

# CAPE COD COMMISSION

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DATE: February 17, 2000

TO: Roland Dupont, Bourne Board of Selectmen

FROM: Cape Cod Commission

RE: Development of Regional Impact  
Cape Cod Commission Act, Sections 12 and 13

APPLICANT: Town of Bourne  
Board of Selectmen  
24 Perry Avenue  
Bourne, MA 02532

PROJECT #: 97031

PROJECT: Bourne Integrated Solid Waste Management Facility

BOOK/PAGE: Book 1351 Page 456 & 457

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## DECISION OF THE CAPE COD COMMISSION

### SUMMARY

The Cape Cod Commission (Commission) hereby approves with conditions the application of the Town of Bourne Selectmen as a Development of Regional Impact (DRI) pursuant to Sections 12 and 13 of the Cape Cod Commission Act (Act), c. 716 of the Acts of 1989, as amended, for development of the Bourne Integrated Solid Waste Management Facility (DRI #ENF 97031), including two new lined cells (Phase 3 and Phase 4), the reclamation of Phase 1D, and the Materials Recovery Facility (MRF). The decision is rendered pursuant to a vote of the Commission on February 17, 2000.

### PROJECT DESCRIPTION

The project before the Commission is the re-development of a waste management facility located off MacArthur Boulevard (Route 28) in Bourne. The project site, which has a Board of Health Site Assignment for this purpose, is 78 acres. The Town has operated a landfill on the site since the late 1960's. Active landfilling of municipal solid waste (MSW) ended in 1997 when the Town began shipping MSW to the SEMASS waste-to-energy plant.

In 1994, the Town received a permit from the DEP to expand the existing landfill by constructing a new, lined cell immediately adjacent to and partially on top of part of the older landfill. The proposed new cell was to provide disposal capacity for Bourne-only MSW and construction and demolition (C&D) debris. However, after reviewing the proposed new cell with the DEP, the Town decided instead to construct a more

comprehensive, regional lined landfill in phases for just C&D and other difficult-to-manage wastes (such as mattresses and old furniture). The Town also decided to incorporate a processing center for the C&D in the proposal. As such, the Town of Bourne took on a leadership role in the region in planning for proper management of these wastes.

The Bourne Integrated Waste Management Facility incorporates several different projects. The capping of older, previously filled portions of the site (Phases 1A-1D) began before commencement of the MEPA/Commission review. Development of the first lined landfill cell (Phase 2) was issued a Waiver by MEPA. Therefore, this DRI decision relates to the development of the Bourne Waste Management Facility (DRI #ENF 97031) including the development of two new lined cells (Phase 3 and Phase 4), the reclamation of Phase 1D, and the Materials Recovery Facility (MRF).

The development of the full Phase 1 reclamation plan (Phase 5), Phase 6, the bio-solids proposal are not part of this DRI approval. These projects are discussed only in conceptual terms in the FEIR and, according to the Secretary's Certificate and will be the subject of future Notices of Project Change.

In addition, capping of the old, unlined landfill cells (Phase 1A-1D) began prior to the commencement of the Joint Commission/MEPA review. Development of the first lined cell, Phase 2, was granted a Waiver from inclusion in the EIR process. These projects were, therefore, considered during the review of the overall Waste Management Facility but are not part of this DRI approval.

#### PROCEDURAL HISTORY

In September 1997, the Commission received an Environmental Notification Form (ENF) for the proposed project. The ENF included a request from the Town for a Waiver from the need to prepare an Environmental Impact Report (EIR) for Phase 2 of the project. The Commission commented in a letter to MEPA dated October 27, 1997 in support of the Waiver request.

In December, 1997, the Town of Bourne received a Waiver from the MEPA Unit for Phase 2 (referred to by the Town as "modified Phase 2" and what MEPA calls "Phase 1" in its Certificate and Record of Final Decision on the Waiver request). The MEPA Certificate on the Waiver required that an Environmental Impact Report (EIR) be conducted for the cumulative impacts of the full development including current and proposed operations.

Based on this, pursuant to a Memorandum of Understanding between the Commission and the Executive Office of Environmental Affairs, the applicant elected to participate in a joint Cape Cod Commission/MEPA review process designed to address the concerns of both agencies and to expedite project review. A duly-noticed public hearing for the purpose of Scoping the Draft EIR (DEIR)/DRI report was held on August 10, 1998. A Subcommittee meeting to prepare a comment letter to MEPA on the DEIR was held on August 27, 1998. A letter on the Scope was sent to MEPA dated August 31, 1998.

The Town submitted a Draft EIR (DEIR)/DRI report to the MEPA Unit on December 3, 1998. A copy was submitted to the Commission on December 9, 1998. A public hearing

was held on January 28, 1999 for the Commission Subcommittee to receive testimony on the DEIR. Commission comments on the DEIR were submitted to MEPA on February 9, 1999. Duly-noticed Subcommittee meetings were held on February 1<sup>st</sup> and 5<sup>th</sup>, 1999 to discuss the Commission's comments on the DEIR.

On February 16, 1999, the Secretary of Environmental Affairs issued a Certificate on the DEIR stating it adequately and properly complied with the Massachusetts Environmental Policy Act. The Certificate for the DEIR also required preparation of a FEIR for the remainder of the landfill project. In October 1999, the Town filed the FEIR. A duly-noticed public hearing was held on November 9, 1999 for the Subcommittee to receive comments on the FEIR. A duly-noticed Subcommittee meeting was held on November 19, 1999 to discuss the Commission's comments on the FEIR. The Secretary of EOEA issued a Certificate on the FEIR on November 29, 1999. This completed the joint MEPA/Commission review process.

A duly noticed public hearing was held on January 10, 2000 for the purpose of dealing with DRI-only issues under the Regional Policy Plan. At the February 3, 2000 Subcommittee meeting, the Subcommittee voted unanimously to recommend to the full Commission that the project be approved as a DRI, subject to conditions. A final public hearing was held before the full Commission on February 17, 2000. At this hearing, the Commission voted to approve, with conditions, the application of the Town of Bourne Selectmen as a Development of Regional Impact (DRI) pursuant to Sections 12 and 13 of the Cape Cod Commission Act (Act), c. 716 of the Acts of 1989, as amended, for development of the Bourne Integrated Solid Waste Management Facility (DRI #ENF 97031), including two new lined cells (Phase 3 and Phase 4), the reclamation of Phase 1D, and the Materials Recovery Facility (MRF).

#### Materials submitted for the record

##### From the applicant:

Meeting Notice	7/28/97
Presentation on Non-MSW Landfill	7/29/97
Environmental Notification Form and cover letter	10/3/97
Letter to EOEA requesting extension to comment deadline	10/27/97
Letter to EOEA, clarification of waiver request	10/31/97
Application to Water Pollution Abatement Trust	12/18/97
Joint Commission/MEPA Joint Process Review application	6/24/98
Letter to EOEA, extension submission deadline for DEIR	10/5/98
DEIR	12/9/98
Letter to EOEA, errata in DEIR	12/21/98
Letter, to Commission, requesting more time at hearing	1/28/99
Copy, MassHighway permit	1/28/99
Copy, SABATIA, Inc site assessment	1/28/99
Presentation on project	1/28/99
Letter to EOEA w/attachs., work plan for hydrogeologic study	2/17/99
Draft FEIR	10/99
FEIR	10/99
Response to comments on FEIR	11/9/99
Draft Waste Acceptance Policy	11/9/99
Report on repair of Phase 2 liner	11/9/99
Letter, to Commission, DRI Exemption application request	11/15/99

From Cape Cod Commission staff:

