

Response to Public Comments

Re: Proposed Total Maximum Daily Loads Regulation for Indian River, Indian River Bay, and Rehoboth Bay, Delaware.

Introduction

Delaware Department of Natural Resources and Environmental Control (DNREC) has proposed to establish and adopt Total Maximum Daily Loads for nitrogen and phosphorous for Indian River, Indian River Bay, and Rehoboth Bay.

As part of the public participation process, DNREC established an interagency TMDL workgroup with representatives from several state and federal agencies. DNREC also organized the TMDL Advisory Committee for the Inland Bays with representatives from many stakeholder groups. The Advisory Committee met on July 28th and August 11th 1998, at which time DNREC made presentations of the proposed TMDL and responded to the questions and comments. The proposed TMDL Regulations were published in Delaware Register of Regulations, Vol. 2, Issue 2, Saturday, August 1, 1998. A workshop was held September 2nd followed by a Public Hearing that evening. During the workshop, DNREC again presented the proposed regulation and the technical basis for the regulation and responded to questions and comments from the audience. During and after the hearing a number of commenters requested an extension of the deadline to make comments. DNREC extended the original deadline from September 11th to September 25th, 1998.

Following is a table indicating the commenter, their affiliation, date of comment and comment numbers. The comments and DNREC's responses follow the table.

Commenter	Affiliation	Date of Comment	Comment #
Ken Bounds	Delmarva Poultry Industry	9/2/98	1-9
		9/10/98, Faxed Copy of Oral Comments made 9/2/98	
Joseph Calhoun	Delaware Farm Bureau	9/2/98	10
		9/25/98	11
Bill Angstadt	Delaware Maryland Agribusiness Association	9/2/98	12-28
Carl Solberg	Delaware Sierra Club	9/2/98	29-37
		9/25/98	
Henry McCann	Greater Millsboro Chamber of Commerce	9/2/98	38-48
		9/9/98 Written Copy of Oral Comments made 9/2/98	
John Nevros		9/2/98	49
Wolfgang von Baumgard	Solutions to Arrest Red Tide, Inc.	9/2/98	50-63
		9/25/98	64
Richard Penna	Van Ness Feldman, P.C. On behalf of City of Rehoboth	9/2/98	65-72
		9/25/98	73-85
Robert Collins	Eastern Shore Golf Course Superintendents	9/2/98	86-91
		9/10/98	
Dr. Bruce Richards	Delaware Center for the Inland Bays	9/2/98	92
Lynn Bullock	City of Millsboro	9/2/98	93-95
David Baird	Town of Georgetown	9/2/98	96-113
		8/24/98	
		9/8/98	
		9/17/98	
Charlie Marsch		9/2/98	114-115
Richard Collins	The Center for Public Research	9/2/98	116-124
		9/15/98	
Matthew Murawski	US EPA	9/2/98	125-127
Jim May	Delaware River Keeper Network, Sierra Club and American Littoral Society	9/2/98	128-132
		9/11/98	
Maya Van Rossum	Delaware River Keeper Network	9/2/98	133-135
John Mateylco		9/2/98	136-137
Steven McNulty	Vlasic Foods International	8/10/98	138
		9/9/98	
Darrell J. Minott	Delaware Economic Development Office	9/3/98	139-143
Michael Riska Linda Stapleford Lorraine Fleming	Delaware Nature Society	9/11/98	144-146
Andres Talts		9/11/98	147-152

Commenter	Affiliation	Date of Comment	Comment #
Robert Frederick	Town of Dewey Beach		153
Denise Valitski	Conectiv	9/25/98	154-158
Bill Satterfield	Delmarva Poultry Industry	9/25/98	159
Til Purnell	Friends of Herring Creek	9/25/98	160-162
Jeffrey M. Swain	Townsend, Inc.	9/25/98	163-165
Thomas Henry	U.S. EPA	9/25/98	166-169
David Toddes	Vlasic Foods	09/25/98	170-172

1. Delmarva Poultry Industry (DPI) is very concerned about the lack of time for their members to acquaint themselves with the process and intelligently offer comments.

Response: Recognizing the complexity of establishing TMDLs and the significant impacts they would cause to stakeholders in the watershed, DNREC developed a public participation process and stakeholders involvement plan that exceeded State of Delaware Regulatory Development Process guidelines. DNREC engaged in extensive public outreach by briefing stakeholders on the TMDL process at the following meetings.

May 19, 1997	Governor's Council on Agriculture
May 22, 1997	Council of Farm Organizations
June 27, 1997	Pesticide Advisory Committee
August 26, 1997	Delmarva Poultry Industry Growers Committee
October 16, 1997	Delaware Chapter of the Sierra Club
October 28, 1997	Potentially Affected Parties, Environmental Groups, Legislators
December 2, 1997	Delaware State Grange
January 22, 1998	Delaware Association of Conservation Districts
January 27, 1998	Delaware Farm Bureau
March 6, 1998	Christina Basin Task Force
March 27, 1998	Inland Bays Scientific & Technical Advisory Committee
April 1, 1998	Senate Natural Resources Committee
April 3, 1998	Center for the Inland Bays Board of Directors
April 8, 1998	Inland Bays Workshop
April 22, 1998	Environmentalists Meeting
April 29, 1998	US Army Corps of Engineers (Channelized Stream Maintenance General Permit)

DNREC also established an interagency TMDL workgroup with representatives from several state and federal agencies. Furthermore, DNREC organized the TMDL Advisory Committee for the Inland Bays with representatives from many stakeholder groups. The Advisory Committee met on July 28th and August 11th 1998, at which time DNREC made presentations of the proposed TMDL and responded to the questions and comments. A workshop was held September 2nd followed by a Public Hearing that evening. During the workshop, DNREC again presented the proposed regulation and the technical basis for the regulation and responded to questions and comments from the audience. During and after the hearing a number of Commenters requested an extension of the deadline to make comments. DNREC extended the original deadline from September 11th to September 25th, 1998.

DNREC followed and exceeded State of Delaware requirements for public participation process for development of regulations. In addition, DNREC believes that the public participation process not only meets but also exceeds requirements of the Clean Water Act. Please see comments #125, #127, #128 and #166.

The TMDL as proposed calls for the development and implementation of a Pollution Control Strategy. DNREC intends to fully involve all stakeholders in this crucial step.

2. DPI is concerned that if goals are set to cause noncompliance then a set of devastating regulations will be implemented.

Response: The Clean Water Act requires establishment of TMDLs when water bodies are not meeting water quality standards. The proposed TMDL is established to meet Delaware's Surface Water Quality Standards.

3. It is important that the Department realize that water quality degradation didn't occur overnight and that solutions will not come overnight. A scientifically valid amount of time must be allowed to permit voluntary programs to be effective.

Response: Water quality degradation and violation of water quality standards in the Inland Bays has been documented by intensive water quality monitoring and analysis performed by the State of Delaware, the Federal Government, various universities and private researchers and citizen monitoring groups. Point and nonpoint source controls have been implemented in the watershed which have resulted in water quality improvements for certain pollutants. However, water quality data still indicate that Delaware's Water Quality Standards for nutrients are not being met and will not be met without further reductions of nutrient inputs.

DNREC intends to fully involve stakeholders in the implementation of the proposed TMDL through the development of the Pollution Control Strategy. The Pollution Control Strategy development process will set the timetable for full implementation of the TMDL.

4. How will DNREC be able to differentiate between nutrients from agricultural fields versus septic systems, residential land and suburban runoff and nutrient droppings by fish and wildlife?

