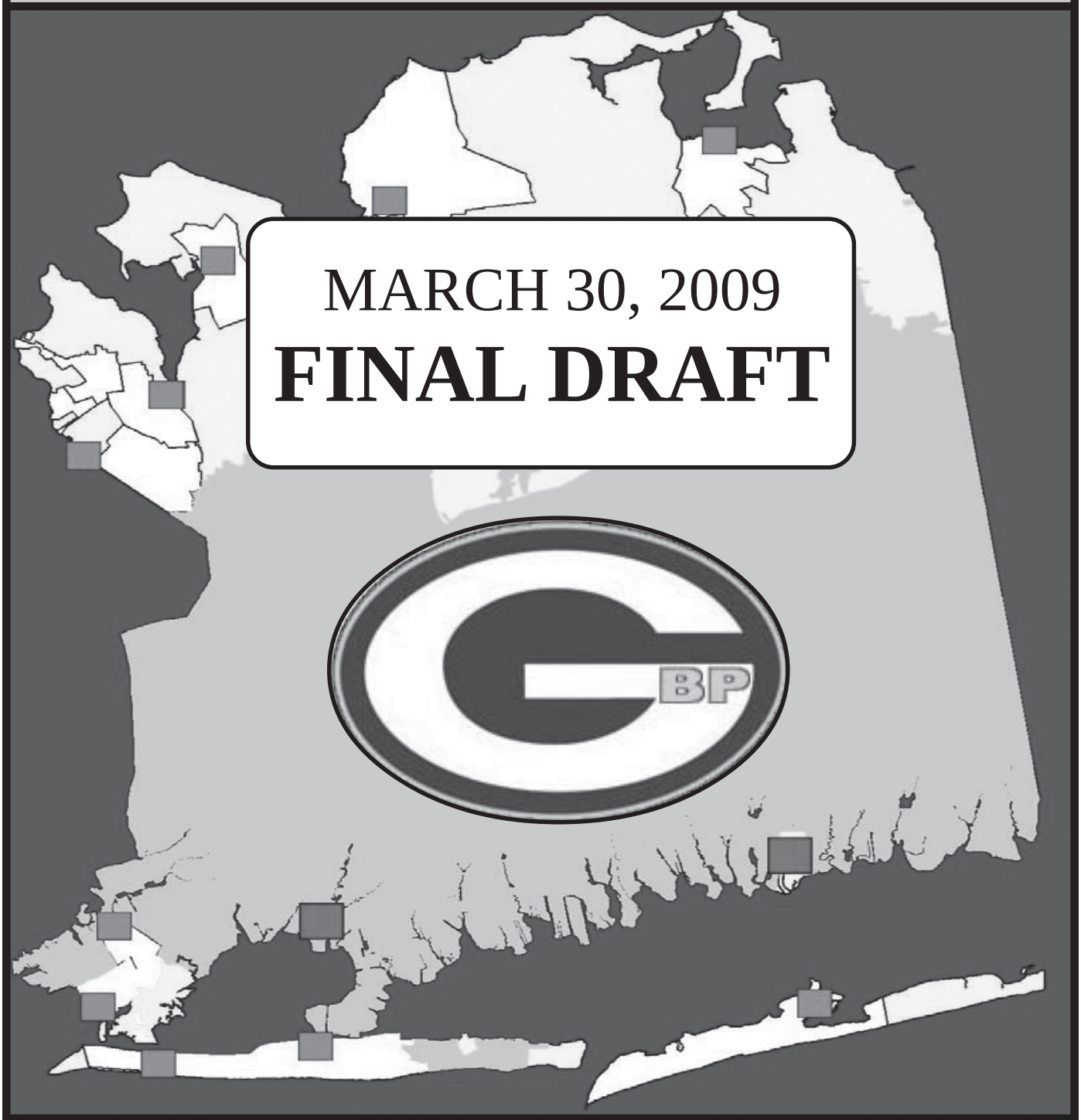
GREEN BAY PARKERS.ORG

GREEN BAY PARKERS.ORG
SAVE THE BAY PROPOSAL



MARCH 30, 2009

FINAL DRAFT

MARCH 2009

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This report presents the findings from research conducted by Green Bay Parkers.Org and offers proposed solutions to better sewage/stormwater treatment.

The report is organized in the following structure:

In January 2008, the majority on the Nassau County Legislature voted to pass County Executive Tom Suozzi's Sewage Consolidation plan, which would have closed the sewage treatment plants in Cedarhurst, Lawrence and Long Beach and diverted the flow into the Bay Park Sewage Treatment Plant.

For 4 months, concerned residents of Bay Park/East Rockaway and the surrounding communities fought the county at every turn to prevent this ill-conceived plan from becoming a reality.

Finally, the determination of the residents and their spokesgroup, Green Bay Parkers.Org, paid off and the consolidation plan was removed from the county budget before it was passed in April 2008.

While this has prevented the Bay Park Sewage Treatment Plant from receiving any more influent, it did nothing to address the concerns of residents about the environmental impact of a sewage plant that dumps almost 70 million gallons of treated effluent into Reynolds Channel in Hempstead Bay on a daily basis.

The purpose of this report is to show realistic alternatives in sewage treatment and how they could be applied to help save the bays and estuaries of southwest Nassau County by exploring various processes of sewage treatment and storm water run-off, the two biggest causes of pollution to Hempstead Bay, and lessen the environmental impact the plants have on the western bays and it's estuaries.

Nassau County's Bay Park Sewage Treatment Plant (STP) discharges almost 70 Million Gallons Daily (MGD) of treated effluent to Reynolds Channel. In addition to the Bay Park STP two other sewage plants, Lawrence STP and Long Beach STP, have outfall pipes in the bay. Together they add another 8 to 9 million gallons of sewage each day to the fragile ecosystem of Hempstead Bay.

The Bay Park STP is the only large scale STP on Long Island where a major sewer pipe empties into an enclosed bay and is allowed to operate with fewer environmental restrictions than the North Shore plants that flow to Long Island Sound. The other big plant on the South Shore, Cedar Creek in Wantagh, discharges it's effluent into the ocean, as do the large STP's in Suffolk County.

State environmental officials consider Hempstead Bay to be an "impaired" waterway and environmental groups, such as Operation Splash and Citizens Campaign for the Environment, say that decades of effluent have clouded the western bays and that nitrogen has triggered algae blooms that smother life on the bay bottoms. They want Nassau County to improve treatment at Bay Park and ultimately extend the outfall pipe out to the ocean.

"It doesn't take a rocket scientist to know that millions of gallons of sewage a day is going to diminish the water quality of the bay," Adrienne Esposito, an activist from Citizens Campaign for the Environment, was quoted as saying in a Newsday article about the western bays.