Letter, to EOEa, on ENF and Waiver request	10/27/97
Staff Form Q	7/9/98
Staff transmittal form for EIR	7/9/98
Subcommittee memo	7/10/98
Subcommittee memo	7/15/98
Letter, to Selectman Dupont about Scoping Session	7/16/98
Draft natural resources comments	8/3/98
Subcommittee memo	8/3/98
Draft Subcommittee comment letter to EOEa on EIR	8/4/98
Minutes of Scoping Session (public hearing)	8/10/98
Handout, description of process for Scoping Session	8/10/98
Hearing Notice for Scoping Session	8/10/98
Handout, description of Commission/MEPA process	8/10/98
Subcommittee memo	8/20/98
Minutes, Subcommittee meeting	8/27/98
Letter to EOEa on EIR	8/31/98
Subcommittee memo	9/22/98
Subcommittee memo	11/13/98
Staff Form Q - DEIR	12/16/98
Subcommittee memo on DEIR	12/17/98
Subcommittee memo	1/5/99
Facility Use Request form	1/6/99
Staff Report on DEIR	1/22/99
Hearing Notice on DEIR	1/28/99
Minutes, Hearing on DEIR	1/28/99
Minutes, Subcommittee meeting	2/1/99
Minutes, Subcommittee meeting	2/5/99
Subcommittee Report and cover letter on DEIR	2/8/99
Subcommittee memo	2/10/99
Subcommittee memo	3/18/99
Photographs of crane test	7/30/99
Staff transmittal form for FEIR	10/8/99
Facility Use Request form	10/13/99
Subcommittee memo – errata in FEIR	10/25/99
Staff Report on FEIR	10/28/99
Subcommittee memos (2)	10/28/99
Script of process for public hearing	11/9/99
Subcommittee memo	11/10/99
Hearing Notice on FEIR	11/9/99
Minutes, Hearing on FEIR	11/9/99
Draft Subcommittee Report on FEIR	11/19/99
Facility Use Request form	12/2/99
Subcommittee Report on FEIR w/cover letter	12/2/99
Staff response to letter from Russell Kingman	12/2/99
Subcommittee memo	12/31/99
Staff Update	1/3/00
Hearing Notice on DRI-only issues	1/10/00

From state/local officials:

DEP, Final permit, lateral expansion	12/1/94
DEP, Permit extension request	12/30/96
EOEA, Meeting/site visit notice for ENF	10/14/97
MassHighway, comments on ENF	10/28/97

From state/local officials (continued):

EOEA, draft Phase I Record of Decision	12/4/97
EOEA, ENF Certificate	12/31/97
EOEA, Phase I Record of Decision, Waiver determination	12/31/97
Department of Environmental Protection, Phase 2 Final approval	9/14/98
EOEA, Submission deadline for DEIR	9/16/98
DEP, Final Approval, Request for tonnage increase	10/6/98
EOEA, DEIR Certificate	2/16/99
Letter, Falmouth Selectmen to EOEA on DEIR	11/23/99
EOEA, FEIR Certificate	12/3/99
Letter, Yarmouth DPW in support of facility	12/31/99
Letter, Chatham Highway Department in support of facility	12/31/99
Letter, Harwich Highways Division in support of facility	1/5/00
Letter, Truro DPW in support of facility	1/6/00
Letter, Brewster Board of Selectmen in support of facility	1/7/00
Fax, Barnstable DPW in support of facility	1/10/00
Fax, Provincetown DPW in support of facility	1/11/00
Letter, Bourne Selectmen, comments on draft decision	2/3/00

From the public:

Article, Bourne Courier	7/23/98
Tim Johnson, 3 articles	8/1/98
Letter, EOEA, appointment of Roland Dupont to Recycling 2000 Commission	8/3/98
Reginald Judson, color photo and article from Bourne Courier	8/10/98
David Jacobson, two comment letters, MA Army National Guard, Environmental Specialist	8/10/98
Letter, Lexes H. Coates	8/13/98
Article, Cape Cod Times	8/15/98
Article, Bourne Courier	8/20/98
Articles (2), Bourne Courier	8/27/98
Article, Cape Cod Times	8/28/98
Articles (2), Bourne Courier	9/10/98
Letter, Tim Johnson	9/21/98
Letter, Tim Johnson	9/30/98
Letter, Tim Johnson	10/20/98
Article, Bourne Courier	11/9/98
Article, Falmouth Enterprise	11/27/98
Letter, Tim Johnson	12/7/98
Article, Cape Cod Times	12/16/98
Articles (2), Bourne Courier	12/17/98
Letter, Tim Johnson	12/21/98
Article, Cape Cod Times	12/22/98
Articles (2), Bourne Courier	12/24/98
Letter, Tim Johnson	1/25/99
Letters (2), Tim Johnson	1/28/99
Letter and attachments, Reginald Judson	1/28/99
Article, Cape Cod Times	1/29/99
Letter, Tim Johnson	2/3/99
Article, Bourne Courier	2/4/99
Letter, Richard Conron	2/10/99
Article, Bourne Courier	2/14/99
Articles (2), Bourne Courier	2/25/99
Article, Bourne Courier	3/4/99

From the public (continued):

Letter, Richard Conron	11/9/99
Letters (2), Tim Johnson	11/9/99
Letter, Judith Conron	11/9/99
Letters (2), the Conrons	11/14/99
Letter, Theresa Rodriguez	11/17/99
Letter, Russell Kingman	11/18/99
Letter, John Elwood	11/22/99
Letter, Tim Johnson	1/10/00
Letter, George Seaver	1/12/00

The application and notices of public hearings relative thereto, the Commission staff's notes, exhibits and correspondence, the transcript and minutes of meetings and hearings and all written submissions received in the course of the Commission's proceedings on 97031 are incorporated into the record by reference.

TESTIMONY

August 10, 1998: Scoping Session

Mr. Roland Dupont, Bourne Selectmen, described the project using a model to show how the Town proposed to dig out previously landfilled materials from part of the existing capped landfill area, sort it and re-bury it. He said the project is designed not to be visible from the Bourne Bridge. He noted the Town had submitted updated data on project traffic impacts. Mr. Dupont noted groundwater monitoring had been done in 1997 and 1998. Mr. Richard Keller, a Town consultant, discussed water quality monitoring.

Ms. Adams, project Planner along with Mr. David Hall, Waste Management Coordinator, Mr. Paul Tilton, Transportation Engineer, Ms. Heather McElroy, Natural Resources Planner and Mr. Thomas Cambareri, Water Resources Office all presented parts of the Staff Report.

The Subcommittee asked questions of the staff related to water quality monitoring.

Mr. George Seaver noted he was involved with the LF-1 plume coming from the MMR. He noted that the Town's liability from groundwater contamination was a key issue. He said there was a contaminant in a well at Cox Lane and that the house was subsequently hooked up to Town water.

Mr. Tim Johnson submitted copies of three letters for the record. He expressed concern about the visibility of the project from the Bourne Bridge and possible groundwater contamination.

Mr. Peter Fisher expressed concern over landfill mining and that it would cause offensive odors.

Mr. John York expressed concern over landfill mining, disposal of chromated copper arsenic (CCA) lumber and possible contamination of a down-gradient marsh system.

Mr. Reginald Judson expressed concern about the financial solvency of the project and groundwater contamination.

Mr. Leo Locke expressed concern about groundwater contamination.

Mr. Jim Malados expressed concern about groundwater contamination.

Mr. David Malarski expressed support for the project.

Mr. David Jacobson from Otis ANGB submitted written comments.

Mr. Matt Trask expressed support for construction of a regional C&D facility.

Mr. Lex Coates said he was at the hearing to learn more about the project.

Mr. Deane moved to close the hearing and leave the record open. Mr. Randolph seconded the motion. The Subcommittee voted all in favor of the motion.

August 27, 1998: Meeting

The Subcommittee and Mr. Cambareri discussed possible changes to the draft letter on the DEIR Scope to MEPA concerning down-gradient groundwater impacts and monitoring.

Mr. Hall and the Subcommittee discussed changes to the Solid Waste section of the comment letter concerning disposal capacity, acceptance of waste generated on-Cape versus off-Cape, Bourne's commitment to expand its recycling programs.

Mr. Tilton and the Subcommittee discussed changes to the Transportation comments including accident data and the background traffic estimates to be used in the DEIR, safety issues related to the MacArthur Boulevard U-Turns and site access.

The Subcommittee recommended the comment letter be changed to reflect a desire by the Commission that a second height/visibility test be performed.

Mr. Kaufman moved to authorize Mr. Travelo to review the final draft of the comment letter to MEPA. Mr. Deane seconded the motion. The Subcommittee voted all in favor of the motion.

January 28, 1999: Hearing on DEIR

Mr. Haydon Coggeshall of the Bourne Board of Selectmen introduced the project. He introduced the project team. Mr. Roland Dupont, Bourne Board of Selectmen, introduced the Town's consultants. He asked Mr. Brent Goins to address the water resources section in the Draft Environmental Impact Report (DEIR).

Mr. Goins used a series of overheads which provided an outline of his presentation. He also submitted a copy for the record. Mr. Goins noted the Town was committed to install a limited number of down gradient wells. He noted the wells would be installed with Department of Environmental Protection, Cape Cod Commission and the County Health Department's input. Mr. Goins noted the test results of the additional wells would be presented in the Final Environmental Impact Report (FEIR).

Mr. Neil Andres presented the transportation section of the DEIR.

Mr. Dupont said that the Town was considering increasing curbside collection of recyclables to address the RPP's 20% trip reduction standard. He said the Town was considering adding white goods to elevate trips to the landfill. Mr. Dupont explained that the Town inspects each load of waste that is disposed of at the facility. He said there will be a sampling program to test of hazardous materials. On Community Character, Mr. Dupont said the Town was committed to performing a second height test and was willing to provide notice.