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation.

For purposes of establishing the TMDL it is not necessary or practical to differentiate between various sources of nutrients. The proposed TMDL considers the total nutrient load entering the Inland Bays from point sources, tributaries, and from the atmosphere. Tributary loads represent total nonpoint source contributions from all sources in the watershed. Specific contributions of each nutrient source and required levels of reduction will be determined during the development of the Pollution Control Strategy. DNREC intends to fully involve stakeholders in the development of the Pollution Control Strategy.

5. What happens if the atmospheric deposition goal is not met and all other sources meet their goals? Will landowners be asked to make up the difference?

Response: The Clean Water Act and implementing regulations require establishment of total maximum daily loads, which includes waste load allocations for point sources and load allocation for nonpoint sources and a margin of safety. The proposed TMDL has identified nutrient load reductions that are necessary from point sources, nonpoint sources and from atmospheric deposition in order to meet Water Quality Standards. DNREC believes that its proposed TMDL regulation is equitable, appropriate and meets the goals of the Clean Water Act.

Through monitoring efforts targeted load reductions will be tracked. If targeted reduction goals are not met, appropriate actions will be required to meet the goals of the Clean Water Act.

6. DPI Supports the voluntary agricultural nutrient management options including nutrient management plans, analysis of animal wastes, storage facilities for animal wastes, composting structures for disposal of dead animals, use of new soil and plant Nitrogen testing methods, use of cover crops, buffer strip, water control structures and created wetlands for sediment and nutrient removal and nutrient management public education programs.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. However, specific nutrient load reduction activities will be determined during development of the PCS. DNREC intends to fully involve stakeholders in the development of the Pollution Control Strategy.

7. We are concerned that farmers will be targeted by the State of Delaware to the point they are driven out of business.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation.

The Clean Water Act and implementing regulations require establishment of total maximum daily loads (TMDLs) for waters that are not meeting State Water Quality Standards. A TMDL includes waste load allocations for point sources and load allocation for nonpoint sources and a margin of safety. The proposed TMDL has identified nutrient load reductions that are necessary from point sources, nonpoint sources and from atmospheric deposition in order to meet Water Quality Standards. DNREC believes that its proposed TMDL regulation is equitable, appropriate and meets the goals of the Clean Water Act.

DNREC intends to fully involve stakeholders in the implementation of the proposed TMDL through the development of the Pollution Control Strategy. The PCS will consider appropriate and cost-effective measures designed to achieve water quality standards.

8. The British have something called Best Available Technology, Not Entailing Economic Cost. DNREC needs to keep that concept in mind.

Response: Please see the response to comment #7.

9. Commenter stated that if farmers were pushed out of the region then "other uses more awful to the environment than agriculture" would ensue.

Response: Please see the response to comment #7.

10. The Farmers of the Inland Bays Committee came up with the following voluntary practices to help reduce non-point source loadings including nutrient management plans, analysis of animal wastes, storage facilities for animal wastes, composting structures for disposal of dead animals, use of new soil and plant Nitrogen testing methods, use of cover crops, buffer strip, water control structures and created wetlands for sediment and nutrient removal and nutrient management public education programs.

Response: Please see the response to comment #6.

11. The Delaware Farm Bureau questions whether the establishment of this TMDL is lawful. The Clean Water Act, 33 U.S.C 1251 et. Seq. does not provide DNREC with the authority to establish TMDL's that allocate loads to nonpoint sources. Indeed, the legislative history of the Clean Water Act demonstrates that Section 303(d) was not intended to control nonpoint source pollution but rather only point source pollution.

Response: The Clean Water Act and implementing regulations require establishment of total maximum daily loads (TMDLs) for waters that are not meeting State Water Quality Standards. A TMDL includes waste load allocations for point sources and load allocation for nonpoint sources and a margin of safety. The proposed TMDL has identified nutrient load reductions that are necessary from point sources, nonpoint sources and from atmospheric deposition in order to meet Water Quality Standards. DNREC believes that its proposed TMDL regulation is equitable, appropriate and meets the goals of the Clean Water Act.

Furthermore, 7 Del. Code 6010 provides authority to DNREC to establish TMDLs.

12. DMAA believes that if the State of Delaware is to limit the agricultural use of nutrients, as proposed by these TMDLs that accurate determination of the present agricultural nutrients nonpoint contributions must be established.

Response: Please see the response to comment #4.

13. DMAA believes that if the State of Delaware is to limit the agricultural use of nutrients, as proposed by these TMDLs that reductions of nutrients used must be based on current science of nutrient impact on water quality.

Response: Please see the response to comment #3.

14. DMAA believes that if the State of Delaware is to limit the agricultural use of nutrients, as proposed by these TMDLs that DNREC must allow adequate time for public participation and stakeholder involvement.

Response: Please see the response to comment #1.

15. Conversion of cropland to housing developments generates a greater threat to the environment than agriculture poses now. Nitrogen loading to the bay from agricultural sources is 33 pounds per acre compared to 44 lbs. per acre of single family non-sewered housing.

Response: Please see the response to comment #7.

16. DMAA has worked with DNREC on a number of reports in which DNREC has supported voluntary non point source pollution strategies. DNREC should have included the Nonpoint Source Management Program Advisory Review Committee early in the process. The organization of the TMDL Advisory committee was too little too late.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. However, DNREC acknowledges the past contributions of all stakeholders and encourages their participation in the development of the PCS. Also, please see responses to comments #1 and #3.

17. DMAA agrees that water quality monitoring demonstrates that the bays are enriched with the nutrients nitrogen and phosphorous and that the nutrients enter these surface waters from point sources, non point sources and from the atmosphere. However there appears to be sufficient doubt on the state of the science to ask for DNREC's assumptions and conclusions to be peer reviewed by wide range of experts in the field of science.

Response: The modeling tool used for establishing the proposed TMDL was developed by the U.S.Army Corps of Engineers and is a state of the art program that has been applied to several estuarine systems, including the Chesapeake Bay. The data used, technical assumptions made and conclusions made during the modeling phase were peer reviewed by the Scientific and Technical Advisory Committee of the Inland Bays National Estuary Program. Furthermore the results of load reduction scenarios and proposed TMDL were peer reviewed by the Interagency TMDL Workgroup and the Scientific and Technical Advisory Committee.

Also, please see response to comment #3.

18. DMAA Believes that the numeric criteria for the entirety of the bays is flawed.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Numeric criteria for the Inland Bays were established in the State of Delaware Surface Water Quality Standards as Amended February 26, 1993.

19. DNREC has lumped together all nonpoint sources without a distinction between natural background levels of nutrients and man made contributions.

Response: Please see the response to comment #4.

20. In 1997 DNREC took the position that phosphorous is not coming from groundwater into the Piedmont basin but is coming from sediments in the lakes and streams. A totally different position than they have in the TMDLs

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation.

DNREC has not made any assumptions on the fate and transport of phosphorous in groundwater during the development of this proposed TMDL regulation.

21. Non point sources are not mentioned in the Consent Decree. DNREC can comply with the Clean Water Act requirements for the TMDLs and the Court order without any load allocation to nonpoint sources.

Response: Please see the response to comment #11.

22. DMAA sees no evidence that DNREC has considered any economic issues or factors in designing these TMDLs.

Response: Section 303 (d) of the Clean Water Act does not require economic or financial considerations to be used in the establishment of TMDLs. Economic considerations will be made during the development of the PCS. Also, please see response to comment #7.

