

New York State Department of Environmental Conservation  
Division of Environmental Permits, Region 2  
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John P. Cahill  
Commissioner

September 23, 1998

Paul S. Mankiewicz, Ph.D.  
The Gaia Institute  
99 Bay Street  
City Island, NY 10464

Re: Draft EIS  
Beneficial Use of Dredged Materials ... Royal Marina/Pelham Bay Landfill  
DEC No. 2-6003-00105/00001

Dear Dr. Mankiewicz:

Department staff have reviewed the Draft Environmental Impact Statement for the "Beneficial Use of Dredged Materials for the Improvement and Enhancement of Eastchester Bay Wetlands and the Water Based Economy of the Eastern Bronx". Overall, while the DEIS presents an interesting initial discussion of the creation of wetlands within a nearshore dredged material containment facility, there remain many unanswered questions about this complex issue that must be addressed before we can complete our review.

The dredging of the Royal Marina by itself is fairly routine and likely could move forward more rapidly if it were uncoupled from the construction of the confined disposal facility and wetlands creation at the Pelham Bay Landfill. You should advise the marina operator to contact us if this option is being considered. Additional information including a bathymetric survey, method of dredging and alternative dredged material disposal area will be required.

Following are some specific and general comments/questions regarding the DEIS:

1. On pages 2 and 6, Item #1 asserts that contaminant discharge will be reduced by reducing the surface area of the sediments that are to be dredged from the marina. While this may be true, it makes the assumption that the sediment remaining in the marina after dredging will be uncontaminated, that no new contaminated sediment will be deposited in the marina and that the marina area will not have any impact on water quality. This assumption needs to be supported.
2. Item # 2 on pages 2 and 6 assumes that the wetlands habitat created will be more valuable than the existing subtidal area that will be destroyed. Before that can be determined, the value of the existing habitat must be described in greater detail through current bathymetric and biological surveys. The DEIS should also discuss the value of the habitat exchange if the project does not manage to create a functional wetlands area and what provisions will be made to ensure that wetlands remain functional after the end of the study.
3. The DEIS needs to discuss the ownership of the underwater lands and what is necessary to obtain any agreement or easement necessary for the use of the area.
4. Page 5 of the DEIS discusses seeding the creeks with oysters as a means of erosion control. Although this may be nice as a reintroduction of a historical species to the area and natural re-establishment of oyster may indicate improving water quality, the department is generally opposed to artificial introductions of shellfish to uncertified (closed) areas. This creates an

"attractive nuisance" because oysters are commercially and recreationally valuable, but in this area would be a threat to public health.

5. Page 7 discusses the migration of the landfill leachate to the north and east. More supporting documentation is needed of this including volumes and contaminants of concern. The landfill has been capped and the majority of leachate creation/flow due to infiltration will cease, but it will take 5+ years for this engineering solution to work. The other source of leachate creation is upflow from the bedrock. How will the created wetland affect this leachate flow.
6. More detail is needed with respect to the leachate treatment aspect of this project including uptake by plants and animals and the effectiveness of treatment during cold weather periods.
7. The DEIS should discuss what provisions will be made for evaluating the created wetlands after the end of the three year study, what criteria will be used, what provisions there will be if the criteria are not met and what plans are being made to maintain the area after the end of the study.
8. How does this project tie in with other proposed wetlands to be created near the landfill. How is this project related to studies by Sven Hoeger of Creative Habitat during the landfill remediation?
9. Page 12, #1. Again assumes that the created wetlands have more value than the subtidal habitat. This must be better documented.
10. Page 13, # 8. Better documentation of the occurrence of threatened/endangered species is necessary. This item also discusses ducks and winter flounder. The DEIS should address the potential migration of contaminants through the food chain to these and other biota. Also, silversides are mentioned as a major prey species for flounder - this may be true for Summer Flounder (Fluke) but not for Winter Flounder. Which species is being referred to?
11. Technical Appendix, page 4. Again assumes that sediment remaining in Royal Marina after dredging is "clean" and that there will be no new accumulation of contaminated sediment.
12. Technical Appendix, page 6. Provide information on the amount of leachate and contaminants of concern from the landfill occurring now.
13. Page 10, Tech. App., bottom. The leachate/groundwater at the landfill is one contiguous plume.
14. Page 11, third para. The landfill is 89.3 acres.
15. Page 14. The section on circulation and the calculations are unclear. Also, please discuss the impact of the structure on sedimentation and scouring of adjacent areas.
16. Page 19, Hydrocarbons. The DEIS claims that leachate treatment/pollution reduction will be a benefit of this project, yet makes unsupported assumptions that this will occur. It is likely that most of these reactions also occur in sediments (as opposed to soils). This claim needs much better support.
17. Technical Appendix, page 7. In order to determine whether there is a measurable improvement in water quality in the area, the existing water quality must be determined first. How and when will this be done? What plans are there to measure water quality during the construction of the containment facility, the creation of the wetlands and to verify water quality improvement subsequent to completion?
18. Technical Appendix, page 14, top. Provide characterization of the soft sedimentary habitat

that would be lost - bathymetry and biological survey.

19. Technical Appendix, page 16. Need detailed plan and discussion of stormwater pond creation and discharge to wetlands.
20. Technical Appendix, page 17. Do not support introduction of oysters or black (blue) mussels. Ribbed mussels are acceptable.
21. Technical Appendix, pages 25 - 26. A more thorough discussion of the alternative disposal options is needed. What are the costs? Discuss upland and in-water options.
22. Sampling Protocols and Results Appendix. Sediments were not analyzed for Dioxins. Is there a rationale of why this was not done? Give more detail on the "standard sampling protocols" that were used. What were the QA/QC and chain of custody procedures?
23. Samples were collected at the north side and south side of the marina but not in the center. The three north side samples were composited as were the three south side samples. Were all core similar in grain size and TOC? Was there any stratification of the cores? What led to the decision to composite the samples and only sample both ends of the marina? No detection limits were given for the various analytes. Metals were compared to NYS DEC sediment criteria but not VOC's or SVOC's.