A regional planning board study that was conducted in 1976 found that sewage treatment plants in southwest Nassau dump 16,000 pounds of nitrogen that is contained within the effluent into Hempstead Bay every day, the largest amount released into any Long Island bay. Sadly, very little has been done since then to monitor these nitrogen levels or explore how the sewage affects the bay's ecology. Yet while The Department of Environmental Conservation (DEC) seemingly ignores the plight of the South Shore bays, millions have been spent to solve water-quality problems in Long Island Sound and Jamaica Bay.

The DEC announced in December of 2007 that they would undertake a detailed study of western Hempstead Bay to identify the sources of suspected contaminants such as nitrogen. Hempstead Bay was first listed in the State's 303(d) in 2006 as an impaired water body due to possible over enrichment of nitrogen from point and non-point sources.

This listing is the first step in recognizing that Hempstead Bay is impaired and that a Total Maximum Daily Load (TMDL) or a watershed restoration plan is needed. The TMDL is a comprehensive process that looks at all sources of nitrogen into the bay and determines how best to reduce the nitrogen loading into the bay. The listing was done based on input from the South Shore Estuary Reserve (SSER) Office, local government groups, and with the knowledge of New York State DEC staff.

Environmental advocates have been pushing for a TMDL analysis for Hempstead Bay since 2001 because, when completed, the DEC's reports have led to government mandated improvements for sewage treatment facilities on the North Shore to proctect and clean up the water.

In March 2008, NYSDEC Regional Citizen Participation Specialist Bill Fonda said in a letter to Green Bay Parkers.Org, "The DEC has committed staff time this year (2008) to initiate the TMDL process by directing and overseeing the TMDL process through the South Shore Estuary Reserve Office. The TMDL process is tentatively scheduled to be completed by the end of 2013. During this process, meetings will be held with the SSER Citizens Advisory Commission. At the end of that process, a public workshop on the draft TMDL will be held." As of the publication of this report, the status of the TMDL is not known.

While waiting for the TMDL to be completed, members of Green Bay Parkers.Org have been compiling research to find realistic solutions to combat the negative environmental impact associated with the sewage plant's effluent being dumped into the bay.

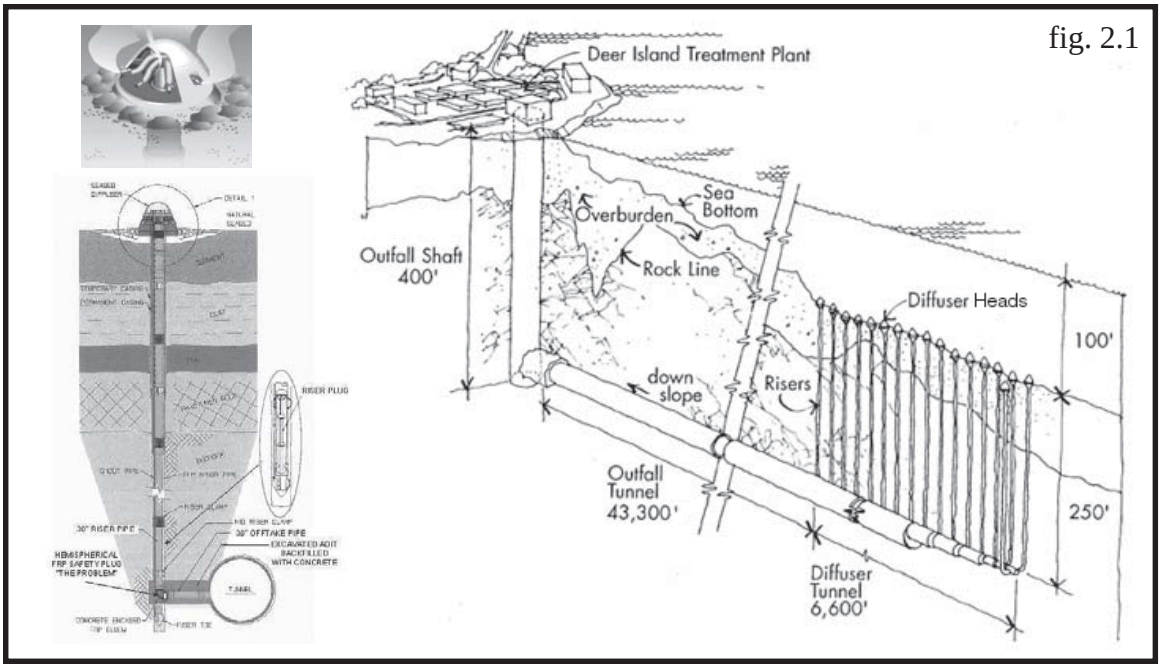
One solution that has been discussed by various politicians and activist groups for over 30 years is to extend Bay Park's effluent outfall pipe in Reynolds Channel 2 to 3 miles further into the Atlantic Ocean. The biggest hold up to procuring an ocean outfall pipe has been the price tag attached to it, which is estimated to be anywhere from $200 to $300 million.

An example of the benefits of an ocean outfall pipe can be shown by the success of the Deer Island STP in Boston, MA. In the late 1980's, Boston Harbor was listed as one the filthiest harbors in America due to sewage from several plants dumping their effluent into the shallow harbor at a dilution rate of 14 parts seawater to 1 part effluent causing untreated human waste, condoms, syringes, tampon applicators and other nasty things to wash up on the shore. The Environmental Protection Agency (EPA) recommends at least a 50 to 1 dilution rate for sewage plant effluent.

After years of negotiation, legal battles and construction holdups, the facility at Deer Island, which processes an average of 350 MGD of sewage, was on-line with a new 9.5 mile ocean outfall pipe and began using it in September, 2000.

The new outfall pipe (fig. 2.1) starts straight down underneath the plant and reaches a depth of 400 feet, using gravity to force the effluent out of the pipe. The effluent then travels 9.5 miles through an effluent outfall tunnel that is buried into the deep rock located underneath the seafloor and is 24 foot in diameter. The last 1.25 miles of the outfall pipe are equipt with 53 effluent diffusers that rise up from the deep rock to diffuser heads at the seafloor. Each diffuser head disperses the effluent through eight ports (over 400 diffuser ports in total) into 100 feet of water diluting the effluent to 100 parts seawater to 1 part effluent.

fig. 2.1



Since the outfall pipe has been relocated to Massachusetts Bay from Boston Harbor, the water quality of the harbor has improved dramatically. Data collected over several years indicate that nutrient levels and algae populations have decreased to typical estuarine levels, bacteria counts in the water decreased by more than two thirds, and fish populations, such as fluke and flounder, and shellfish are making a strong comeback.

But is an ocean outfall pipe enough? Is dillution the solution to pollution? There are many who argue that an ocean outfall pipe just moves the problem of polluting the water with sewage from one area to another, and eventually we will see the bay becoming more

and more polluted due to the effluent washing back towards the shore. James Tripp, general counsel for the Environmental Defense Fund, stated in a Newsday report about the western bays that over time, sewage dumped in the ocean can cause major problems, such as algae blooms and a low oxygen level. "An assumption was that the ocean was kind of an infinite sink for nitrogen. That's not true," Tripp said in the report.