23. DMAA doesn't believe that nutrient standards for the bays are reasonable in comparison to drinking water standards and crop fertilizer requirements.

Response: Please see the response to comment #18.

24. DMAA recommends that DNREC remove Article 2,3,4 and 5 from the proposed Inland Bays TMDLs. This will withdraw the proposed Load Allocations for nonpoint sources.

Responses: Water quality data and modeling results for the Inland Bays demonstrate that Delaware Water Quality standards for nutrients can not be met without load reduction from point sources, nonpoint sources and atmospheric deposition.

The Clean Water Act and implementing regulations require establishment of total maximum daily loads, which includes waste load allocations for point sources and load allocation for nonpoint sources and a margin of safety. The proposed TMDL has identified nutrient load reductions that are necessary from point sources, nonpoint sources and from atmospheric deposition in order to meet Water Quality Standards. DNREC believes that its proposed TMDL regulation is equitable, appropriate and meets the goals of the Clean Water Act.

DNREC intends to fully involve stakeholders in the implementation of the proposed TMDL through the development of the Pollution Control Strategy. The PCS will consider appropriate and cost-effective measures designed to achieve water quality standards.

25. DMAA recommends that DNREC reconvene the Nonpoint Source Management Program Advisory and Review Committee to assist and provide oversight for the continued advancement practices for the Whole Basin Management Program for all of Delaware. Not just the Bays. The Delaware nonpoint source Pollution Control Strategy should be developed and implemented through the DNREC 319 program in the same way that Pennsylvania has done it and get it out of the TMDL program.

Response: Please see the response to comment #6.

26. DMAA recommends that DNREC pursue a wide range of participation from the scientific community, especially the agricultural research community to review current assumptions and models regarding nutrient impact on water quality.

Response: Please see responses to comments #3 and #17.

27. DMAA recommends that DNREC explore the distinction between natural background levels of nutrients versus cultural contributions, which contribute to eutrophication.

Response: Please see the response to comment #4.

28. DMAA recommends that the Governor fund appropriate research in Delaware to generate peer reviewed Delaware specific research on these nutrient environmental issues that can be used by DNREC to make reliable and dependable assumptions for accurate conclusions.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see response to comment #17.

29. The Sierra Club is generally pleased that Delaware has selected the Chesapeake Bay Water Quality and Hydrodynamic Model, based on the U.S. Army Corp of Engineers—Cqual model.

Response: The modeling tool used for establishing the proposed TMDL is a state of the art program and is the best available tool for this kind of analysis.

30. The Sierra club wonders if further simulations might be run showing the effects other land use controls might have, especially for on site septics.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. However, as part of the development of the PCS, appropriate model simulations can be run.

31. The Sierra Club would like to see Land use practices examined in the Pollution Control Strategy Phase.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. However, DNREC intends to fully involve stakeholders in the implementation of the proposed TMDL through the development of the Pollution Control Strategy.

32. The Sierra Club believes that the TMDL regulations are a beginning, and that the Pollution Control Strategy Phase will provide opportunity to explore options like pollution trading.

Response: Please see the responses to comments #30 and #31.

33. Sierra Club encourages the Department to continue in the objective approach they have displayed in conducting a comprehensive analysis of the loadings which the subject water quality limited segments may continue to receive while attaining their designated uses.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. However, DNREC believes it has used an objective and scientifically defensible approach in estimating various pollutant loads and establishing TMDL targets.

34. Sierra Club feels that the Proposed Articles 2 and 3 are highly consistent with the known water quality studies and literature linking historic land based nitrogen and phosphorous loading sources within the tributaries and subsurface flows from the subsurface flows from the sub-basins referenced by these articles. The notoriety surrounding these non-point source load reductions should not, and has not, distracted DNREC from attempting the most accurate, impartial and responsible scientific determination of pollutant loading reductions.

Response: Please see the response to comment #33.

35. A recent literature review (Scarborough, 1997, unpublished) demonstrates that the Department's approach and findings regarding atmospheric nitrogen loading are fundamentally realistic and applicable to the load reduction targeting process for TMDL development. We generally support the Department's use of the direct depositional data modeled in the proposed TMDL.

Response: DNREC Acknowledges the support of the commenter.

36. The Department has reasonably attempted to take into account the lack of knowledge or uncertainty which accompanies the task of assessing and determining basin-wide, seasonally variable, nonpoint source pollutant load allocations. Sierra Club recommends that the Department provide some further explanation of how the margin of safety has been designed to adequately provide this required safeguard.

Response: Because of the complexity of the Inland Bays system and the model used to simulate that system, establishing a numerical value for the margin of safety was not practical. However DNREC used the following strategies to assure that a sufficient margin of safety would exist as a result of implementing the proposed TMDL. First, conservative assumptions were made in order to develop and calibrate the model. Second, the proposed load reductions were established when projected water quality concentrations in the Indian River, Indian River Bay and Rehoboth Bay were better than State Water Quality standards. Thus, the difference between the Water Quality Standards and the projected concentrations equal the margin of safety. The conservative assumptions made in order to develop and calibrate the model add to this margin of safety. DNREC believes that the above procedure meets the intent of establishing a margin of safety as required by Section 303(d) of the Clean Water Act.

37. Sierra Club believes that in order to insure the protection, restoration and continued propagation of the indigenous finfish and shellfish which have so significantly declined within these ERES waters, it is essential that the most thorough legal compliance be achieved in the proposed regulations. Delaware proposes under Article 8, that pollution control strategies (PCS) will be incorporated into the Whole Basin Management Program. The regulations should associate each TMDL article with a reasonable assurance the PCS development will commence immediately upon adoption of the regulations. Time frames of Delaware's WBMA CPP implementation plan should be clearly and directly referenced in the body of the TMDL regulations.

Response: Section 303(d) of the Clean Water Act does not require an implementation schedule as part of a TMDL. However, DNREC is planning to develop the PCS in a timely manner following the adoption of the proposed TMDL regulation in coordination with the Department's Whole Basin Management Program. DNREC intends to fully involve stakeholders in the development and implementation of the PCS.

38. What is the rationale for water quality standards exceeding drinking water standards? Are the standards generated by DNREC or EPA? Has any other state met standards this high, and if so, what has been their technology?

Response: Please see the response to comment #18.

39. The Chamber urges that regulatory language be clear and specific. Of particular concern is the term "All point sources" in Article 1. The entire scope of the material DNREC distributed to the TMDL Advisory Committee addressed nitrogen and phosphorous discharge. Yet article 1 is not so worded. Is it the intent of the article to address all point sources which discharge nitrogen and phosphorous?

Response: It is the intent of Article One to address all point sources which add nitrogen and phosphorous loads to the Inland Bays.

40. The Chamber believes the implementation plan to be a critical factor in this equation, but little information, other than language in Article 8 has been offered to date. DNREC says it will develop a "Pollution Control Strategy", but what are the elements and time frame? How can those affected assess the true impact of these regulations without such key information?

Response: The Pollution Control Strategy development process will set the timetable for full implementation of the TMDL. DNREC intends to fully involve stakeholders in the implementation of the proposed TMDL through the development of the Pollution Control Strategy.

41. Does DNREC have a memorandum of understanding with EPA, or will it and when? Similarly, will MOU's be executed with industries which do not discharge large amounts of nitrogen and phosphorous?

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation.