Mr. Richard Keller presented the Natural Resources and wildlife habitat section in the DEIR. He provided a copy for the record of a report completed by Sabatia, Inc.

Mr. Deane asked what stage the Town was at in the current facility design. Mr. Dupont said the Phase 2 liner system is complete except for the leachate collection system and pump tanks. He said the Town was hoping to send the DEP the request for the Authorization to Construct Phase 2.

Mr. Kaufman questioned where the proposed new groundwater monitoring wells would be installed. Mr. Goins responded that the Town was going to install monitoring wells near the toe of the Phase 2 liner to insure there was quality control process to insure that the Phase 2 liner was sound. He said these wells were requested as a precaution by the DEP.

Mr. Deane questioned the similarities and differences between the facility and the Springfield Materials Recovery Facility. Mr. Dupont responded that Bourne's facility would include a tip floor so that loads could be inspected, a grinder/chipper to reduce large items like stumps for burial, a material recovery facility and the landfill. He reiterated that the landfill would be lined.

Ms. Andrea Adams, the project Planner, Mr. David Hall, Waste Management Coordinator, Mr. Paul Tilton, Transportation Engineer, Mr. Tom Cambareri, Water Resources Office and Ms. Heather McElroy, Natural Resources Planner, presented sections of the Staff Report.

Mr. Deane asked if the Natural Heritage program had been contacted. Ms. McElroy said yes, they had been and Natural Heritage believed the project would not impact rare or endangered species habitat.

A representative of the Southeast Regional Office of the DEP noted that the Authorization to Operate Phase 2 of the landfill had been received and reviewed by his office. He noted the proposed facility is significantly different from the old unlined landfill.

Mr. Steve McNally of the Bourne Board of Health said the Board has been reviewing the proposed project all along and supports it. He said the lined cell was a viable project.

Mr. Tim Johnson submitted information for the record. He noted there was a website which specialized in planting trees on old landfills after capping. He said the Town should provide an artist's rendering of what the proposed landfill and associated facilities would look like.

Mr. Richard Conron said he was opposed to the landfill project. He said it would have a negative impact on real estate values.

Mr. Jack Elwood expressed concern about the speed of trucks entering and leaving the landfill site.

Mr. Reginald Judson said Greenpeace had requested a meeting with Mr. David Ellis of the DEP over a facility called Resource Recovery of Quincy. He noted that Mr. Ellis was in court over a site assignment. He said an unlicensed hauler had visited the Bourne facility. He was concerned that unauthorized waste would be accepted at the facility.

Mr. David Jacobson thanked the Town's consultants for addressing water resources issues. He expressed concern about using sludge for part of the landfill cap since this could be contaminated material.

Mr. John York said his primary concern was for groundwater contamination. He said he agreed with the staff's comments including the need for more off-site and down gradient wells and different well screening depths.

Mr. Jim Maltos said the Commission needed to understand the misconception that the Town supported the project. He said not to rely on the Town Meeting vote as an indication of support. He noted that all liners leak and that Bourne would be liable for the contamination. He said the Commission should be concerned about providing waste disposal methods for the Cape, not communities off-Cape.



Mr. Pete Fisher said it was not valid that the landfill Enterprise Fund monies could be used for other purposes. He said the Enterprise Fund monies must stay with the fund and be used for the purposes spelled out when the Fund was created.

Mr. George Seaver said the project's financial viability was in question.

Mr. George Lennox said he was an environmental engineer and that all landfill liners will leak. He said the FEIR should address this. He said the Town should consider a double liner system.

Mr. Russ Kingman said he was a member of the Finance Committee. He noted leachate is collected and pumped out of the facility. He said the concerns about landfill odor issues are not valid. He noted the facility workers now have additional protective gear. He also noted that outside audits had been conducted of the facility and that the Finance Committee is supportive of the project.

Mr. Dupont noted the Town has held a variety of public meetings to explain the project. He said the Town was not concerned about what they would find if down gradient, off-site wells were placed.

Mr. Kaufman moved to close the hearing and leave the record open. Mr. Deane seconded the motion. The Subcommittee voted all in favor of the motion.

#### February 1, 1999: Meeting

Ms. Adams noted the purpose of the meeting was to discuss the Subcommittee's changes to the January 22, 1999 Staff Report on the DEIR.

Mr. Deane questioned why the proposed County Jail and Nightingale Pond Estates was listed as developments in the study area. Mr. Tilton responded traffic from these projects, along with the MMR, Brookside and Subaru of New England might affect the landfill. He noted the DEIR had included expected traffic from CanalSide Commons. Mr. Deane noted the Town was currently accepting a limited amount of wood waste (to make forms to pour concrete) from the Big Dig. Mr. Hall noted concerns raised in the Staff Report related to acceptance of loose, friable asbestos and retention of disposal capacity for Cape-generated waste.

#### February 5, 1999: Meeting

Ms. Adams, the project Planner, noted a separate Subcommittee meeting had been held on 2/1/99 but that comments from that meeting had not been included in the Staff Report with the exception of grammatical corrections suggested by Mr. Kaufman. Ms. Adams also noted the water resources staff had met with Mr. Dupont and Mr. Goins on 2/3/99 to discuss the Staff Report.

Mr. Tilton said the analysis did not have to be very extensive to show that Nightingale Pond estates traffic either would or would not impact the Bourne Waste Management facility.

Mr. Dupont suggested the letter from the Highway Administration did not provide clear guidance on the curbcut issue. At the same time, he said it was the Town's understanding that curbcuts on Route 28 were not favored. He said the issue of moving the U-turn was a different one. He noted the Town was already looking to construct a deceleration lane.

Mr. Cambareri said staff had met with Mr. Dupont and Mr. Goins on 2/3/99.

Mr. Dupont said the Town can understand what the staff is requesting. At the same time, he noted that in this case, the Bourne landfill is not located in a Wellhead Protection District or adjacent to surface water bodies. He noted the Town had agreed at the hearing on 1/28/99 to sink additional

wells. He said the Town would work with the DEP, Bourne Health Department and Commission staff.

Mr. Deane questioned how it could be determined, if contamination was detected in off-site wells, where that was coming from with the other known off-site sources like the stump dump.

Mr. Cambareri suggested two of the sites were cross-gradient from the Bourne landfill. He noted the staff had suggested a number of sites to Mr. Dupont and Mr. Goins at the 2/3/99 meeting as an add-on to the on-site landfill wells.

Mr. Hall noted that there were also issues related to waste management. He noted the staff was concerned about Big Dig wastes and about disposal capacity.

Mr. Dupont said it would not be a problem for the FEIR to clarify where composting operations occur on site. He said the issues raised in the Staff Report will be addressed in detail in the FEIR.

Mr. Kaufman moved that the January 22, 1999 Staff Report be adjusted based on the Subcommittee's traffic discussions and become the Subcommittee Report to MEPA. Mr. Deane seconded the motion. The Subcommittee voted all in favor of the motion.

Mr. Deane moved to authorize Mr. Travelo as Chair to review and approve the final version of the Staff Report to become the Subcommittee's Report to MEPA. Mr. Kaufman seconded the motion. The Subcommittee voted all in favor of the motion.

#### November 9, 1999: Hearing on FEIR

Ms. Adams, Mr. Hall, Mr. Tilton and Mr. Cambareri presented the Staff Report on the FEIR.

Mr. Dupont, Bourne Selectmen, described the project and FEIR. On water resources issues, he noted the Town would commit \$50,000 to complete the water quality studies. He also said the Town was undertaking a study of a double liner system using two synthetic geo-membranes and one layer of clay. Mr. Michael McElhare, Bourne Integrated Solid Waste Management, submitted comments for the record. He noted that in FY 1999, 70 % of the waste coming to the facility was generated in the Primary Wasteshed.

Mr. Richard LaFarge noted a recent Town Meeting had denied funding for Phase 3.

Ms. Cathy LaBelle expressed concern about the acceleration/deceleration lane. She questioned why it had been constructed shorter than the length recommended by the Commission.

Mr. Richard Conron said the visualization test should be repeated during the winter when there were no leaves on the trees.

Mr. Milast submitted a list of 21-E sites in Bourne and questioned whether the Town would be liable if the liner system failed.

Mrs. Judy Conron expressed opposition to the project.

Mr. Robert Horton expressed concern about the landfill liner system and noise from trucks delivering waste to the facility.

Mr. Patrick Skelly expressed support for the project, although he questioned the advisability of taking asbestos at the facility.