In Orange County, CA, new solutions to sewage treatment allow treated effluent to become so pure that 70 MGD of it is now being reclaimed after it's pumped into a groundwater basin, where it mixes with other water and filters through sand, clay and gravel, and is then re-used as safe, purified water coming from your tap. When the Orange County plant's full potential is realized, up to 130 MGD could be added to the county's fresh water supply. This would help the sewage plant reduce it's effluent output to about half of the 240 MGD it now releases through its ocean outfall pipe.

The concept of recycling wastewater to meet drinking water standards is not new. There are cities in the U.S. and abroad that have used the concept of "indirect potable re-use" for many years. This process involves disinfecting the water before pumping the effluent into an aquifer or reservoir. The water then sits in the reservoir for a certain period of time before it is distributed to public drinking water wells. While this concept works well with no adverse effect on residents, it is for small scale sewage operations. Most plants that use this technology recycle approximately 5 MGD on average.

The new system in Orange County, CA is the largest and most high tech in the world. The system began operating in January of 2008 and uses a three step process to remove contaminants from the water. The water is first returned to the sewage plant in the San Fernando Valley, where it goes through a series of micro filters to remove solids and bacteria. The water is then subjected to a "reverse osmosis" treatment (fig. 2.2) which passes the water through a membrane filter that removes viruses, salts, pharmaceuticals

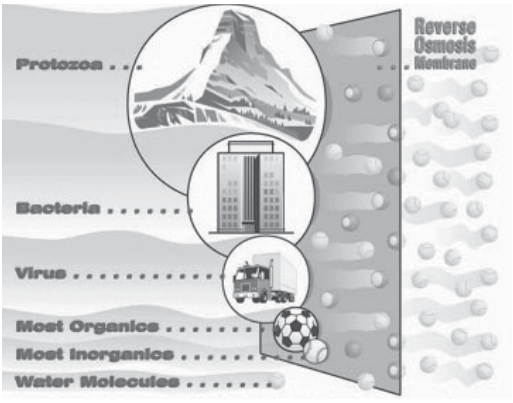


fig. 2.2

These objects show the relative sizes of particles that are filtered out by a reverse osmosis membrane, compared to a water molecule the size of a tennis ball. Water molecules are forced under high pressure through the molecular structure of the membrane. Purified water is collected on the other side of the reverse osmosis membrane while particles remain trapped on the other side of the membrane due to their large size.

and other harmful materials. The final step in the process blasts the water with ultraviolet light and hydrogen peroxide to get rid of any remaining contaminants.

From there it travels to what are known as “spreading grounds” where the water mixes with other water and is allowed to seep through layers of sand, gravel and clay for more filtering en route to the underground aquifer. The water then spends 1 to 2 years below ground mixing with the natural water in the aquifer before the recycled water returns to a purification plant. Only then is the water considered safe for public use. The Orange County Water District, which is in charge of managing the county’s groundwater basin, compares the quality of recycled water to that of distilled water.

There are many people who are still leery about the whole “toilet to tap” process of recycling sewer water, but there are numerous benefits to water recovery. Recycling water can help to cut down on the amount of effluent discharged into the waterways by sewage treatment plants. The reverse osmosis process followed by treatment with ultra violet light and hydrogen peroxide effectively removes harmful pharmaceutical compounds, endocrine disrupters (a series of compounds found in plastics and birth control pills) and viruses, such as hepatitis, that can be spread through oral contact with bacteria like fecal particles in the water.

By comparison, the Bay Park STP doesn’t even have the technology to remove the chlorine, ammonia or nitrogen from its’ effluent. One can only imagine the tremendous amount of pharmaceutical and plastic compounds that are being dumped unabated each day into Reynolds Channel.

Another process for creating cleaner effluent to help save the bay from its impending doom is using a “bio-filtration” system (fig 2.3) to clean the sewage. Many cities across the country are constructing or are already utilizing artificial wetlands to treat sewage. Wetland plants like cattails and giant reeds, along with white birch trees, have a natural ability to absorb and assimilate most of the substances along with other nutrients.

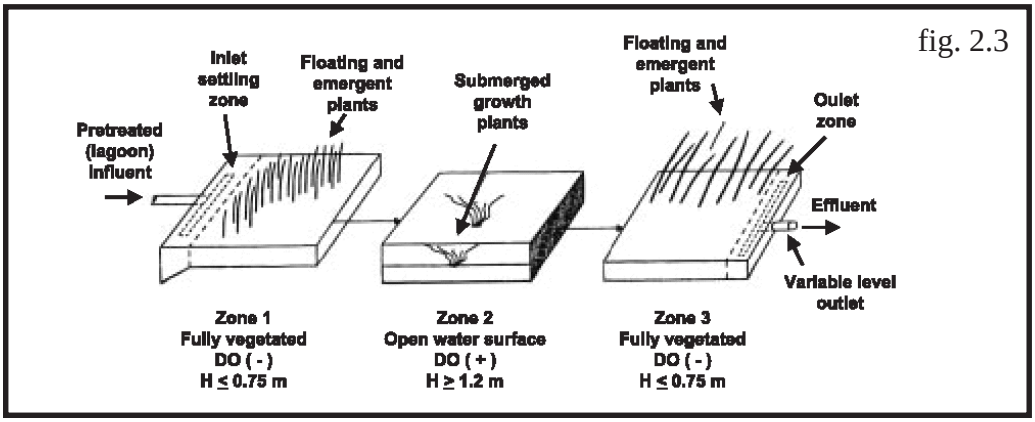


fig. 2.3

Bio-filtration relies on natural biological processes to cleanse surface water of nutrients and organic debris. As sewer water moves through the wetland vegetation, solids are suspended and sink to the bottom. Natural chemical reactions along with microbial activity then take place in the oxygen depleted (anaerobic) water which decomposes the nutrients, along with compounds of nitrogen and phosphorus, and transforms these pollutants into simpler substances and thereby restores the oxygen to the water.

People have only recently begun to understand and appreciate the crucial role natural wetlands play (fig. 2.4). In addition to preventing erosion, controlling floods and protecting aquatic life, wetlands are valuable in their ability to filter pollutants washed in from streets.