42. Will the Pollution Control Strategy address point and nonpoint sources? Will pollution trade offs be considered?

Response: The Pollution Control Strategy will address point and nonpoint sources. The PCS will consider appropriate and cost-effective measures designed to achieve water quality standards. DNREC intends to fully involve stakeholders in the implementation of the proposed TMDL through the development of the Pollution Control Strategy.

43. Given the sweeping, stringent standards being proposed,... it is vitally important that broad based assistance in time, technology and money be provided to the municipality and business community. What plans has DNREC made for this? Will the Delaware Economic Development office be brought into the loop? What is the Governors position?

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. However, DNREC intends to fully involve stakeholders in the implementation of the

proposed TMDL through the development of the Pollution Control Strategy. The PCS will consider appropriate and cost-effective measures designed to achieve water quality standards

44. Town Officials have voluntarily formulated a \$5 million plan to use land application of treatment plant discharges that is unfunded. Are Millsboro's 2000 residents to bear that cost entirely on their own – and only to maintain current levels?

Response: Section 303 (d) of the Clean Water Act does not require economic or financial considerations to be used in the establishment of TMDLs. Economic considerations will be made during the development of the PCS. DNREC will work with any party to help them secure existing funding or other funding as it becomes available.

45. Will companies, which are now operating within their permits, receive any assistance with the technological research and probable retrofitting that will be in their futures? Or will we force them to relocate elsewhere? Will these regulations become one more example of a long history of unfunded legislative mandates?

Response: Please see response to comment #7.

46. What assistance plan is there for the nonpoint sources?

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see responses to comments #43 and #44.

47. What becomes of the private septic user?

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see responses to comments #43 and #44.

48. Can the County Council provide central sewer county wide? In what time frame? Who pays for it?

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see responses to comments #43 and #44.

49. Commenter stated he “Recently found out about the BIOCEL, which can be added to existing wastewater plant septic systems through nitrogen removal and lowering O&M costs” and went on to say he thinks “ it is about time that DNREC and persons in charge force all communities to use BIOCEL to save bay water.”

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation.

50. Commenter stated his belief that the current TMDL should be actively looking to the future to more stringent standards.

Response: The Clean Water Act and implementing regulations require establishment of total maximum daily loads, which includes waste load allocations for point sources and load allocation for nonpoint sources and a margin of safety. The proposed TMDL has identified nutrient load reductions that are necessary from point sources, nonpoint sources and from atmospheric deposition in order to meet Water Quality Standards. DNREC believes that its proposed TMDL regulation is equitable, appropriate and meets the goals of the Clean Water Act.

DNREC intends to fully involve stakeholders in the implementation of the proposed TMDL through the development of the Pollution Control Strategy. The PCS will consider appropriate and cost-effective measures designed to achieve water quality standards.

51. Commenter recommended 97% reduction in total nitrogen and phosphorus loading by 2005 from centralized wastewater systems by immediate implementation of BIOCEL quaternary treatment technology in existing facilities upon EPA certification.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see response to comment #50.

52. Commenter recommended elimination of viral, bacterial, protozoic and other pathogens and parasites through the BIOCEL process and adoption of ozone- based water purification systems in place of chlorine-based systems by the year 2005.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see response to comment #50.

53. Commenter recommended the elimination of all industrial and commercial chloride loading and influx of halogens and halides linked to bio-production of carcinogenic and otherwise harmful organo-halides by 2005.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see response to comment #50.

54. Commenter recommended elimination of water fluoridation in the IRIB sub-basin to prevent bio-reactive production of organo-flouro compounds by the year 2002.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see response to comment #50.

55. Commenter recommended public re-evaluation of centralized wastewater treatment philosophy, design and implementation.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see response to comment #50.

56. Commenter recommended use of nutrients for growth of microalgae as a feed supplement for livestock and use of manure for energy production.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see response to comment #50.

57. Commenter recommended use of BIOCEL process for nitrogen and phosphorus reduction in all farm drainage systems, tax ditches and other agriculture related nutrient loading sources. He went on to recommend implementation of the ABCEL process in agricultural phosphate loading reduction.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see response to comment #50.

58. Commenter recommended buffer zones along rivers streams and tax ditches and provision of tax incentives for agricultural BNR systems.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see response to comment #50.

59. Commenter recommended Quaternary treatment systems for all new unsewered communities, and systems that are being replaced and tax incentives to do so.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see response to comment #50.

60. Commenter recommended elimination of any remaining cesspools.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see response to comment #50.

61. Commenter made several recommendations regarding changes to land use patterns.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see response to comment #50.

62. Commenter recommended 97% point source wastewater reduction by 2005, 97 % of new residential nonpoint wastewater BNR by 2002, 75 percent reduction of existing residential

nonpoint wastewater BNR pollution by the year 2015, 97% industrial commercial BNR by 2005 and 80% agricultural BNR by 2010.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see response to comment #50.

63. Commenter suggested that 3 additional scenarios be run in the model.

Response: The scenarios, as suggested, are not technically addressable by the model. Also, please see the response to comment #30.

64. Commenter advocated formation of a work group within DNREC that would be focused on extensive real time high tech data collection and dissemination.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation.

65. Commenter gave a history of requests for information and followed with a request for extension of the deadline due to not having enough time to evaluate the scientific basis for the levels set in the TMDL.

Response: DNREC received a FOIA request August 5, 1998. On August 14, 1998 DNREC informed the requestor that the requested information was available for their review. Please see also the response to comment #1.

66. Commenter stated his belief that DNREC should be required to develop a more thorough justification and a comparison of the cost per pound for removal from the City's facility versus the cost from other sources.

Response: Please see the response to comment #22.

67. Commenter suggested a variety of scenarios be run through the water quality model.

Response: DNREC ran scenarios requested by the commenter's consultant and provided those results. The results of the scenarios run have been included in the final TMDL analysis report. DNREC believes that the result of these alternative scenarios do not warrant changes to the TMDL regulations as proposed.

68. Commenter did not believe that preliminary estimates of cost per pound of pollutant would pass any rational test of cost-benefit or cost effectiveness.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see the response to comment #22.

69. Commenter felt it was unreasonable to assume that land applied treated wastewater would not migrate at least some portion of the nutrients into the waterways.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. DNREC has not made any assumptions on the fate and transport of land applied treated wastewater during the development of this TMDL regulation. Specific point source disposal options will be determined during the development of the PCS. DNREC intends to fully involve stakeholders in the development of the Pollution Control Strategy.

70. Commenter noted that the Rehoboth Treatment plant is making major improvements at this time and that further reductions would create a disproportionate expense to the City.

Response: Many point and nonpoint source controls have been implemented in the watershed which have resulted in water quality improvements for certain pollutants. However water quality data still indicate that Delaware's Water Quality Standards for nutrients are not being met and will not be met without further reductions of nutrient inputs. Also, please see the response to comment #22.

71. Commenter noted that there is no indication for the timing of implementation of the TMDL within the TMDL and the uncertainty that creates with regard to financial planning issues.

Response: Please see the response to comment #40.

72. Commenter noted that no provision for funding of capital expenditures is specified and that the City believes that the Department should consider alternatives that are not financially ruinous to the City.

Response: Please see the response to comment #44.

73. Because of the accelerated schedule the City has not been afforded a meaningful opportunity to participate in the process and to assess and comment in an informed manner on the TMDL proposal.

Response: Please see the response to comment #1.

74. The fundamental problem with the proposed TMDL program is that it allocates to the city of Rehoboth a significantly disproportionate burden of the responsibility of achieving water quality in the Inland Bays.