Mr. Tim Johnson said the double liner idea was a good one.

Mr. George Seaver expressed concern about the project financial viability.

Mr. Donald Ellis said the Commission should consider the impacts to the Bourne Bridge of big C&D waste trucks particularly wear and tear on the expansion joints.

Mr. Stanley Ogis said trucks visiting the facility are routinely inspected by the State Police.

Mr. Dupont noted the Town had held 22 public meetings on the project. He said the project was designed to be state-of-the-art and was financially sound.

Mr. Ansel noted the Staff Report expressed concern about hazardous materials and questioned how truckers are advised the facility may be reaching its daily intake limit.

Mr. Dupont responded that regular haulers to the facility understand the inspection protocols and that the Town has set up a system where companies are called by phone and are advised of remaining daily capacity.

Mr. Deane moved to close the hearing and leave the record open. Mr. Ansel seconded the motion. The Subcommittee voted all in favor of the motion.

The Subcommittee decided to hold a meeting to discuss the draft comment letter to MEPA on November 18, 1999 beginning at 4:30 PM at the Assembly of Delegates Chambers.

#### November 19, 1999: Meeting

Ms. Adams reviewed changes to the Staff Report would be sent as a Subcommittee Report/comment letter to MEPA. The changes included adding a sentence recognizing the Town's commitment to analyze inclusion of a double liner system.

Mr. Michael McElhare, representing the Town, said the Town had provided for the funding for removal of oil contaminated soils. The Subcommittee directed staff to change the sentence on page 7 of the letter to reflect this.

Mr. Randolph made a motion that the draft Subcommittee Report, as amended be sent to the MEPA Unit as the Commission's comment letter on the FEIR for the project. Ms. Frazer seconded the motion. The Subcommittee voted all in favor of the motion.

#### January 10, 2000: DRI Hearing

Mr. Roland Dupont used a video presentation of slides to illustrate his points. He noted there had been a tear in the landfill liner. The Massachusetts Department of Environmental Protection had been notified and the tear had been repaired. He also addressed the methane which migrated off site to the adjacent Rod and Gun Club. He noted that two test wells had been sampled. Mr. Dupont said the adjacent Club building had been shut down by representatives of the County Department of Health and the Environment due to the gas levels. He noted that a combined vent and flare system had been installed to address the problem. Mr. Dupont said that the adjacent building were subsequently re-opened for occupancy.

Mr. Goins explained how the landfill gas system could be used to make energy. Mr. McElhare explained how the Town was seeking input from the federal EPA relative to the energy potential of the methane.

Mr. Dupont gave a brief overview of the project to date and expressed satisfaction with the Staff Report on the FEIR.

Ms. Adams presented the Staff Report. She noted that the Town had addressed comments relative to providing a disposal precedence for Cape municipalities and the concern about asbestos. She also noted the Town had committed to additional vegetative screening.

Mr. Cambareri addressed the water resources section of the staff report. He noted the project site is not within a public water supply resource area. He noted the proposed lined landfill would be designed with state-of-the art technology. He did note the site was within the area of the Back River ACEC.

Mr. Jim Maladis expressed concern about the off-site methane migration. He said the Commission should require that tests be taken at off-site locations such as nearby buildings and homes. He also felt that an agency other than the Barnstable County Department of Health and the Environment should perform the testing.

Mr. Richard LaFarge expressed concern that the methane had migrated further off site and that venting and flaring would not address the problem. He asked if the staff had investigated the issue.

Ms. Adams responded that it was her experience that the State DEP would require the facility, or any landfill with the same problem to take appropriate steps to remediate the off-site impacts. She suggested that venting and flaring were commonly used methods to address methane migration at landfills.

Mr. Cambareri suggested that given the Cape's geology and sandy soils, methane resulting from the old unlined landfill would not be likely to migrate long distances. He noted it is typically only a problem where a structure covers the ground and does not allow the methane to dissipate naturally.

Mr. Reginald Judson expressed concern about what the residents in Bourne would be exposed to next. He questioned what other types of pollution would result from the landfill.

Mr. Tim Johnson said he was concerned that not all the facts had been considered by the Commission. He submitted a copy of his comments for the record. He listed what he saw as the detriments of the proposed project. He was concerned about the visual impacts, fiscal and financial impact to the Town, uncertainty as to the feasibility of proposed landfill mining and post-waste management uses for the property. He suggested the recent vote in support of continuing expansion of the landfill was biased because the continued employment of municipal officials would be jeopardized unless they voted in favor of continuing the expansion.

Mr. Martin Greene of the Bourne Fire Department said the levels of methane detected at the adjacent property were minimal. He said the Rod/Gun Club buildings were properly evacuated when methane was detected, but suggested that there were only small pockets of gas. He noted that the building in question was not designed for human habitation in any case.

Ms. Judy Conron said it was very difficult to receive information from the Town in a timely manner. She said the communication was particularly important if something went wrong, like the methane leak. She suggested the Commission require the Town to publish a newsletter about the project's progress.

Mr. Dupont noted that there have always been methane leaks at landfills. He said the method used by the Town in this case – vents with flares – was similar to that used by other facilities. He said the Town was also being fiscally responsible in the design and progress of the project.

Ms. Adams said the Subcommittee should review and vote on the draft Minutes from the November 19, 1999 meeting. She also said that in terms of procedure, the Subcommittee should vote to continue the hearing and the record to the February 17, 2000 Commission meeting.

Mr. Deane moved to continue the hearing and the record to the February 17, 2000 Commission meeting. He also moved to hold a Subcommittee meeting for the purposes of reviewing a draft decision for approval with conditions on February 3, 2000 beginning at 5:00 PM. Mr. Ansel seconded the motions. The Subcommittee voted all in favor of the motions.

February 3, 2000: Meeting

Mr. Travelo opened the meeting at 5:00 PM. He noted it had been continued from the Subcommittee public hearing on January 10, 2000.

Ms. Adams reviewed a revised draft decision. She noted the revisions included ones she had made in response to a comment letter received from the Bourne Board of Selectmen.

Ms. McElroy addressed changes to the natural resources findings concerning a drainage basin which was also functioning as a wetland.

Mr. Goins noted that the Town may wish to enlarge the drainage basin to handle runoff from the Phase 1 old unlined landfill. He also noted that the drainage basin was located outside of the Phase 1 area, not the Phase 6 area.

Mr. Fox noted that the isolated wetland was within the area of the Phase 1 Waiver and as such, it was not subject to the Commission's jurisdiction.

Ms. Adams reviewed minor changes to the community character findings.

Mr. Cambareri reviewed changes to the water resources findings.

Ms. Adams reviewed changes to the draft general conditions.

Mr. Goins noted that the Town may seek an agreement with an abutting property owner to allow off-site management of storm-water runoff.

Ms. Adams noted that this would require use of the Flexibility Clause if supported by the Subcommittee.

The Subcommittee was in agreement that management of stormwater off-site was acceptable, provided the Town had the agreement of an abutting property owner. Based on this, the Subcommittee directed staff to draft a finding which allowed the Town to either manage stormwater on site or off-site. The Subcommittee agreed that use of the Flexibility Clause was warranted.

Ms. Adams noted the applicant should submit copies of conceptual plans to be attached to the final decision.

Mr. McElhare noted that the Town had begun the application process for Phase 3. As such, he suggested the timeframe of the partial and final Certificates of Compliance be moved back to the Authorization to Construct and Operate Phase 4.

The Subcommittee supported Mr. McElhare's request.

Mr. McElhare and Mr. Goins expressed concern about condition G4 regarding appeals and the seven year limit noted in condition G1.

Mr. Fox noted that both G1 and G4 contained standard language included in DRI decisions.

The Subcommittee discussed the matter and directed staff to keep conditions G1 and G4 as drafted.

Mr. McElhare expressed concern about the SW/HMW condition which required submission of MOUs between Bourne and other Towns to the Commission. He said Bourne was willing to submit a sample MOU.

Ms. Fenn noted that submission of the MOUs was to insure that the disposal precedence was maintained for waste from Cape municipalities.

The Subcommittee supported Mr. McElhare's proposal and directed that the condition be eliminated.

Ms. Adams noted a minor correction to the transportation conditions.

Ms. McElroy noted two of the natural resources conditions could be eliminated.

Ms. Adams noted changes to the community character conditions dealing with adding additional screening vegetation and submission of a landscaping plan.

Mr. Deane moved to approve the draft decision, as amended, for consideration by the full Cape Cod Commission. He also moved to give authority to review final changes to the Subcommittee Chair. Mr. Ansel seconded the motions. Mr. Randolph abstained from voting. The remainder of the Subcommittee voted all in favor of the motions.