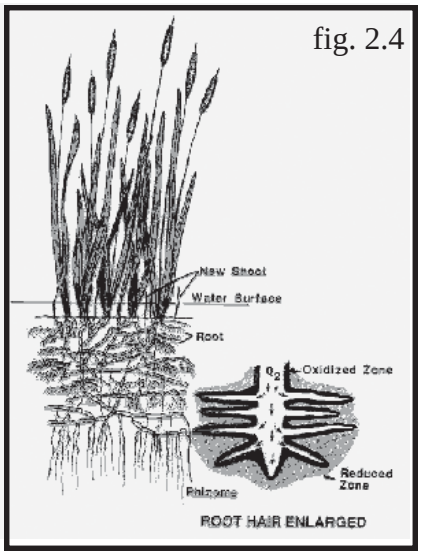


fig. 2.4

The biggest advantage to a natural bio-filtration system is its low cost. The construction of a wetland filtration system is approximately half the cost of a conventional sewage treatment plant. Wetland filtration is also inexpensive to operate because the wetlands essentially maintain themselves.

Another excellent example of using green technology to combat polluting the bays and estuaries can be found by studying the Bear River Solar Aquatics Wastewater Treatment Facility in Nova Scotia, Canada which began operations in 1995.

The process begins with raw sewage influent directed to a blending tank. Bacteria is then added by way of recycling of the secondary solids from the clarifier. The water is aerated to break up the solid material and convert it to prime material for the subsequent ecosystems to feed on. This process is called bio-augmentation (fig. 2.5). Sludge is not produced as in conventional treatment systems.

The water then goes into solar tanks that contain mini ecosystems. The water is gravity fed from one to the next and inside each tank are specially selected algae, zooplankton, phytoplankton, snails, fish and plants that feed on the organic compounds in the water. As the wastewater progresses from one tank to the next, more and more of the organic compounds are removed.

After the last tank, the wastewater flows into a solar pond. The pond is divided into three sections with each containing the same ecosystems as the tanks, only on a larger scale. The water is aerated to help accelerate the consumption of organic material. The effluent is then pumped into a gravity clarifier/marsh where various marsh grasses provide denitrification, nutrient uptake, phosphorous removal, and final polishing and clarification.

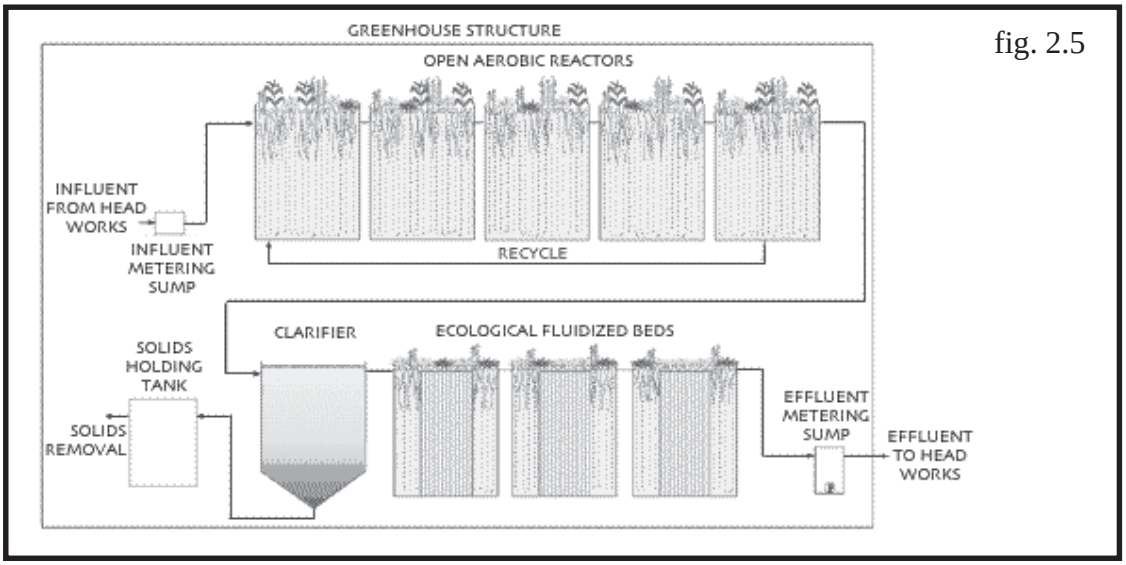


fig. 2.5

Although it has not yet been necessary, the water could also be passed through a swirl separator and a rotary drum filter where any remaining solids are removed and sent to underground stabilizing tanks for aerobic digestion and then applied to a reed bed for composting.

Finally, the effluent is UV disinfected and gravity fed into the Bear River. Monitoring has shown that the final water meets or exceeds environmental standards. The solar aquatic system is cost-effective as it provides secondary and tertiary treatment at the same cost as traditional methods providing only primary treatment. In addition, the odorless and aesthetically pleasing appearance of this facility greatly improves the quality of life for those who live nearby.

A benefit of this system is the high degree of diversity in the ecosystems. Because of this, they are not as vulnerable to toxins as systems that rely on only a few specialized microorganisms. Furthermore, they are self-regenerating and effectively run themselves, with little operator intervention required.

The only downfall of this process is that up until now it has only been done on a small scale, but larger solar aquatic plants are currently being built. For example, there was an artificial wetlands system built to handle sewage at the Columbia Regional Wastewater Treatment Plant in Columbia, MO. that has recently increased capacity from 13 MGD to 20 MGD with no ill effects.

Another factor contributing to the demise of Hempstead Bay is stormwater run-off. Stormwater gathers a variety of pollutants that are mobilized during run-off events (fig. 2.6). Nutrients such as phosphorus and nitrogen can promote the overgrowth of algae, deplete oxygen in the waterway and be harmful to other aquatic life. Toxic chemicals from automobiles, sediment from construction activities and careless application of pesticides, herbicides and fertilizers threaten the health of the bay and can kill fish and other aquatic life. Bacteria from animal wastes and illicit connections to sewerage systems make the bay unsafe for swimming and fishing/shellfishing.