Response: The Clean Water Act and its implementing regulations require establishment of total maximum daily loads, which includes waste load allocations for point sources and load allocation for nonpoint sources and a margin of safety. The proposed TMDL has identified nutrient load reductions that are necessary from point sources, nonpoint sources and from atmospheric deposition in order to meet Water Quality Standards. DNREC believes that its proposed TMDL regulation is equitable, appropriate and meets the goals of the Clean Water Act.

75. The proposed TMDL program would unnecessarily impose on the City of Rehoboth controls that are far in excess of what is appropriate or even reasonable for solving water quality concerns in the Rehoboth Bay, including any attributable nexus to Indian River.

Response: Because of mixing mechanisms and sediment nutrient recirculation in the Inland Bays it is necessary to reduce the nutrient input across the entire watershed in order to achieve Delaware Water Quality standards in the following four water body segments: Indian River (DE 140-004), Upper Indian River Bay (DE 140-E01), Lower Indian River Bay (DE 140-E02) and Rehoboth Bay (DE 280-E01).

76. This disproportionate burden is further magnified by the total failure of the proposed TMDL program to examine and assess the practicality, feasibility and effectiveness of the controls that would be imposed on the City of Rehoboth.

Response: Please see response to comment #24.

77. The process for establishing the proposed TMDL program denied the City a right of meaningful participation. Not until July 20, 1998 did the city receive notice of the Inland Bays TMDL Advisory Committee meeting on July 28, 1998 or the public hearing on September 2, 1998. At the September 2, 1998 public hearing, the City reaffirmed that the Department had neither afforded the City an adequate time to prepare comments nor provided sufficient information to assess the efficacy of the draft TMDL. Seven days before the comments were due, DNREC notified interested parties that the comment period would be extended—but only for another two weeks. This rushed procedural schedule falls well short for the requirement of ensuring adequate and meaningful public participation.

Response: Please see responses to comments #1 and #65.

78. As of the date of these comments the City has not been provided with the information necessary to understand what data and assumptions were fed into the model. Does the Model sensitivity to stream inputs indicate that assumptions based on two USGS stations measurements are acceptable? What methods were used to estimate stream flow? Did the Model assume the maximum permitted flows or, where appropriate, realistic average flows or increases in average flows? Were separate runoff coefficients based on land usage in the individual watersheds used in these determinations? How were stormwater flows and pollutant inputs estimated? Does the Model account for any reductions that might arise as a result of the pending implementation of Phase II of the Stormwater Management Program?

Response: All requested information and model outputs were provided to the City's representatives and explained during a meeting on September 21, 1998.

79. In short the city has received only a minimal amount of the requested information, and for what it has received, the City has not had sufficient time to evaluate the information and prepare detailed comments. Without public disclosure and access to information and analysis supporting the Department's proposed TMDLs, the City and the public at large cannot effectively comment upon whether the Department fully considered all relevant factors in developing its proposed TMDLs.

Response: Please see responses to comments #1, #65 and #78.

80. The Rehoboth STP is not a significant contributor to the problem yet it is being required unfairly to implement the most stringent requirement. From a cost perspective it is far less costly – and far more equitable – to achieve a 20% reduction from nonpoint sources than to eliminate entirely loads from all point sources.

Response: Please see the responses to comments #24 and #75.

81. If nonpoint sources were required to reduce their load a bit more it would obviate the need to require elimination of all point sources.

Response: Please see the response to comment #74.

82. The Department's allocation of responsibility between point sources and nonpoint sources overlooks the likelihood of greater controls being placed on nonpoint sources in the Bay as a result of new regulatory efforts.

Response: Please see the response to comment #24.

83. The Draft TMDL Report completely ignores the problem with leaking septic tanks, a potentially substantial contributor to nutrient over-enrichment.

Response: Please see response to comment #4.

84. It is understandable that the TMDL program had to be developed quickly, as a result of the Settlement Agreement and Consent Decree. However, there is little reason why a more flexible and adaptive TMDL program could not have been developed. A phased approach, for instance, would allow the development of an implementation plan that contains measurable milestones, leaving open the possibility of modifying components of the TMDLs if those milestones are not reached.

Response: Please see the responses to comments #40 and #50.

85. The draft TMDL report contains very little, if any discussion or analysis to support the proposal for systematically eliminating all point sources currently discharging into Rehoboth Bay. The Draft Report, in short, provides almost no explanation for why DNREC selected scenario 69 as the preferred option.

Response: The Draft TMDL Report indicates that scenario 69 is the scenario with the least restrictive load reduction targets that still result in attainment of Delaware Water Quality Standards.

86. Commenter stated " My frustration with this process it with the Advisory Committee. I don't know what type of advice this committee provided to this process. I believe it had nothing at all to do with setting this total maximum daily load."

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see the response to comment #1.

87. Commenter feels that a very poor attempt was made to get public participation for the TMDL number, and he is concerned that his name and the organization he represents will be somehow portrayed as taking a particular stand on the issue. No such opportunity existed.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see the response to comment #1.

88. The Advisory Committee has no order of parliamentary procedure at any of the meetings. ... Most importantly, no purpose of this committee was declared. Was the committee convened to solicit advice, offer recommendations, or perhaps (most importantly) make a resolution in favor or opposition to the TMDL? This was not clearly stated at any time. Certainly, no action was taken. Therefore, what transpired was a collection of comments that really can not be called anything but informal.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see the response to comment #1.

89. Commenter urges “ That the decision of the Secretary be made without any reference to or consideration of the Advisory Committee. If public participation is prerequisite in adoption of such regulations, then I suggest that the so-called actions of this body do not suffice for that purpose.”

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Also, please see the response to comment #1.

90. If public participation in the draft and implementation of Pollution Control Strategies is solicited, a more formal, structured approach is required.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. DNREC intends to fully involve stakeholders in the development and implementation of the proposed TMDL through the Pollution Control Strategy.

91. Commenter stated his opposition to the proposed TMDL number, stating he felt “that a ‘cart before the horse’ approach has been taken. It is my belief that such a number can only be set after Pollution Control Strategies can be devised.”

Response: DNREC believes that the commenter’s position is inconsistent with Clean Water Act and it’s implementing regulations.

92. The Center for the Inland Bays is launching a new program called Tributary Strategies for tributary creeks and streams that feed into the rivers that make our Inland Bays. Land owners who live and work within the watershed have a responsibility, and in reality, an opportunity to improve water quality.

Response: DNREC intends to fully involve stakeholders in the development and implementation of the proposed TMDL through the Pollution Control Strategy.

93. Commenter supports the concept, and has plans to remove their discharge from the river and Inland Bays, but it is the methodology that he has a problem with and has concerns about a lack of a timetable.

Response: DNREC supports activities that are designed to meet the targets established by the proposed TMDL regulation. With regard to a timetable for implementation, please see the response to comment #40.

94. Commenter feels “ it’s time we start finding out how it’s going to be done, so we can explain to the people how it’s going to happen.”

Response: Please see the response to comment #40.

95. Commenter noted that after going through one wastewater treatment plant upgrade, another is being called for, and the city can not afford repeated upgrades.

Response: Please see the response to comment #70.

96. First and foremost the Town supports the efforts to reduce nutrient levels into these waterways, but the proposal’s systematical elimination of all point waterways is an issue of great concern to us.

Response: Please refer to the responses to comments #24 and #40.

97. All point source discharge facilities should be allowed the same percentage reduction (as *non-point sources, ed.*) based upon their point of discharge.

Response: Please see the response to comment #24.