#### JURISDICTION

The proposed Bourne Waste Management Facility (development of two new lined cells (Phase 3 and Phase 4), the reclamation of Phase 1D, and the Materials Recovery Facility) qualifies as a Development of Regional Impact (DRI) under Section 3 (e) of the DRI Enabling Regulations governing review of Developments of Regional Impact, which requires review of "any of the following proposed commercial, service, retail or wholesale business, office or industrial development, as well as any private health, recreational or educational development:... \*new construction or use changes involving as a principal use outdoor commercial space with a total project area greater than 40,000 sq. ft."

The proposed project also qualifies as a DRI under Section 3(h) of the DRI Enabling Regulations governing review of Developments of Regional Impact, which requires review of "any development providing facilities for transportation to or from Barnstable County, including but not limited to ferry, bus, rail trucking terminals [or] transfer stations..."

The proposed project was also subject to Commission review because the project required the filing of an Environmental Impact Report under Section 61-62h of Chapter 30 of the general laws. This is provided by Section 12(i) of the Act and by Commission regulations.

#### FINDINGS

The Commission has considered the application of the Bourne Board of Selectmen for the proposed Integrated Solid Waste Management Facility, and based on consideration of such application and upon the information presented at the public hearing(s) and submitted for the record, makes the following findings pursuant to Sections 12 and 13 of the Act:

## GENERAL

G1. The development of the full Phase 1 reclamation plan (Phase 5), Phase 6, the bio-solids proposal are not part of this DRI approval. They will also be the subject of future MEPA Notices of Project Change.

G2. The site of the proposed project, as defined in this decision, has a site assignment as a landfill from the Bourne Board of Health, which dates to June, 1972. The development is also consistent with the Town of Bourne development bylaws.

## SOLID WASTE and HAZARDOUS MATERIALS/WASTES

SW/HMW1. The proposed Bourne Integrated Waste Management Facility is intended to meet a regional need for the processing and disposal of construction and demolition (C&D) and difficult-to-manage (DTM) wastes. It will enable Cape Cod communities to deliver recyclable materials and to dispose of C&D and DTM wastes at a facility located on Cape Cod. As such, this facility will be a regional asset to Cape Cod.

SW/HMW2. At full build, the facility is expected to receive a maximum of 825 tons per day (tpd) of waste and recyclable materials. On average, a maximum of 400 tpd (500 tpd during the peak season) will be disposed and 425 tpd will be composted or processed for recycling. If 500 tpd are disposed, the amount accepted for composting or processing for recycling cannot exceed 325 tpd (MEPA Certificate, November 29, 1999).

SW/HMW3. The proposed project is in compliance with Section 4.2 of the RPP. The materials recovery facility (MRF) portion of the proposal will assist Cape Cod communities in achieving the goal of recycling and composting 40% of its solid waste by 2005 by providing the ability to process recyclable materials prior to their reuse by manufacturers. The landfill portion will provide a facility, using the latest in landfill technology, for the disposal of C&D debris and DTM wastes. Only wastes that cannot be composted, recycled or otherwise diverted will be landfilled.

SW/HMW4. Municipal solid waste, hazardous materials, motor vehicles, liquid or gaseous materials, radioactive material and medical material will not be accepted at the facility (Bourne Board of Selectmen handout, April 16, 1998).

SW/HMW5. The nearest MRF to Cape Cod today is a BFI-owned facility in Brockton. The nearest lined landfill that could accept Cape Cod's C&D and DTM wastes is a BFI-owned facility in Fall River.

SW/HMW6. The projected life expectancy of the landfill is 14 to 25 years (MEPA Certificate, November 29, 1999).

SW/HMW7. Based on the following measures, the Town of Bourne believes that C&D generated in the Primary Wasteshed (Cape Cod, Martha's Vineyard, Carver, Plymouth and Wareham, from DEIR, Appendix C, page 1) will be given disposal precedence.

- The Town of Bourne has documented that as of the end of 1999 about 70% of disposal capacity is being used by Cape Cod towns, 10% by Plymouth and Wareham, and 20% by other off-Cape sources.
- Facility staff begin turning away commercial haulers when the daily intake approaches 20 – 40 tons of the allowed 400 tpd capacity.
- As of the end of 1999, thirteen Cape Cod towns had signed a Memorandum of Understanding (MOU) with the Town of Bourne for use of the facility. The MOU guarantees contract communities disposal capacity within the 400 tpd limit.
- A waste acceptance protocol is being developed to assist facility staff and haulers using the facility better understand how waste will be handled at the facility.
- The Town of Bourne has developed methods to track the amount of waste it receives from commercial haulers and municipalities.

SW/HMW8. According to maps produced for the 1996 RPP, the Bourne landfill site is not located within a delineated Wellhead Protection District/Zone II area or a Potential Public Water Supply Area. As such, MPS 4.2.2.3 does not apply to this project.

SW/HMW9. MPS 4.2.2.2 requires that development and redevelopment shall be in conformance with the Massachusetts Hazardous Waste Regulations, 310 CMR 30.00. The FEIR provided a description of the types of waste that will not be accepted at the facility and how these unacceptable wastes will be identified, stored and removed from the premises.

SW/HMW10. The landfill is not permitted to accept any asbestos containing material (ACM) except non-friable vinyl asbestos tile. If the town wishes to pursue disposal of other ACM, a Special Waste Determination Permit will need to be obtained from DEP (MEPA Certificate, November 29, 1999).

SW/HMW11. As part of the Department of Environmental Protection's permitting of the project, the Town was required to prepare and maintain as part of the Phase 2 Authorization to Operate an Operations and Maintenance Plan (ATO, condition 21) dealing with nuisance conditions (odors, dust, litter), waste inspections for unacceptable materials including hazardous materials and emergency response. This is in conformance with Other Development Review Policy (ODRP) 4.2.2.4.

#### TRANSPORTATION

TRANS-1. The proposed expansion of the Waste Management Facility is expected to generate approximately 440 daily vehicle trips and 58 peak hour trips.

TRANS- 2. MPS 4.1.1.1 of the Regional Policy Plan requires DRI's to mitigate all regional intersections and roadways where project traffic is expected to add 25 or more vehicle trips during the peak hour. Based on this threshold, the project traffic is expected to impact two regional locations: MacArthur Boulevard and the Bourne Rotary. Therefore, mitigation is required at both of these locations.

TRANS-3. At locations where the threshold (25 trips) of MPS 4.1.1.1 are reached but the increase is less than 50 peak hour trips, DRI's may make a payment of \$100 per trip per



intersection or roadway to comply with MPS 4.1.1.1. Since the study locations are under 50 peak hour trips, the proponent has chosen to make this monetary payment to mitigate their peak hour traffic. The total cost to mitigate MacArthur Boulevard (\$2,500) and the Bourne Rotary (\$4,200) is \$6,700 using this method.

TRANS-4. MPS 4.1.2.1 of the RPP requires DRI's to offset at least 20% of their projected traffic. The applicant has proposed to implement an expanded curb side recycling program to meet this standard. This is an expansion of the existing curb-side recycling program and also includes educating the public, pursuing other drop-off areas (e.g., Post Office) and potentially developing a regional recycling facility. These measures will reduce vehicle trips to the site.

TRANS-5. As part of the Phase 1 Waiver process, MEPA approved and the Town constructed an acceleration and deceleration lane at the site drive to improve traffic conditions at this location. Trucks previously used the breakdown lane as they approached and departed the site creating potential accident problems. The acceleration and deceleration lanes eliminate this problem and improve the flow of traffic at the site drive and along Route 28 northbound.

#### NATURAL RESOURCES

NR1. The site is primarily located outside of Significant Natural Resource Areas (SNRA) as mapped by the 1996 RPP. The applicant provided an existing conditions plan as requested.

NR2. Correspondence from the Natural Heritage and Endangered Species Program (NHESP) dated August 1998 states that the project will not impact state listed lepidoptera species. The applicant also retained a wildlife biologist to inventory rare and endangered species on the site. The FEIR contains the biologist's report, indicating his corroboration that the site does not contain habitat to support the rare species of concern in this area.

NR3. The applicant proposed the possibility of managing capped portions of the landfill for wildlife habitat after the completion of the landfilling phases.

NR4. The nearest surface water body to the project site is Donnelly Pond, located 500 feet to the east. Also according to the plans submitted, no wetlands occur within the proposed phased landfill development area or within 100 feet of its perimeter. However, the natural resources inventory in the FEIR documents a drainage basin, located outside of the project area which is functioning as a wetland. This isolated wetland is within the area of the Phase 1 Waiver and as such, is not subject to the Commission's jurisdiction.