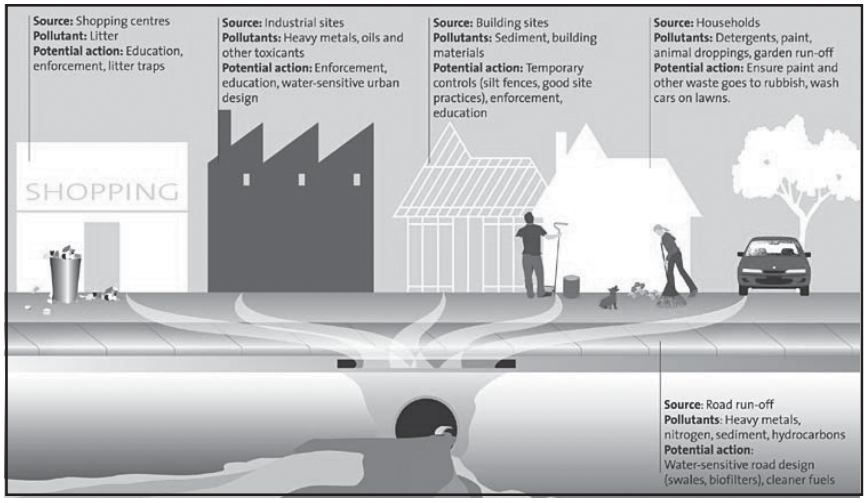


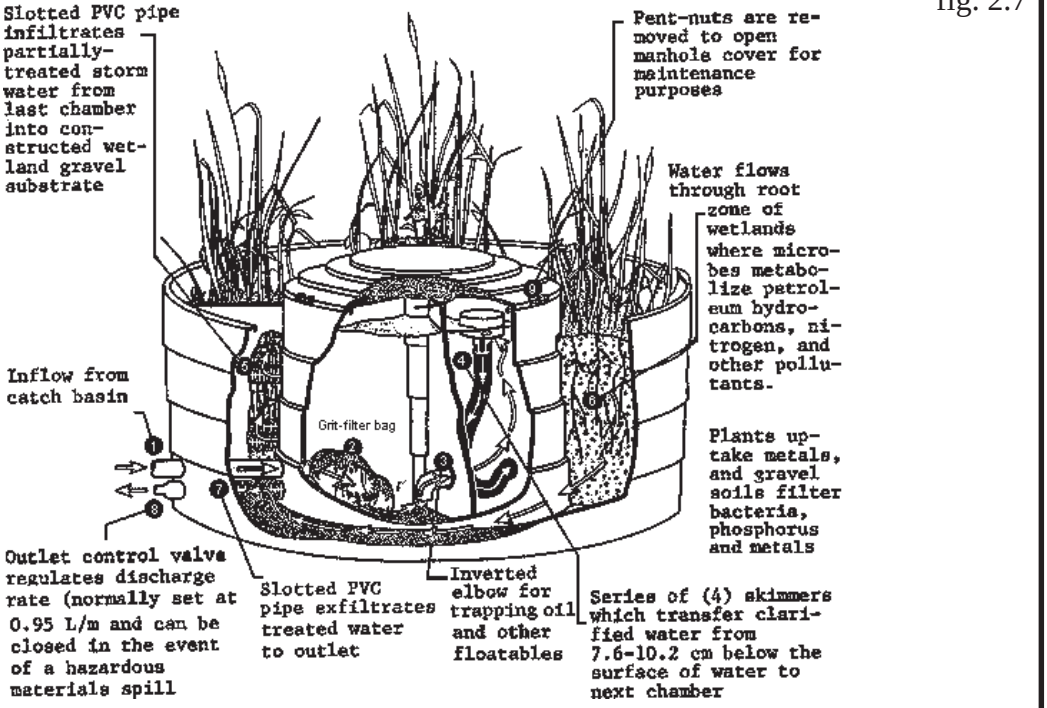
fig. 2.6

A number of new technologies exist to treat stormwater but have been installed and operated by relatively few communities, even though field tests show improved performance for old stormwater systems.

One of these new processes uses bio-filters called the Storm Treat® System and was developed in 1994. After storm water is pre-screened to remove large particles of debris,

the water then flows into tanks that have constructed wetlands contained within (fig. 2.7) and sits inside for a period of 4 to 5 days before being released into the bay.

fig. 2.7



The water is naturally cleansed through the wetlands root zone where microbes metabolize petroleum hydrocarbons, nitrogen and other nasty pollutants. The plants inside the tank absorb all the metals while the gravel soil acts as a filter to remove bacteria, phosphorus and other materials. This system has performed better than expected in cleansing stormwater and studies show it removes almost 95% of pollutants. This system has been successfully used to protect shellfish beds that have been closed due to high coliform levels.

Another recent technology is called the Vegetative Rock Filter. This process is the same as the one used by many sewage treatment plants, but the concept has been applied to treat stormwater run-off only since the mid-90's.

The Vegetative Rock Filter (fig. 2.8) works by sending pre-screened influent through a series of connected tanks filled with several feet of aggregate that are planted with wetland plants. The system utilizes biological action and root uptake to remove

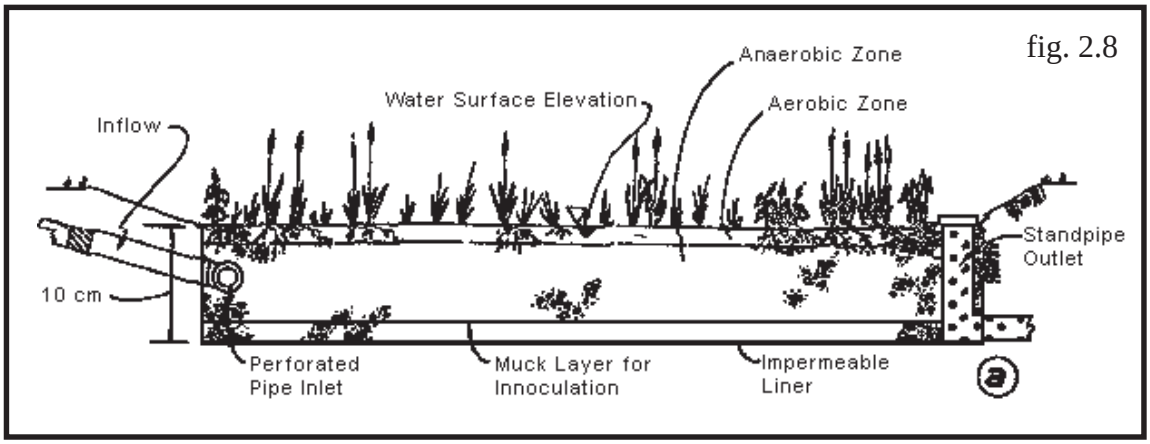


fig. 2.8

pollutants. This system has also been proved to remove up to 95% of pollutants from stormwater. It also has proved to remove some nutrients that are missed by most other stormwater treatment systems. The only downfall is this system takes up a lot more room than conventional stormwater treatment systems.

The residents of Bay Park and the surrounding communities are still not convinced that the county is doing its due diligence to protect the bay. The sewage treatment plant at Bay Park has not had any renovations on its effluent output since the county proposed their flimsy consolidation plan to residents in 2008. The plant still stinks occasionally, the beach at Hewlett Point still shuts down a few days every summer due to high bacteria levels, shellfish harvesting is still prohibited in the bay and it's still pumping almost 70 million gallons of effluent into Reynolds Channel each and every day.

Due to the county's apparent inactivity concerning the Bay Park STP, the members of Green Bay Parkers.Org have decided to be proactive by researching alternatives and creating various scenarios to upgrade the way the county handles sewage treatment in order to help obtain our goal - Saving the Bay.

We believe any of the following 3 options would be excellent alternatives to the way Nassau County currently treats sewage and needs to undergo a study conducted by the county to see the feasibility of making one of these options the future of sewage and stormwater treatment all across Nassau County.