98. No economic evaluation has been presented for any of these reductions or elimination.

Response: Please refer to the response to comment #22.

99. Requiring expensive upgrades to central sewer systems will likely cause people considering moving into town to reconsider and move to unsewered areas.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Please see the response to comment #24.

100. What is being proposed to eliminate the point source discharges is in complete contradiction of what the State Office of Planning is proposing in all their groups for land use plans, and that's putting everybody in centralized areas, where centralized sewer systems are available.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Please see the response to comment #24.

101. Point source discharge elimination would not allow for the option of seasonal discharge.

Response: Please see the response to comment #50.

102. No consideration has been given to nutrient uptake between the point of discharge and impacted waterbodies.

Response: The TMDL Analysis considers nutrient loads entering the Inland Bays from the Millsboro pond outflow. This nutrient load includes the discharge from the Georgetown STP. DNREC believes that any nutrient uptake occurring between the point of discharge of the Georgetown STP and the Millsboro pond outflow would not significantly affect assumptions made during the analysis.

103. Georgetown recognizes the environmental benefit to elimination of discharge, but is not able to afford the estimated \$4 Million dollar costs to do so.

Response: Please see the response to comment #44.

104. The Town of Georgetown is proposing to go ahead and comply with the percentage reductions that are being put forward for the nonpoint source discharges. However, systematic elimination of point sources is something that is not feasible for the town.

Response: Please see the responses to comments #24 and #40.

105. The Town Council feels that elimination of discharge facilities along the Inland Bays is not the solution to reducing the nutrient levels found in these waterways.

Response: Please see the response to comment #24.

106. Attention should focus on reducing the level of nutrients discharged by point and nonpoint sources before any proposed elimination is considered.

Response: Please see the responses to comment #24 and #40.

107. No economic evaluation has been presented for the point source elimination. The only funding currently available is for non point source reduction.

Response: Please see the response to comment #44.

108. Point source facilities only contribute to 15% of the nitrogen discharge and 17% of the phosphorous discharge. It is the Town's understanding that the removal of phosphorous from the effluent is technically achievable up to high percentages. The elimination of point source

discharge facilities does not allow the option to increase the treatment of effluent to reduce these levels.

Response: Please see response to comment #24.

109. The selection of scenario #69 had been made without economic evaluation of the financial impact. We have prepared the enclosed table which shows the cost in dollars per pound removed over a 20 year period. It clearly indicates that the installation of a biological nutrient removal system combined with a seasonal discharge is by an order of magnitude more economically advantageous than the total elimination of the discharge. Georgetown sewer users charges are above the affordability level set by federal agencies.

Response: Please see the response to comment #44.

110. The TMDL analysis uses the full base line nutrient loading for the Town of Georgetown's wastewater treatment plant at cell 157. The actual discharge is approximately 7 miles north of the Millsboro Pond. This is an overly conservative assumption and the Town strongly urges DNREC to model the Stockley Branch and Eli Walls Tax Ditch in order to more accurately reflect Georgetown's contribution towards the nutrient loading of the Upper Indian River.

Response: Please see the response to comment #102. In addition, DNREC plans to develop models to be used as the basis for establishing nutrient TMDLs for Stockley Branch, Eli Walls Tax Ditch and Millsboro Pond by 2003.

111. The Town of Georgetown also strongly objects to adopting the articles as stated in the TMDL analysis prior to adopting an implementation strategy. The elimination of point discharges does not allow any flexibility in the future pollution control strategy if and when it is adopted. The final pollution control strategy may include watershed pollution credit trading which allows the Town of Georgetown, even under complete elimination, to purchase enough pollution credits to maintain a seasonal biologically enriched nutrient reduced discharge.

Response: Please see responses to comments #30 and #31.

112. We challenge the Department to determine cost analyses for non point source removal in \$/lb removed over 20 years to allow comparison with cost figures we provided in our TMDL data table. If the Department were to develop such cost figures the Town could determine whether it is economically and environmentally more beneficial to simply buy "pollution credits" rather than pay for additional treatment plant improvements.

Response: Please see the response to comments #44.

113. We further encourage the Department to prepare a pollution control strategy for review prior to closing the comment period.

Response: Please see the response to comment #37.

114. It is about time these regulations are put into effect. Dilution is not the solution. Point source must come out of the bay. The bays are stretched now. Sea lettuce all over. Dying clams, crabs, and fish. I hope these regulations will be enforced and not changed to meet somebody's accommodations.

Response: DNREC acknowledges the commenter's support of the proposed TMDL regulations. Also, please see the response to comment #3.

115. I feel that the Federal Government and the State created a lot of this in Rehoboth and Millsboro and that the Federal Government and the State should absorb the cost of these changes.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. However, please see the response to comment #44.

116. I will agree that there are some problems in the Inland Bays. I will say that, I think, there is a great deal of lack of information over exactly what is causing that problem. I think that DNREC has stated at some of these meetings that even though they claim to know that there

is an excess of nitrogen and phosphorous, they have no idea what that is coming from, other than they do know they claim the atmosphere.

Response: Please see the responses to comments #3 and #4.

117. This whole process that we are involved in has not remotely sought public input.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Please see the response to comment #1 and comments # 127, #128 and #166.

118. What we need here is balance to look at the problem. That's not possible when you have the time frame that we have been given to deal with this when you bring in the citizens at the very last minute and tell them, We don't have any time to hear your concerns, and when no genuine attempt is made to involve the elected officials of the state.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Please see responses to comments #1 and #11 and comments #125, #127, #128 and #166.

119. The EPA, and possibly DNREC, may be violating limits on their power that were established by the federal and state constitutions to protect the citizens from possible abuse of power by their government.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Please see the response to comment #11.

120. The public input process, including both the citizens' TMDL advisory committee and the public hearings, were illegally designed by DNREC to give the appearance of accepting citizen input while DNREC actually ignores the input they receive.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Please see responses to comments #1 and #11 and comments # 127, #128 and #166.

121. Did Mr. McCabe take advantage of lawsuit settlement negotiations to do an end run around duly elected officials, both federal and state, so that he could fulfill his personal vision of what a healthy environment should be? If this were found to be so, we believe it would be an abuse of the power of his office.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Please see the responses to comment #3 and #11 and comment #125.

122. When Delaware DNREC officials agreed to cooperate with the EPA in implementing these regulations, were they acting with complete understanding and acceptance of their constitutional duties to represent all the citizens of Delaware, or are they using the resources of state government to fulfill their personal vision of responsible environmentalism?

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Please see the responses to comments #2, #3 and #11 and comment #125.

123. The single public hearing was held on September 2, 1998. It was made clear that the regulations would be implemented as originally written, on the original schedule. No argument presented by any of the speakers, regardless of technical or scholarly merit would deter DNREC from their pre-chosen path. This is not proper, legal public input.

Response: DNREC never stated that the regulations would be implemented as originally written. Also, please see responses to comments #1, #2, and #11.

124. We request that DNREC temporarily take an adversary position with respect to EPA and this lawsuit settlement. Convene a public meeting of the leadership of the General Assembly and fully advise them on what you want to do and why. Then, before putting the citizens of Delaware on a path that will put them so firmly under the thumb of federal officials that are not accountable to the voters, get the approval of the elected members of the Delaware State Government.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. Please see comment #125, and the responses to comments #1, #2 and #11.

125. The State has the primary responsibility to set the TMDLs. If Delaware doesn't set them, then EPA must, and we are prepared to do that.

Response: DNREC intends to establish the proposed TMDL as scheduled and recognizes EPA's authority to do so should there be a delay.