#### COMMUNITY CHARACTER

CC1.MPS 6.2.3 requires that development provide adequate landscaped buffers in order to limit adverse visual impacts on the surrounding community. The Town proposes to maintain an existing 230-foot wide vegetated area along MacArthur Boulevard to screen the facility from the roadway. While this existing vegetation should provide an effective buffer during the growing season, the facility is partially visible from the roadway during the winter months.

CC2. The Town proposed to supplement existing vegetation between MacArthur Boulevard and the landfill. The FEIR states the plantings in this area will be 75% evergreen and 25% deciduous trees. This conforms to recommendations made by the Commission in its comment letter on the DEIR.

CC3. In order to address concerns raised by the public during the DEIR review regarding visibility of the facility from the Bourne Bridge and A & P shopping plaza, the Commission recommended that additional visibility testing be conducted. A second "height test" was performed with a crane on July 30, 1999 with Commission staff present. The crane, with the boom extended, simulated a height between 183 and 210 feet above MSL. The FEIR (pg. 170) states that the facility at buildout would be at an elevation of 185 feet above MSL. If so, based on the height test, it appears the facility will not be visible from the Bourne Bridge, A&P shopping plaza and adjacent Upper Cape Vocational Technical School.

#### WATER RESOURCES

WR1. The proposed project is not located in a Wellhead Protection Area, but, is located in a Marine Water Recharge Area to the Back River which is recognized as an Area of Critical Environmental Concern.

WR2. Although the proposed project is located on the Cape Cod Sole Source Aquifer, the area downgradient from the Bourne facility is classified in the Regional Policy Plan as an "Impaired Area" in terms of water quality by virtue of the existing landfill's presence. As a result, the general area is not recognized for its potential for drinking-water supply development.

WR3. The proposed project incorporates a state of the art landfill with double liner with leak detection interval and leachate collection system. The completed project will be capped and collected leachate will be managed at a facility that is licensed to handle landfill leachate.

WR4. The existing monitoring-well network is sufficient to monitor the adequacy of the proposed environmental protection. However, the existing Phase 1 unlined landfill has been identified as a source of contamination to ground water beneath and downgradient of the facility. 1,4-Dichlorobenzene was detected in excess of Massachusetts Maximum Contaminant Levels (MMCL) at one on-site well (MW-7) and approaching MMCL at another on-site well (MW-14).

WR5. The hydrogeological assessment of the Phase 1 unlined landfill site indicates that groundwater flows approximately 2 feet per day, which is projected to ultimately discharge into the Back River ACEC and its associated wetland system. Data submitted as part of the FEIR clearly shows impaired ground water from the existing landfill migrating in groundwater flow off site.

WR6. The Town of Bourne conducted a detailed assessment to locate all downgradient private drinking-wells and is currently arranging public water supply alternative for all except two.

WR7. The unlined landfill is one of few landfills on Cape Cod for which an off-site, downgradient water quality assessment has not been conducted. Therefore, the extent and nature of ground-water impact downgradient of the existing unlined landfill is not known.

WR8. The Town has agreed to install six monitoring-well clusters, consisting of two wells each, downgradient and off site to evaluate the extent and nature of downgradient impact of the Phase 1 unlined landfill on water quality. The evaluation will provide a baseline measure of water-quality.

WR9. Elevated nitrogen was detected in ground-water samples collected from wells downgradient of the former septage lagoons. The Town removed this source of contamination. However, the existing nitrogen in the ground water will migrate to marine discharge areas. Potential impact to surface waters of the Back River Area of Critical Environmental Concern (ACEC) is of particular concern, although there is uncertainty regarding the potential for nitrogen from the former septage lagoons to discharge at the Cape Cod Canal. The mass of nitrogen and the nitrogen's fate has not been evaluated.

WR10. Limited water quality data collected by the Coalition for Buzzards Bay suggests that the Back River embayment has experienced impact from development in its watershed. Therefore, studies of embayment water quality and tidal flushing, and nitrogen loads to its watershed are warranted.

WR11. The Town of Bourne offered to allocate \$50,000 toward a nitrogen study for the Back River embayment watershed.

WR12. Attached to this decision (Attachment A) is a work plan outlining tasks envisioned by the Commission to be necessary for a successful study.

WR13. Minimum Performance Standard 2.1.1.6 requires that "new direct discharge of untreated stormwater, parking lot runoff and/or waste water into marine or fresh surface water and wetlands shall not be permitted. Stormwater shall be managed and disposed of on site. Development and redevelopment shall use best management practices such as vegetated swales, to minimize runoff and maximize water quality treatment." According to Town representatives, Bourne is seeking two alternatives for stormwater management: a.) management within and on the Solid Waste Management Facility site or b.) management of stormwater on an abutting property through an agreement with that property owner. The Commission finds that it is appropriate to invoke the Flexibility Clause to allow the management of stormwater runoff off the project site with the assent of the abutting property owner. The Commission finds that this alternative will not be more detrimental to the protected resource than would be allowable under MPS 2.1.1.6.

#### CONCLUSION

Based on the findings above, the Cape Cod Commission hereby concludes:

1. The benefits of the proposed project outweigh the detriments resulting from the development. This conclusion is supported by findings SW/HWM1-11.

2. The project as proposed is consistent with the 1996 Regional Policy Plan with the exception of Minimum Performance Standard 2.1.1.6. This conclusion is supported by findings SW/HWM1-11 and conditions TRANS1-4, NR2, CC1-3 and WRC1-3. With respect to Minimum Performance Standard 2.1.1.6, the Commission has found that it is appropriate to apply the Flexibility Clause in the Regional Policy Plan to allow the applicant to pursue an alternative method of managing stormwater runoff.

3. The project as proposed is consistent with local development by-laws. This conclusion supported by the finding G2.

The Commission hereby approves with conditions the application of the Bourne Board of Selectmen for the proposed Integrated Solid Waste Management Facility (development of two new lined cells (Phase 3 and Phase 4), the reclamation of Phase 1D, and the Materials Recovery Facility) as a Development of Regional Impact, provided the following conditions are met:

### CONDITIONS

#### GENERAL

G1. This DRI decision is valid for 7 years and local development permits may be issued pursuant hereto for a period of 7 years from the date of the written decision. The development of the full Phase 1 reclamation plan (Phase 5), Phase 6, the bio-solids proposal are not part of this DRI approval. These projects will also be the subject of future MEPA Notices of Project Change.

G2. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this decision.

G3. The applicant shall obtain all state and local permits for the proposed project.

G4. No development work, as the term "development" is defined in the Act, shall be undertaken until the appeal periods has elapsed or, if such an appeal has been filed, until all judicial proceedings have been completed.

G5. The proposed Integrated Solid Waste Management Facility shall be constructed in accordance with the following conceptual design plan: "Preliminary Site Plan for Cape Cod Commission Final Decision on Development of Regional Impact" dated 1/27/00 (attached).

G6. The applicant shall forward to the Commission, forthwith, copies of any and all local and state permits and approvals issued in relation to this project and issued subsequent to this decision. A copy of final plans approved by the Department of Environmental Protection (DEP) and local boards shall be submitted to the Commission upon receipt of relevant approvals.

G8. The applicant shall provide the Commission with an annual progress report to be submitted on or before the anniversary of the date of this decision. The annual progress report shall describe the status of local and state development permitting and

project construction. The last progress report shall be provided along with the request to the Commission for the final Certificate of Compliance as described in condition G10.

G9. A partial Certificate of Compliance from the Cape Cod Commission is required for conditions Trans-1, and CC1. The applicant shall notify Commission staff of the intent to seek a partial Certificate of Compliance at least thirty (30) days prior to application to the Department of Environmental Protection for an Authorization to Operate Phase 3. Such notification shall include a list of key contact(s) for questions that may arise during the Commission's compliance review. Commission staff shall complete an inspection under this condition within seven (7) business days of such notification and inform the applicant in writing of any deficiencies and corrections needed. The applicant understands that the Commission has no obligation to issue a partial Certificate of Compliance unless all conditions are complied with or secured consistent with this decision. The applicant agrees to allow Cape Cod Commission staff to enter onto the property which is the subject of this decision for the purpose of determining whether the conditions contained in the decision are met.

G10. A final Certificate of Compliance from the Cape Cod Commission is required for conditions Trans-2, CC2, CC3, WRC1 and WRC2. The applicant shall notify Commission staff of the intent to seek a final Certificate of Compliance at least thirty (30) days prior to application to the Department of Environmental Protection for an Authorization to Construct Phase 4. Commission staff shall complete an inspection under this condition within seven (7) business days of such notification and inform the applicant in writing of any deficiencies and corrections needed. The applicant understands that the Commission has no obligation to issue a final Certificate of Compliance unless all conditions are complied with or secured consistent with this decision. The applicant agrees to allow Cape Cod Commission staff to enter onto the property which is the subject of this decision for the purpose of determining whether the conditions contained in the decision are met.