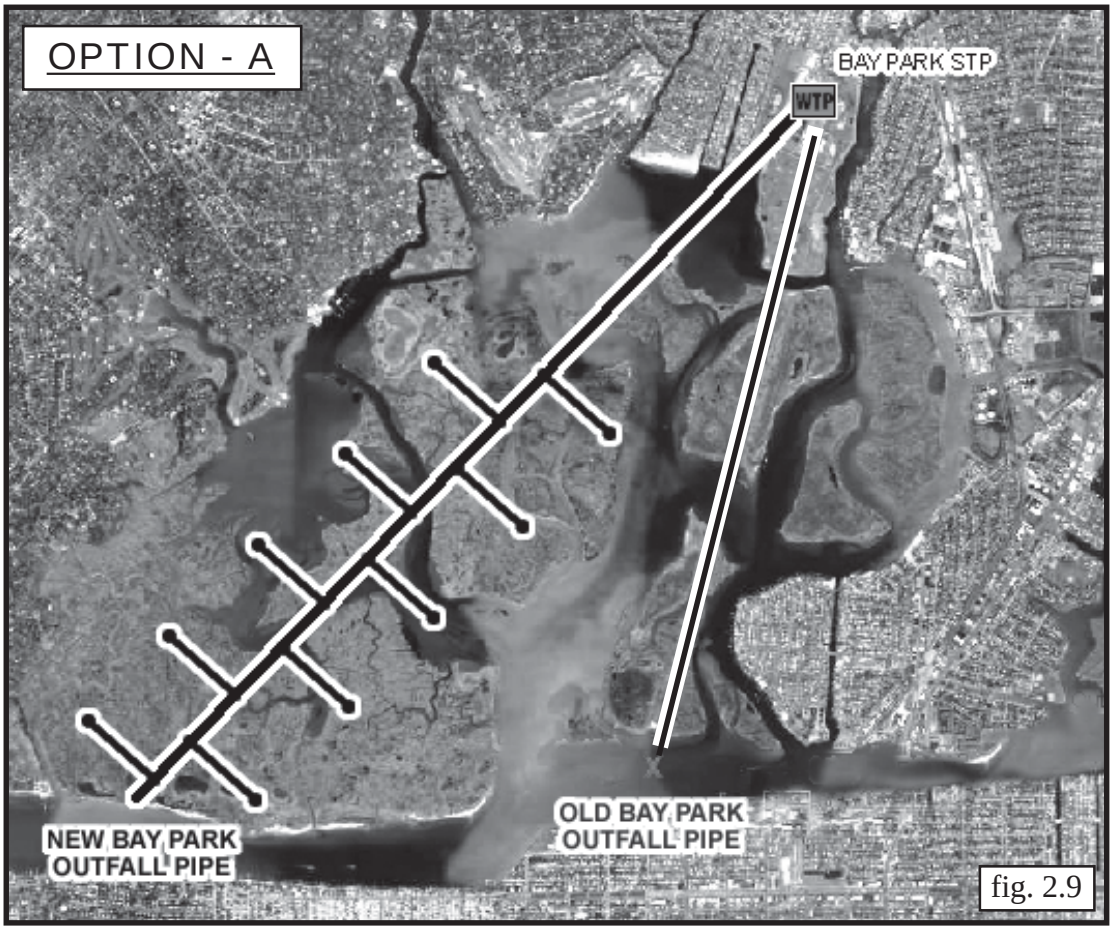


fig. 2.9

OPTION - A

The raw sewage first flows to the plant at Bay Park, as it does now, where it goes through a series of mechanical screen filters and grit tanks to remove large screenings and grit. This natural waste material (rocks, sticks, etc.) would then be taken to landfill. The sewer water would then follow the existing process of flowing through settling tanks and aeration tanks to remove all the sludge from the water. The sludge would be processed as it is currently and taken off-site for disposal.

The water would then be subjected to “reverse osmosis” treatment and be forced through membrane filters to remove viruses, salts, pharmaceuticals, endocrine disrupters, etc. The water would then flow through a chamber under ultraviolet light while being doused with hydrogen peroxide to get rid of any remaining harmful contaminants.

From there the treated water travels to the hassocks area of the bay (fig. 2.9) which is flush with reeds and cattails. Lower areas of the hassocks could be raised up slightly to

help support plant growth. The water would then flow out of a pipe that extends from the plant in a south west direction to Reynolds Channel through a series of diffusers located just above the seafloor at regular intervals. When the treated water trickles out from the diffusers, it would mix with the water in the bay to dillute it even further and any remaining bacteria that survived during the treatment stages would be naturally absorbed by the lush beds of reeds and cattails growing in the hassocks.

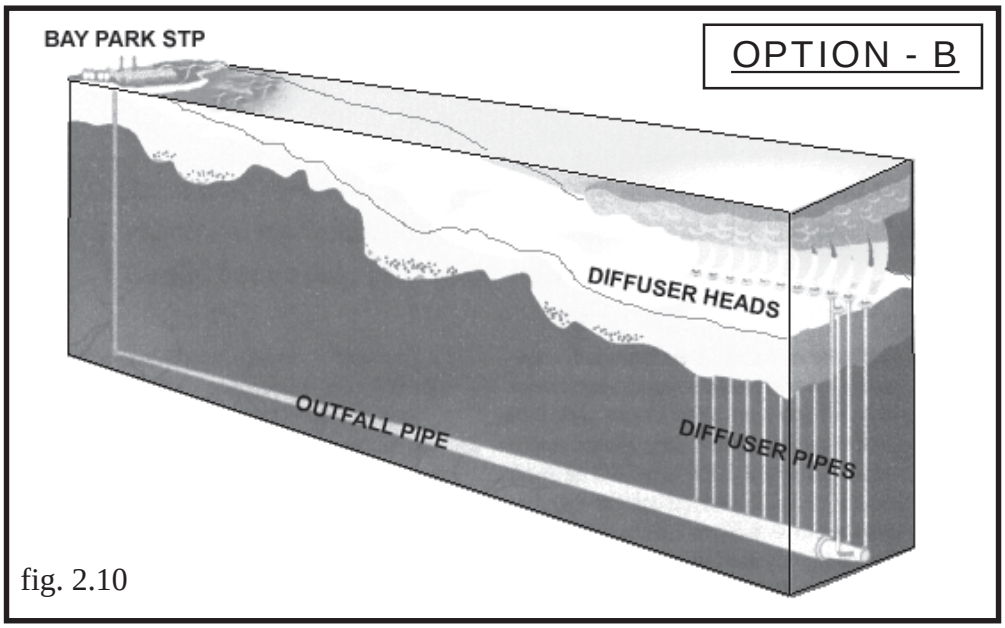


fig. 2.10

OPTION - B

In this scenario, the Bay Park STP would empty its effluent into the Atlantic via an ocean outfall pipe, following the model of the Deer Island STP in Boston, MA.