126. Delaware has done a great deal towards meeting the goals of the Clean Water Act. With the proposed Inland Bays TMDL, Delaware is taking another significant step towards meeting the goal of the Clean Water Act. We believe this proposed TMDL is an important first step towards improving the water quality.

Response: DNREC generally agrees with the intent of the comment and believes that the proposed TMDL is designed to meet State Water Quality Standards as required under Section 303(d) of the CWA.

127. We want to commend DNREC on efforts to involve stakeholders in the process of establishing this TMDL. We recognize that the short time frames that the State is working under make extensive public input difficult. Nonetheless, with the formation of an advisory committee, three public meetings, and now this hearing, the State has gone well beyond EPA's requirements for public participation. We support Delaware's intent to continue to seek stakeholder input as they move from establishing TMDL to the truly difficult task of implementation.

Response: DNREC acknowledges the support of the commenter.

128. Delaware has already afforded more public process than most other states. I'm not saying there shouldn't be, or it should be done differently. But some credit has to go where credit is due.

Response: DNREC acknowledges the support of the commenter.

129. Overall, we believe that DNREC has done an admirable job of developing TMDLs for Indian River, Indian River Bay and Rehoboth Bay.

Response: DNREC acknowledges the commenter's support of the proposed TMDL.

130. TMDLs must be implemented. The draft TMDL states that it will be implemented through the state's Pollution Control Strategy (PCS) program. How will this be done exactly, particularly for nonpoint sources? How and when will implementation occur for affected point sources?

Response: Please see response to comment #37.

131. TMDLs must be incorporated into the State's CPP. How will this be done?

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation.

132. It appears as though the TMDL does not set a numerical margin of safety, on an either percentage or absolute basis. We do not believe the margin of safety meets legal requirements. Would the State please explain how the MOS meets CWA requirements?

Response: Please see the response to comment #36.

133. They (*Sections of the Clean Water Act, ed.*) are 20 year old sections. If they had been implemented when they were supposed to be implemented, then we would not be facing so many of the problems that we are facing today on so many levels.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. However, DNREC believes that the establishment of the proposed TMDL is necessary to meet the goals of the Clean Water Act.

134. I would like to give a great vote of confidence to DNREC for what they have done. We think it's a multi-faceted approach.

Response: DNREC acknowledges the support of the commenter.

135. If we go and make a TMDL that does not work, the reality is, five years from now, ten years from now, we're going to be back with a brand new TMDL, that is going to be even stronger, and all of those facilities that had to invest to meet the first TMDL are going to have to do it again. So, now is the time to do it, and it is the time to do it well. And, I think, that DNREC has done a very good job and has taken a very big step in accomplishing that goal of doing it right.

Response: DNREC acknowledges the support of the commenter and believes that this TMDL as proposed meets the goals of the Clean Water Act.

136. I don't have technical confidence in this particular area or the science, but I very much appreciate what, I think, is a fine effort from the people who have worked on this.

Response: DNREC acknowledges the support of the commenter.

137. Even at this point, there is no talk of what will ultimately be the political consensus that solves this problem. I think, the media in general in this state has rightfully singled out the deafening silence on this issue from the Governor.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation.

138. Commenter requests exemption from the TMDL's regulation for the Inland Bays. Plant averaged less than one quarter of a pound per day for both phosphorous and ammonia this calendar year. Regarding Article 1, Vlastic does not contribute to the nutrient loading. Plant is a pickling operation and the wastewater discharge contains salt. Commenter further stated this is an appropriate discharge to a tidal creek. However, the concentration of salt in the effluent is such that spray irrigation is not an option. Since reverse osmosis is the only method available to remove the salt from the effluent at an "exorbitant" cost, plant would probably consider relocating for economic reasons.

Response: DNREC can not offer an exemption to any point source discharger subject to the proposed TMDL. Please also see responses to comments #24 and #50.

139. The Delaware Economic Development Office applauds the efforts of DNREC is taking in regards to cleaning up the environmentally sensitive inland bays by establishing the TMDL regulations for nitrogen and for phosphorous. We support the goals that DNREC has developed in articles 2 through 8.

Response: DNREC acknowledges the support of the commenter.

140. The language in Article 1 is very broad and could be inferred to mean that discharge of anything into the inland bays should be eliminated. We are particularly concerned this language may create an unnecessary economic hardship on companies and businesses who strategically located to use the body of water in their business processes, yet do not discharge large amounts of nitrogen and phosphorous. In an effort to remedy our concerns, we suggest implementing the following changes to Article 1, which read as follows: All point sources, except Vlastic and Conectiv, which are currently discharging nitrates and phosphates into the Indian River, Indian River Bay, and Rehoboth Bay and their tributaries shall be eliminated.

Response: Please see the responses to comments #39 and #138.

141. Nitrate and phosphorous reductions must be attained in an equitable manner so as to not create an economic hardship on the farmers and poultry industry of Delaware, yet attain our environmental stewardship goals.

Response: Please see the response to comment #7.

142. In order to help the communities of Georgetown, Millsboro, Lewes and Rehoboth Beach, we would like to encourage where possible state parkland be used for spray irrigation at no cost to the communities.

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. DNREC believes that all possible and cost effective measures which will result in meeting the proposed load reduction targets will be considered when the PCS is developed following adoption of the proposed TMDL. DNREC intends to fully involve stakeholders in the development and implementation of the Pollution Control Strategy.

143. In regards to Article 6 we would like to know what the department's intentions will be if the 20 percent atmospheric nitrogen rate is not met. Is the department looking to increase the percentage reductions listed in Articles 2 through 6 to meet the overall goal?

Response: Please see the response to comment #5.

144. The Delaware Nature Society strongly urges you to proceed without delay in adopting the Total Maximum Daily Load regulation for nitrogen and phosphorous as proposed by December 15th, 1998. The vast body of data collected over the past 30+ years is more than adequate to substantiate establishing limits for discharge of nitrogen and phosphorous to the waterbodies that comprise the Inland Bays watershed.

Response: DNREC acknowledges the support of the commenter.

145. It is our belief that the calculated reduction targets set in your proposal are reasonable and entirely necessary to reverse the dramatic degradation of the Inland Bays that has ensued in the past four decades. Particularly, we applaud the proposal to systematically eliminate all point source discharges.

Response: DNREC acknowledges the support of the commenter.

146. To alter the deadline for this initial TMDL regulation's adoption will only trigger a "domino effect" and make the Department vulnerable to similar and greater pressures in the future.

Response: DNREC acknowledges the support of the commenter.

147. The analysis seems logical and well founded in hydrodynamics. There does not seem to be any consideration given to groundwater influence on surface water quality.

Response: Please see the response to comment #4.

148. Also regarding groundwater- shouldn't aquifer protection requirements be integrated with these regulations and the mitigation strategy?

Response: This comment does not apply to any specific article(s) of the proposed TMDL Regulation. However, impacts to surface and ground waters will be addressed as a part of the PCS. Also, please see the response to comment #24.

149. The models only deal with the tidally affected portions of the watershed. What about the ponds and the non-tidal tributaries?

Response: As indicated in Delaware's 1998 303(d) list, nutrient TMDLs are scheduled to be developed for several waterbody segments (including ponds and nontidal tributaries) in the Inland Bays basin by 2003.

150. The water quality models in the Analysis discuss organic matter (BOD) concentrations and allocations, yet this is not carried forward to the TMDL regulations. Is there some reason for this?