#### SOLID WASTE and HAZARDOUS MATERIALS/WASTES

SW/HMW1. The Town of Bourne shall submit annual tonnage data to the Commission indicating the tons of material composted, tons recycled and tons landfilled from each Cape Cod town. This should include waste delivered by the towns and commercial haulers.

SW/HMW2. The facility shall operate in accordance with the Integrated Solid Waste Management System described in Section 4.2 of the Regional Policy Plan concerning management and disposal of accepted materials.

SW/HMW3. The facility shall not accept municipal solid waste, hazardous materials, motor vehicles, liquid or gaseous materials, radioactive material and medical materials.

SW/HMW4. The facility shall not accept asbestos-containing material (ACM) except non-friable vinyl asbestos tile. If the Town wishes to pursue disposal of other types of ACM at the facility, it shall only be allowed to do so after successfully obtaining a Special Waste Determination Permit from the Department of Environmental Protection. The Town shall notify the Commission staff of the intent to seek a Special Waste

Determination Permit from the DEP at least thirty (30) days prior to filing an application for such.

#### TRANSPORTATION

TRANS-1. Prior to issuance of a partial Certificate of Compliance, to comply with MPS 4.1.1.1 of the RPP, the applicant shall make payment of \$6,700 payable to the Barnstable County Treasurer for the purposes of a corridor study along Route 28 to address safety related issues at the U-turn located south of the Waste Management Facility site drive. The study shall research options such as improving, removing and/or relocating U-turns to accommodate traffic to the Waste Management Facility and shall be conducted under the direction of the Cape Cod Commission staff.

TRANS-2. To comply with MPS 4.1.2.1 of the RPP, the applicant shall implement an expanded curb-side recycling program for the Town of Bourne. Prior to issuance of a final Certificate of Compliance, the Town shall submit to the Commission a narrative explaining the components of the expanded curbside recycling program.

TRANS-3. Prior to issuance of a building permit for the Materials Recovery Facility, the Town shall provide to the Commission evidence that the expanded curb-side recycling program has been implemented, including measures such as providing educational information to Town residents.

TRANS-4. The applicant shall submit to the Commission a copy of the Section 61 finding as required by the Massachusetts Highway Department (MHD) to the Cape Cod Commission within thirty (30) days of receipt (if applicable).

#### NATURAL RESOURCES

NR1. The applicant shall use best management practices (BMPs) such as swales and wicks to contain surface water runoff and to reduce chances of surface water runoff offsite. In addition to taking steps to minimize the creation of runoff, the applicant may choose to manage stormwater runoff off-site with the agreement of the abutting property owner as noted in finding WR13.

#### COMMUNITY CHARACTER

CC1. Prior to issuance of a partial Certificate of Compliance, the applicant shall submit for Commission review and approval a proposed grading and landscaping/planting plan intended to provide enhanced visual screening between MacArthur Boulevard and the landfill. The existing vegetation should be retained as much as possible. The plan shall include the quantity, sizes and species of all plants materials to be installed. Trees should be 75% evergreen and 25% deciduous hardwoods. Any new evergreen trees shall be spaced no more than 10-12 feet on center and should be a minimum of 7 feet in height at the time of planting; any new deciduous trees should be a minimum of 3" caliper.

CC2. Prior to issuance of a final Certificate of Compliance, the applicant shall install proposed landscaping and plantings as outlined in the plan submitted in connection with condition CC1.

CC3. If all required plantings landscape improvements are not complete at the time a

final Certificate of Compliance is sought from the Commission, any work which is incomplete shall be subject to an escrow agreement of a form and content satisfactory to Commission counsel. The amount of the escrow agreement shall equal 150% of that portion of the incomplete work, including labor and materials, with the amount approved by Commission staff. The escrow agreement may allow for partial release of escrow funds upon partial completion of work. The escrow agreement shall be payable to the Cape Cod Commission with the work approved by Commission staff prior to release of the escrow agreement. Unexpended escrow funds shall be returned to the applicant, with interest, upon completion of the required work. All site work and/or landscape improvements shall be completed prior to application to the DEP for an Authorization to Construct Phase 4.

#### WATER RESOURCES

WR1. Prior to issuance of a final Certificate of Compliance, the Town of Bourne shall install six monitoring-well clusters, consisting of two wells each, downgradient of the facility. This condition shall be substantially complete one year from the date of the DRI approval.

WR2. Prior to issuance of a final Certificate of Compliance, the Town of Bourne shall conduct a nitrogen study to assess the extent and nature of nitrogen impacts to ground and surface waters downgradient of the facility.

WR3. Conditions WR1 and WR2, above, shall incorporate the substantial elements of the work plan referenced in finding WR12 and Attachment A.

#### SUMMARY

The Cape Cod Commission hereby approves with conditions the application of the Bourne Board of Selectmen as a Development of Regional Impact pursuant to Sections 12 and 13 of the Act, c. 716 of the Acts of 1989, as amended, for the proposed Integrated Solid Waste Management Facility which is located in Bourne, MA. This approval is specifically limited to the development of two new lined cells (Phase 3 and Phase 4), the reclamation of Phase 1D, and the Materials Recovery Facility (MRF).

Thomas Broidrick  
Name, Chair

2/28/00  
Date

Commonwealth of Massachusetts

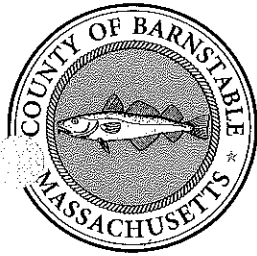
Barnstable, ss.

Subscribed and sworn to before me this 28<sup>th</sup> day of Feb 192000

Katharine L. Peters  
Name, Notary Public

My commission expires:





# CAPE COD COMMISSION

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## ATTACHMENT A

### SCOPE OF WORK

#### **and project implementation strategy for assessment conditions for the Bourne Landfill**

##### **Introduction**

The area downgradient from the Bourne landfill is classified in the Regional Policy Plan as an "Impaired Area" by virtue of the landfill's presence and projected downgradient ground-water flow paths. As a result, the area is not recognized for its potential for drinking-water supply development. Preliminary discussions between the Town of Bourne and the Cape Cod Commission, through the MEPA process, have focused on the objective and scope of a ground-water water quality investigation to evaluate the nature and extent of landfill-impacted ground water downgradient of the Phase 1 unlined landfill. The objective of the limited investigation is to document the nature and extent of landfill impaired ground water emanating from the "core" segment of the Phase 1 unlined landfill. The investigation will result in base-line water quality data to 1) evaluate improvement from the proposed project, 2) use for a nitrogen-loading assessment of the Back River, and 3) develop a Preliminary Qualitative Risk Assessment.

In addition to the detections of elevated nitrogen concentrations in the vicinity of the former septage lagoons at the site, the need for assessment of nitrogen additions to ground water from the former septage lagoons and the development of nitrogen management strategies for the watershed discharging to the Back River ACEC have been discussed. The Town of Bourne has offered to contribute \$50,000 toward nitrogen-impact assessment and development of strategies for non-point nitrogen management in the entire watershed to the Back River Estuary as defined by the Regional Policy Plan, Water Resources Classification Map II.

For the downgradient assessment the Town of Bourne and Cape Cod Commission staff will finalize a scope of work, select well locations and coordinate the project. The project will be substantially complete 1 year after approval of the DRI.





## Downgradient Assessment

### TASK 1

#### Water-table mapping and site selection

For purposes of the downgradient assessment and more accurate watershed delineation, the appropriate location of investigation wells requires that ground-water flow paths are adequately projected from the Phase 1 unlined landfill. Existing water-table maps exhibit only inferred water-table contours downgradient of the landfill. Small variations in assumed hydraulic gradient can have substantial impact on inferred flow paths (Masterson et al., 1998). Consequently, given the relatively shallow hydraulic gradient that exists downgradient of the landfill, a detailed understanding of the water-table configuration is important for a successful investigation. A 2 to 5 foot contour resolution of the water table is preferred, particularly in the vicinity of the Back River embayment, such that confidence may be established in the projected flow paths based on existing information. It is conceivable that existing observation/monitoring wells can provide the data points to complete the task of water-table mapping. Subtasks that will need to be completed toward this goal include:

- \_ Inventory of existing wells:
  - Brookside,
  - Bourne High School,
  - 21E sites
  - Others;
- \_ Surveying and gauging of existing wells; and
- \_ Water-table mapping.