Thank you for the opportunity to comment. If you have any questions, please contact me at the above address or call at (718) 482-4077.

Sincerely,

  
Charles de Quillfeldt  
Environmental Analyst 2

cc: S. Zahn  
P. Gallay  
J. Ferguson  
D. Adelugba  
N. Crawford  
M. Eapen  
M. Hellman, US ACE

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November 8, 2000

Paul Mankiewicz, Ph.D.  
The GAIA Institute  
99 Bay Street  
City Island, NY 10464

Re: Royal Marina/CDF at Pelham Bay Landfill  
DEC No. 2-6003-00105/00001

Dear Dr. Mankiewicz:

DEC staff have reviewed your responses to comments on the Draft EIS for the creation of a confined disposal facility to contain approximately 18,000 cubic yards of dredged sediment from Royal Marina in a 1.5 acre demonstration project. You also discussed the potential for a 30 acre CDF to contain dredge sediment from other facilities in a full build-out. You propose to create tidal wetlands habitat extending out from the shoreline adjacent to Pelham Bay landfill in an existing subtidal area. You contend that the created tidal wetlands will increase habitat diversity in the area and thus provide greater value than the existing habitat that will be lost as a result of the construction of the CDF. In addition, you propose to evaluate the effectiveness of the created wetlands to contain or reduce the contaminant levels in the sediment and possibly to reduce the contaminants stemming from landfill leachate. DEC believes that while CDF's may have utility as a means of containing dredged material when properly sited, the facilities must be located in areas of low habitat value in order that important resource areas are not lost.

Following are specific comments on your response.

1. Previous question 7 requested, partly, more information on what criteria will be used at the end of the three year study to measure its success, and what provisions will be made if the criteria are not met. The above concern was not addressed.

2. Previous question 10 requested, in part, that the DEIS address the potential migration of contaminants through the food chain to waterfowl and fish like winter flounder. This was not addressed, and the response should specifically deal with the potential for loss of contaminants from dredged sediments through the rock interstices into the surrounding bay, material which would be partly from the deeper and potentially more contaminated sediments in the marina. Also, the response should address the potential for contaminant loss from the proposed wetland which would, as proposed, act as a sink and concentrate contaminants from landfill leachate.

3. Previous question 15 requested that the discussion and calculations on circulation be clarified, and how sedimentation and scouring of nearby areas would be affected. The response was based on the full 30 acre build-out and not on the 1.5 acre demonstration, and did not address the question beyond a theoretical discussion of Reynolds numbers and calculated potential changes in current velocity. The response should confine itself to the proposal at hand and interpret the calculated current changes to potential scouring/sedimentation changes of the proposal that could result if the proposed demonstration is built.

4. Previous question 17 requested how water quality changes during and post-project will be evaluated. The response to this request was essentially that the intrinsic aim of the work is to provide a sound foundation to evaluate water and sediment quality in these kinds of projects. NYSDEC does not view this work as an academic exercise but as a project which has to meet its regulatory requirements, and thus restates the request. A suggestion would be to modestly increase the water chemical analysis described in the original proposal to include analysis of nearby bay water samples at appropriate stages of the project.

5. The response to previous question 18 represents the biological survey that was conducted to depict the area as not currently affording essential fish habitat for winter flounder, but other conclusions can be drawn. The benthic sampling conducted in January and April was not representative of peak benthic production periods, and are in fact the periods when seasonal decline are exhibited. Even under these conditions, a significant number of amphipod and polychaete species were found. Given this, comparison to other benthic survey results need to be better assessed prior to making any such conclusions. Better yet would be a follow-up survey during the summer months to correct this deficiency.

6. Previous question 19 requested a detailed plan and discussion of stormwater pond creation and wetland discharge. The response was again relative to the full build-out proposal, and not to the proposal at hand.

7. Previous questions 22 and 23 requested why dioxin analysis was not done and other questions relating to the sampling protocols and compositing strategy, including detection limits. The responses were that it was considered that a \$20,000 cost for dioxin analysis was too high, that compositing would save costs, and that the Corps did not provide New York State specific testing requirements.

a. Detection limits for the pesticides/PCB analysis is still not provided, and is still required.

b. Since compositing was done of the samples at the ends of the marina, the cost for dioxin analysis would be closer to \$4000. The previously requested dioxin analysis is still necessary, and can be conducted on a composite sample in the interest of cost savings.

c. If the applicant would have asked NYSDEC directly for a sampling and testing protocol, one would have been provided. Since the applicant is proposing in-water disposal of dredged material, the statement that certain analytical costs are beyond what the applicant believed was necessary at the preliminary regulatory stage is rejected. Also, the statement that a certain analysis would "not contribute to the development or use of a rational decision tree" is not within the purview of individual applicants to make decisions on, but rather of the regulatory agency (NYSDEC) with the responsibility of reviewing such applications. The applicant's comparisons of the analytical results to some of the worst areas of New York Harbor, setting them up as a standard is not accepted. The sediment analytical results are reviewed according to NYSDEC sediment screening classifications, as well as through program experience, and is the partial basis for some of the concerns listed above.

If you have any questions, please contact me at the above address or telephone. Technical questions regarding your proposal can be directed to Alex Lechich, Region 2 Marine Resources, at our Long Island City office or by telephone at (718) 482- 6061.

Sincerely,



Charles de Quillfeldt

cc: S. Zahn  
A. Lechich