Response: BOD is considered in the model in order to project dissolved oxygen concentrations in the subject waterbodies. Since the proposed TMDL projections meet DO standards, no allocation for BOD is necessary.

151. Agricultural BMP assumptions are worrisome. Doesn't Delaware law require an economic impact analysis be done? Has one been done and is it available for public review? What about agricultural BMP reductions for BOD?

Response: Please see the responses to comments #22 and #150.

152. Commenter is concerned that the follow on "development and implementation of a Pollution Control Strategy" is doomed to failure because of it's top down nature.

Response: DNREC intends to fully involve stakeholders in the development and implementation of the PCS.

153. Commenter forwarded a copy of The Town of Dewey Beach Resolution #68, which supports elimination of wastewater discharge by the West Rehoboth Water and sewer system as long as funding comes from a variety of sources, including the Federal Government and State and Local Governments and DNREC supports the project.

Response: Please see the response to comment #44.

154. Since the TMDL regulation is intended to address only nitrogen and phosphorous pollution, Article 1, as written is overly broad. Point sources such as cooling water systems may contain nitrogen or phosphorus in their discharges solely due to the presence of these pollutants in the intake water. Accordingly, these sources add no pollutant loading to the waterbody. If elimination of point sources of nitrogen and phosphorous is the goal, then this article should be re-worded accordingly. In addition, Article 1 must specify the removal of sources of nitrogen and phosphorous, not removal of all discharges simply containing nitrogen and phosphorous.

Response: Please see the response to comment #39.

155. Data obtained from samples of discharge streams does not take into consideration the amounts of pollutants that may have been present in intake water.

Response: Data used for the analysis of the impact of point sources considered the amount of pollutants in intake waters.

156. Some dischargers have taken steps to reduce or eliminate nitrogen and phosphorus loadings. Therefore, the elimination of point sources will not actually result in the level of reduction in pollution loadings to the inland Bays that may be expected based upon the 1988-1990 data.

Response: Baseline period (1988-1990) conditions, not present conditions, were used to set reduction targets in the development of the proposed TMDL. Therefore, the elimination of point sources will result in the level of reduction in pollution loadings as projected.

157. The TMDL regulation, in its current form, would require a 100% reduction in nitrogen and phosphorous from point sources while requiring a 69% reduction in nitrogen and 52% reduction in phosphorous from non point sources. This places a disproportionate burden upon point sources discharges and the communities which rely upon their services.

Response: Please see the response to comment #24.

158. Article 6 calls for a 20% reduction in the atmospheric nitrogen deposition to the Inland Bays. Because Delaware cannot control nitrogen deposition from out of state sources, the possibility exists for placing a greater burden upon point and non-point sources of nitrogen to further reduce their loadings to the Inland bays. Delaware's industry and citizens should not have to bear the cost of compensating for pollutants being deposited into their waterbodies from sources outside the state.

Response: Please see the response to comment #5.

159. DPI Submitted an 18 page document dated August 25, 1998, titled "Advanced Comments on TMDL Rulemaking" that had been submitted to the US EPA by the American Farm

Bureau. It basically challenges EPA's interpretation of Section 303(d) of the CWA and other considerations for TMDLs and Water Quality Standards.

Response: Please see the response to comment #11.

160. I am fully in favor of the proposed TMDL regulations for Nitrogen and Phosphorus for Indian River, Indian River Bay, and Rehoboth Bay. I have watched water quality deteriorate steadily in these water bodies for my entire life and it is high time that something is to be planned that may help them.

Response: DNREC acknowledges the commenter's support of the proposed TMDL regulations.

161. The sad thing is that the State of Delaware refused to start working on this problem ten years ago when the Clean Water Act was passed. We would be much, much closer to a solution now. However, this plan still allows ample time for development of alternatives and seems to be equitable.

Response: DNREC acknowledges the commenter's support of the proposed TMDL regulations.

162. I do think there should be some attention given to the pollution of the Bays caused by over development and bulkheading and the lack of buffer zones. Poor land use decisions must also take responsibility for some of the pollution.

Response: Please see the response to comment #31.

163. We believe that voluntary not mandatory nutrient plans of an individual's farmland is the appropriate course of action.

Response: Please see the response to comment #6.

164. We agree that phosphorous loads need to be reduced from all sources (septic tanks, industrial, agricultural, etc.), however, we believe the science is not available to link reductions of application to water quality impact, until more is known on solubility and soil transportation characteristics of phosphorous a realistic goal is not possible (see TMDL's article 3 and 5).

Response: Please see the response to comment #17.

165. Our understanding is that: if one acre of farmland is replaced with development land with a septic system- nutrient loading increases three fold.

Response: Please see the response to comment #7.

166. DNREC's efforts go well beyond EPA's requirements for public participation. Federal regulations require only that the State make the proposal available for public comment for thirty days.

Response: DNREC acknowledges the support of the commenter.

167. The freshwater tidal portion of the Indian River is listed for suspended sediment as well as nutrients. While the TMDLs clearly target nutrients, they are silent on the TSS criteria. It is EPA's understanding that DNREC will show that a TMDL for TSS is not necessary because the TSS criteria will be met due to reductions in chlorophyll-a caused by the nitrogen and phosphorus TMDLs. EPA supports this approach, but DNREC must document it in the TMDL report in order to show that the "all pollutants" requirement of the Consent Decree is met.

Response: Additional analysis conducted by DNREC indicates that under the proposed loading conditions, TSS criteria will be met in the freshwater tidal portion of the Indian River. The Final TMDL analysis report has been modified to document this analysis.

168. In order to be consistent with the federal regulations concerning allocating to nonpoint sources, the documentation for the inland Bays TMDL must identify the significant categories of nonpoint sources and show the allocated load (or, at a minimum, the percent reduction

needed) from each significant source. Commenter provided an example of a table to be included in the documentation for the Inland Bays TMDL.

Response: A table similar to the one suggested by the commenter has been added to the documentation.

169. We suggest that the Inland Bays TMDL report include a general discussion of the types of measures and their potential effectiveness that might be used to achieve the nonpoint source load reductions.

Response: DNREC has included such a general discussion in the TMDL report.

170. The goal of the Department is to reduce the levels of nutrients introduced into the Indian River to a level that can be assimilated with no harm to the ecosystem. Vlasic Foods International and our Vlasic Foods-Millsboro Plant fully support this goal.

Response: DNREC acknowledges the commenter's support.

171. Your Department has requested comments to the TMDL Proposals distributed during July. The original deadline for submission was September 5th, extended recently to September 25th, 1998. This is an extremely short comment period, considering the mass of data that must be analyzed and the breadth of the Department's proposals. Additionally, this task is difficult since much of the baseline data has not been made available. Without raw data, interim departmental findings and conclusions, the process and reasonableness of the TMDL Program proposed can not be analyzed. As a consequence, we are forced to object to this process and the related conclusions based on the inability to assess them.

Response: Please see the response to comment #1.

172. The nutrient discharge from the Vlasic Foods- Millsboro Plant can be measured in "grams per day", not "hundreds of pounds" per day. Enforcement of Article 1 as written could result in the closure of the Vlasic Foods Millsboro Plant or relocation of this facility out of Delaware, and a resultant loss of employment and tax revenues, with no environmental benefit to the State of Delaware. On behalf of the Vlasic Foods-Millsboro Plant and of Vlasic Foods International, Inc. we respectfully request that the Department modify Article 1 to allow continued operation of this plant and others that are similarly situated.

Response: Please see the response to comment #138.