This process would follow all the steps listed in OPTION - A for cleaning the influent of grit, solids, bacteria, chemicals, etc. The major change would be that the effluent would be released offshore into the Atlantic Ocean instead of Reynolds Channel. The effluent would first be gravity forced through a pipe down to a depth of at least 400 feet, then travel at least a distance of 9 miles off shore through a large outfall tunnel that is buried into the deep rock located underneath the seafloor. The last mile or so of the outfall pipe would be equipped with effluent diffusers that rise up from the deep rock to diffuser heads located on the seafloor (fig. 2.10).

We believe by following the example of the success of the Deer Island STP in Boston, MA. the water quality of the western bays and estuaries will improve dramatically. We also feel an ocean outfall pipe would decrease nutrient and bacteria levels and algae populations, which would help the fish and shellfish populations that call the bay home.

OPTION - C

fig. 2.11

OPTION - C

This is the most drastic of all the aforementioned scenarios. This proposal suggests shutting down the Bay Park STP, along with the Cedarhurst, Lawrence and Long Beach sewage treatment facilities, and setting up a system of smaller, environmentally friendly “Solar Aquatics” wastewater treatment facilities at various locations across southwest Nassau County.

These facilities, like the system currently in place at the Bear River Solar Aquatics Treatment Facility in Nova Scotia, rely on a naturally occurring breakdown using tanks that contain mini eco-systems set in a “green house” type of structure to dispose of waste (fig. 2.11).

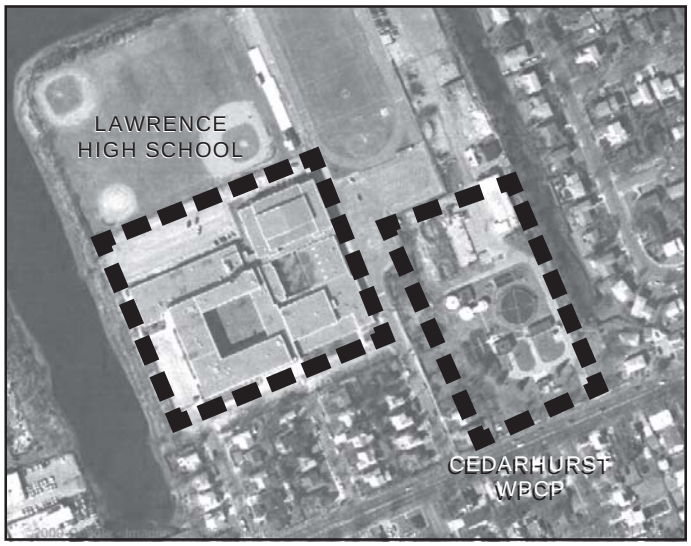
The high degree of bio-diversity contained in each tank’s ecosystem allows it to safely deal with toxins as a complex group and allows these facilities to produce no sludge that must be trucked away for disposal. Even more importantly, the facilities could be placed within densely populated residential areas because they are appealing to the eye and produce none of the odors usually associated with sewage treatment.

The resulting effluent from the these facilities can then be safely dispersed into local waterways with no ill-effects to the eco-system.

If this proposal is adopted and the effluent is deemed to pass or exceed environmental standards after an environmental impact study is done, then we would welcome the closing of the Bay Park STP along with the other 3 southwest Nassau County sewage treatment plants in Cedarhurst, Lawrence and Long Beach. The plants could then be converted to Solar Aquatics Treatment Plants.

The Cedarhurst Water Pollution Control Plant processes approximately 1 to 1.5 million gallons of sewage per day. It was run by the Village of Cedarhurst until it was purchased by Nassau County in 2008 as part of their short-sighted consolidation plan. The plant is located right next door to Lawrence High School (fig. 3.1) and it's effluent pipe runs beneath the school's football field to empty out into Mott Creek, a small off -shoot of Jamaica Bay.

fig 3.1



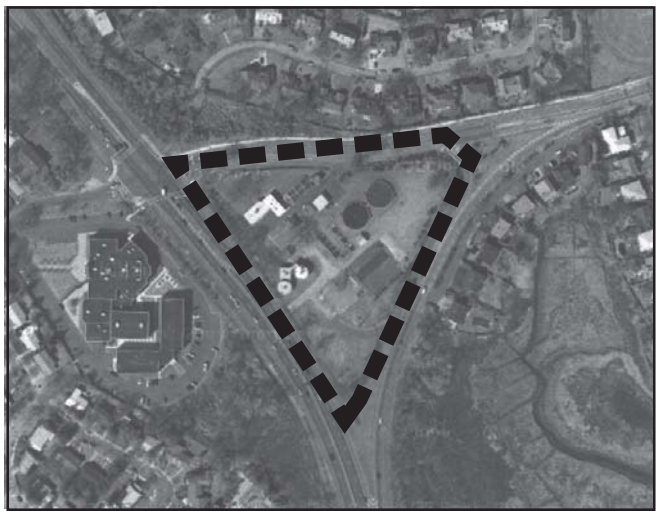
CLOSE-UP OF CEDARHURST PLANT

If either the OPTION - A or OPTION - B scenario recommended for the Bay Park STP (listed in section 2) are realized in the future, then our recommendation for the Cedarhurst WPCP would be to shut it down and sell the land to the highest bidder. Due to the Cedarhurst plants' small size and close proximity to Lawrence High School it could not serve any future purpose, such as a bio-diesel or stormwater processing plant, that would benefit Nassau County.

If the county decides that OPTION - C (listed in section 2) is the best plan for future sewage treatment, then we would recommend dismantling the Cedarhurst WPCP and using the property to construct one of the many Solar Aquatics Treatment Facilities that will be spread out across Nassau County.

The Lawrence Sewage Treatment Plant (fig. 4.1) processes approximately 1.5 million gallons of sewage per day. It was run by the Village of Lawrence until it was purchased by Nassau County in 2008 as part of their ill-conceived consolidation plan. The plant is located just off the Nassau Expressway (Rte. 878) and it's effluent pipe empties out into Bannister Creek, which then empties into Reynolds Channel.

fig 4.1



CLOSE-UP OF LAWRENCE PLANT

If either the OPTION - A or OPTION - B scenario recommended for the Bay Park STP (listed in section 2) are realized in the future, then our recommendation for the Lawrence STP would be to shut it down as a sewage processing facility and convert it into a Bio-Diesel Processing Plant.