#### Projection and confirmation of the "plume-core flow path"

Anticipated ground-water flow paths shall be projected from the landfill using the water-table map resulting from TASK 1. The TASK 1 water-table map and resulting ground-water flow path shall be compared with the latest USGS water-table map for western Cape Cod (Savoie, 1995) and the USGS particle tracking effort results (unpublished). A plume-core flow path shall be delineated from the landfill. The plume core will be defined by the VOC and alkalinity concentrations detected in samples collected from on-site wells 7, 8, 11 and 14.

## **TASK 2**

### Investigation sites

The downgradient investigation will utilize 6 investigation sites where wells will be appropriately screened to facilitate vertical delineation of impacted ground water. Prospective locations for the wells have been identified by the Commission following mapping of projected flow paths on the basis of inferred USGS contours (Leblanc 1986, Savoie 1995) and 1993 aerial orthophotographs (see Figure). These locations lie within a 1/8-mile wide zone located south of Colonel Road and coincident with the northern segment of Great Rock Road to County Road. On-the-ground reconnaissance will be conducted to determine the suitability of these locations for drilling. Following adjustments to the projected flow path based on refined water-table mapping, modification of the selected sites can be made and efforts to obtain access from property owners and the bidding process for drilling contractor can begin.

### Well specifications and bids

Depths of plume occurrence may be estimated from the downward trajectory of the plume identified on-site. Well clusters of up to two nested wells each are necessary to define the vertical extent of impacted ground water. Topography is uneven, ranging from 25 to 150 feet above NGVD east of County Road. Avoiding elevations in excess of 120 feet, drilling from 40 to 125 feet below grade can be anticipated. Drilling will be limited to a maximum depth of 50 feet below the water table. Split-spoon samples will not be necessary above the water table.

### Prepare Bid and Award on Final Well Sites

Detailed well logging shall be conducted, including split-spoon sampling at and every five feet below the water table and description of lithofacies encountered during drilling. Limited soil and water quality analyses will be conducted in the field to optimize screen depths, employing field-screening methods similar to those of Reynolds et al. (1991). Field water-quality analyses will include alkalinity, specific conductivity and dissolved oxygen.

## **TASK 3**

### Sample Analyses Parameters

Laboratory water quality analyses to be conducted on samples collected from the 12 new downgradient wells shall include pH, TDS, ammonia, nitrate, total nitrogen, iron, manganese, VOC's (via EPA Method 524.2), alkalinity, specific conductivity, chloride, sodium, and dissolved oxygen. Water samples will also be analyzed for dissolved

metals, including arsenic, cadmium and chromium. In addition, MW-2, MW-3, MW-5D, MW-8D, MW-11D, MW-14D and MW-18D at the facility will be monitored for ammonia and total nitrogen during the same sampling event that the 12 new downgradient wells are sampled. MW-11D and MW-14D will be monitored for dissolved arsenic.

#### **TASK 4**

##### Compilation and Interpretation of Water Quality Data

Water quality data shall be compiled in the form of a written report, including the results of water-table mapping, plan and a cross-sectional representation of the water quality data. The report will also present discussion of the conceptual model, methodology, and presentation and interpretation of the investigation results. A preliminary qualitative risk assessment shall evaluate any exceedance of MCLs in recognition that the Town of Bourne is pursuing public water to the area.

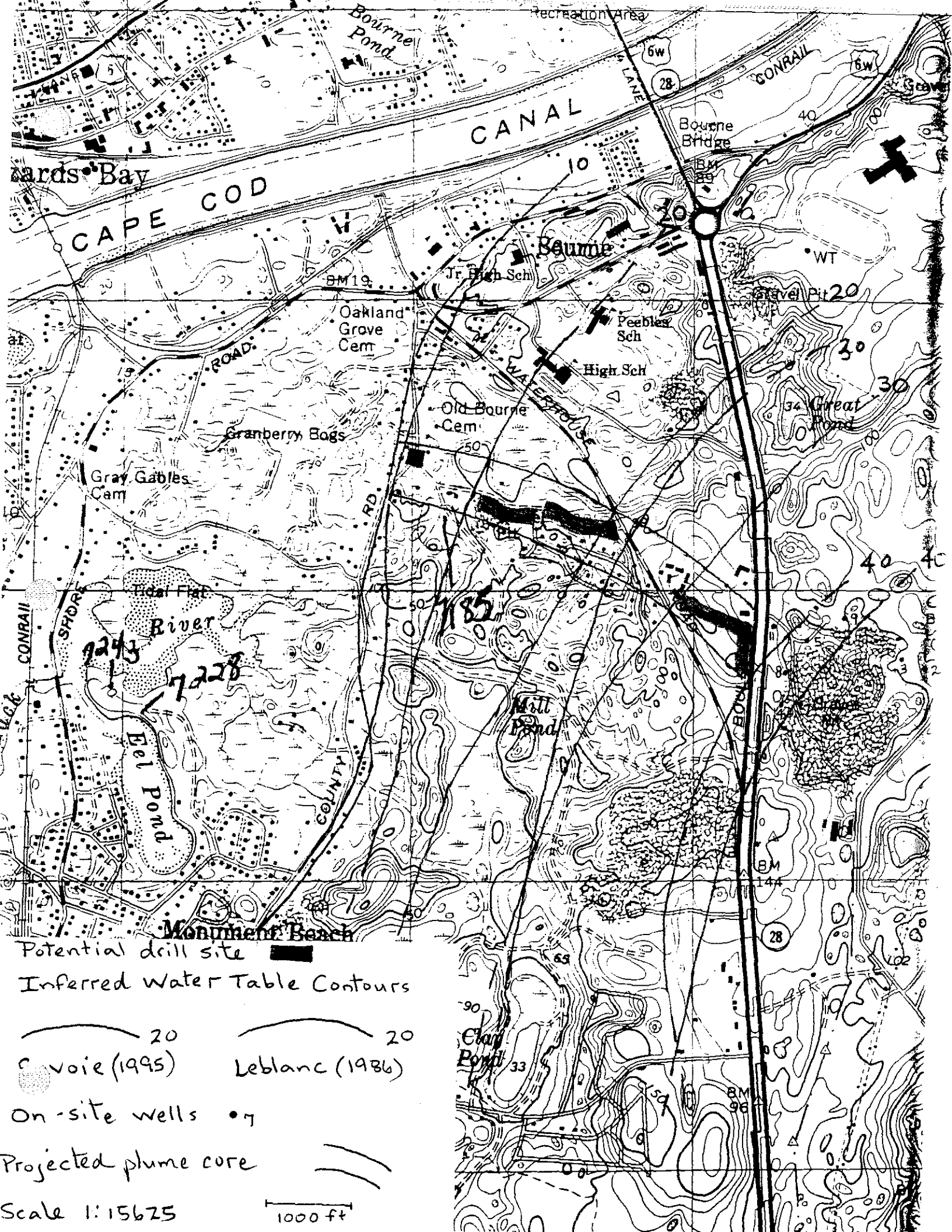
##### **Nitrogen Loading Assessment**

The Regional Policy Plan (RPP) sets a Cape-wide limit of 5 ppm-N on nitrogen loading to ground water. Exceedance of this concentration has been reported in the Town of Bourne's Final Environmental Impact Report to the Massachusetts Department of Environmental Protection. The RPP also sets forth standards regarding nitrogen loading to marine embayment watersheds (Section 2.1.1.2.C.). The RPP standards are based on defining a nitrogen loading limit, which is defined through an assessment of the existing and potential water quality in each embayment. A review of the limited data available for the Back River embayment, made available by the Coalition for Buzzards Bay, suggests the system has been impacted by existing land use in its watershed. Since this information is limited at this point, a comprehensive investigation of the extent and the fate of the nitrogen impact downgradient of the landfill and a nitrogen loading assessment for the Back River embayment watershed is warranted.

#### **TASK 1**

##### Cumulative Nitrogen Loading Assessment

A cumulative nitrogen loading assessment of all sources within the Back River embayment watershed will be calculated. The results will be compared with the embayment system's critical nitrogen load. The critical nitrogen load for the Back River system has not been determined and will comprise the following component of the nitrogen loading assessment outlined in Task 2 below.



Cape Cod Bay

CAPE COD

CANAL

Bourne

BM19

Jr. High Sch

Oakland Grove Cem

Peebles Sch

High Sch

Old Bourne Cem

Granberry Bogs

Gray Gables Cem

Tidal Flat

River

Bel Pond

Monument Beach

Potential drill site

Inferred water table contours

20 20  
voie (1995) Leblanc (1986)

On-site wells

Projected plume core

Scale 1:15625

1000 ft