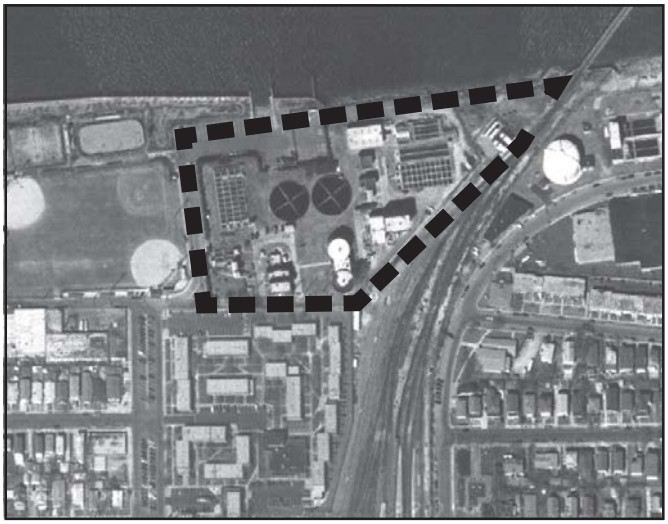
Bio-diesel is an alternative fuel made from vegetable oil (or animal fat) that can be used in any diesel engine without any modifications. Tailpipe emissions of bio-diesel are carbon-neutral, sulfur-free and boast an overall 90% reduction in toxic emissions (compared to diesel). Bio-diesel seems to be the best alternative fuel option at present.

The county could then recover grease and oil from restaurants across Nassau and Suffolk counties then after processing the oil to create bio-diesel fuel, it could then be used as fuel to run Nassau County fleet vehicles.

If the county decides that OPTION - C (listed in section 2) is the best plan for future sewage treatment, then we would recommend dismantling the Lawrence STP and using the property to construct one of the many Solar Aquatics Treatment Facilities that will be spread out across Nassau County.

The Long Beach Sewage Treatment Plant processes approximately 7.5 million gallons of sewage per day. It is run by the City of Long Beach, but was under consideration to shut down as part of the county's short-sighted consolidation plan. The plant (fig. 5.1) is located on the north side of the barrier island and it's effluent pipe discharges into Reynolds Channel, which is part of Hempstead Bay.

fig 5.1



CLOSE-UP OF LONG BEACH PLANT

If either the OPTION - A or OPTION - B scenario recommended for the Bay Park STP (listed in section 2) are realized in the future, then our recommendation for the Long Beach STP would be to either close it down or convert it into a stormwater treatment plant.

To properly treat stormwater and keep hazardous materials contained in it from entering our waterways, we feel it is the county's duty to fit the massive network of stormwater outfall pipes located throughout the southwest Nassau County with environmentally friendly stormwater filtration systems, such as the Aqua-Filter® System, that will treat the stormwater before it gets released into the bay.

Although this would be the best option environmentally, it may prove to be fiscally imprudent due to the sheer volume of stormwater outfall pipes. If the county decides against treating stormwater at the source then it may make environmental sense to convert the Long Beach facility into a stormwater run-off treatment plant.

Instead of letting untreated stormwater empty into the bay at various locations throughout the South Shore of Nassau County via hundreds of outfall pipes, the pipes could instead be connected, rerouted and tied into one large conduit which would send the stormwater into the Long Beach facility to treat the water and remove pollutants before it is pumped back out into the bay.

Stormwater could undergo a process similar to the way wastewater is treated so that we are positive that no chemicals, oils, toxins, pesticides, dog waste, etc. get washed into the storm drain during wet weather events and contribute to the pollution of the bay. This would also help to prevent the closing of local beaches in summer months after heavy rains due to high bacteria levels in the water.

If the county decides that OPTION - C (listed in section 2) is the best plan for future sewage treatment, or if they decide to fight pollution from stormwater run-off at its outfall source, then we would recommend dismantling the Long Beach STP and using the property to construct one of the many Solar Aquatics Treatment Facilities that will be spread out across Nassau County.

Green Bay Parkers.Org, speaking on behalf of residents of Bay Park/East Rockaway and the surrounding communities, have put together this proposal to illustrate that we are not content to sit idly by and watch as our waterways are choked of all life while the county does nothing to improve the sewage treatment process that effects us all.

We are not county executives. Nor are we county legislators, DPW commissioners, sewage plant engineers or paid environmental activists. We are merely concerned citizens who live in the shadows of the Bay Park STP and see, smell, taste and feel the impact the plant has on the environment everyday. We are the spawn of past generations that unknowingly contributed to the demise of the western bays by their lack of environmental awareness and we cannot turn a blind eye as the bays slowly die, because we have the knowledge of the environmental impact of dumping effluent into the bay on a daily basis that our forbearers did not.

We believe that it is the county's duty to provide a safe environment for it's residents. Every day that the county sits on their hands and does nothing to address its current process of sewage treatment is another day that almost 80 million gallons of effluent from the Bay Park, Lawrence and Long Beach STP's are dumped into Reynolds Channel.

We do not wish to wait until the bay is officially declared dead and unusable before investigating ways to improve water quality. We do not wish to wait until we see things such as large fish kills, brown tides, extended beach closings and the banning of all fishing become daily occurrences before we react and realize the undebatable truth that something has to be done about dumping all the effluent from our sewage treatment plants into the bay.

In order to avert an impending environmental disaster, the county must conduct true feasibility studies for all the processes described within our proposal and vet all options for sewage treatment and stormwater run-off to find a system that will ensure future inhabitants of southwest Nassau that the bay will still be there for them.

It is our belief that the county must become a leader in rethinking the way sewage is treated and processed on a large scale. Using the processes in the proposal, the county could then apply the new sewage/stormwater treatment process to other STP's on the South Shore such as Cedar Creek in Wantagh and the state-run Jones Beach facility. Nassau County could become the model for eco-friendly sewage treatment for other counties across the nation to follow.

In addition, we believe that by undertaking a massive infrastructure project of this magnitude at this time, the county will help its residents through the recession by creating hundreds of construction jobs, as well as new "green collar" jobs that will come when these new technologies in sewage treatment are put in place.

Opponents of this proposal may scoff at the ideas contained within and say it has more holes than the ozone layer and wouldn't float on top of an oil slick from the Exxon Valdez, but that just proves that they have missed the point. This proposal was written expressly with the intent to show Nassau County government officials that there are many alternatives to sewage treatment that need to be realistically looked at and studied.

Nassau County is already suffering an amazing loss of young and senior inhabitants due to high taxes and unaffordable homes. One can only imagine the exodus of residents from Nassau County should the bays become so polluted that fishing, swimming and even relaxing on the shore become prohibited activities. For what is the point of living on an island if the water surrounding it it toxic?

In closing, we believe the county needs to realize time is of the essence. When it comes to how Nassau County handles sewage treatment, the future is now because tomorrow may be too late.

IF YOU HAVE ANY QUESTIONS OR COMMENTS ABOUT THIS SEWAGE TREATMENT PROPOSAL PLEASE CONTACT US:

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Below is a list of the web sites and other media used by Green Bay Parkers.Org to help obtain all the technical information needed to create this proposal.

- NCDPW's Sewer System Master Plan Consolidation Feasibility Study
- Newsday
- New York Times
- www.accepta.com
- http://adsabs.harvard.edu
- www.apcc.org
- www.biodiesel.org
- www.biodieselnow.com
- www.biosciregister.com
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- http://fixstormwater.com
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