



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

November 22, 2005

JOHN ELIAS BALDACCI

GOVERNOR

DAWN R. GALLAGHER

COMMISSIONER

Ms. Damaris Diffen
Manager
Town of Islesboro
150 Main Road
P.O. Box 76
Islesboro, ME 04848-0076

**RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0100269
Maine Waste Discharge License (WDL) Application #W002726-5L-D-R
Final MEPDES Permit/WDL**

Dear Ms. Diffen:

Enclosed, please find a copy of your **final** MEPDES permit and Maine WDL which was approved by the Department of Environmental Protection. This permit/license for your facility replaces National Pollutant Discharge Elimination System (NPDES) permit #ME0100269 last issued for your facility by the Environmental Protection Agency on April 30, 1986. Please read the permit/license and its attached conditions carefully. You must follow the conditions in the order to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State law and is subject to enforcement action.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled "*Appealing a Commissioner's Licensing Decision.*"

We would like to make you aware of the fact that your monthly Discharge Monitoring Reports (DMRs) may not reflect the revisions in this permitting action for several months however, you are required to report applicable test results for parameters required by this MEPDES permit/WDL that do not appear on the DMR. Please see attached April 2003 O&M Newsletter article regarding this matter.

If you have any questions regarding the matter, please feel free to call me at 287-7659.

Sincerely,

Bill Hinkel
Division of Water Resource Regulation
Bureau of Land and Water Quality

Enc.

cc: Denise Behr, DEP Jon Carmen, Contract Op. Roger Janson, USEPA

AUGUSTA

17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688
RAY BLDG., HOSPITAL ST.

BANGOR

106 HOGAN ROAD
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND

312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE

1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-0477 FAX: 764-1507

DMR Lag

When the Department renews discharge permits, the parameter limits may change or parameters may be added or deleted. In some cases, it is merely the replacement of the federally issued NPDES permit with a state-issued MEPDES permit that results in different limits. When the new permit is finalized, a copy of the permit is passed to our data entry staff for coding into EPA's Permits Compliance System (PCS) database. PCS was developed in the 1970's and is not user-friendly. Entering or changing parameters can take weeks or even months.

This can create a lag between the time your new permit becomes effective and the new permit limits appearing on your DMRs. If you are faced with this, it can create three different situations that have to be dealt with in different ways.

1. If the parameter was included on previous DMRs, but only the limit was changed, there will be a space for the data. Please go ahead and enter it. When the changes are made to PCS, the program will have the data and compare it to the new limit.
2. When a parameter is eliminated from monitoring in your new permit, but there is a delay in changing the DMR, you will have a space on the DMR that needs to be filled. For a parameter that has been eliminated, please enter the space on the DMR for that parameter only with "NODI-9" (No Discharge Indicator Code #9). This code means monitoring is conditional or not required this monitoring period.
3. When your new permit includes parameters for which monitoring was not previously required, and coding has not caught up on the DMRs, there will not be any space on the DMR identified for those parameters. In that case, please fill out an extra sheet of

paper with the facility name and permit number, along with all of the information normally required for each parameter (parameter code, data, frequency of analysis, sample type, and number of exceedances). Each data point should be identified as monthly average, weekly average, daily max, etc. and the units of measurement such as mg/L or lb/day. Staple the extra sheet to the DMR so that the extra data stays with the DMR form. Our data entry staff cannot enter the data for the new parameters until the PCS coding catches up. When the PCS coding does catch up, our data entry staff will have the data right at hand to do the entry without having to take the extra time to seek it from your inspector or from you.

EPA is planning significant improvements for the PCS system that will be implemented in the next few years. These improvements should allow us to issue modified permits and DMRs concurrently. Until then we appreciate your assistance and patience in this effort.

Phil Garwood



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17 AUGUSTA, MAINE 04333

DEPARTMENT ORDER

IN THE MATTER OF

TOWN OF ISLESBORO	) MAINE POLLUTANT DISCHARGE
PUBLICLY OWNED TREATMENT WORKS	) ELIMINATION SYSTEM PERMIT
ISLESBORO, WALDO COUNTY	) AND
#ME0100269	) WASTE DISCHARGE LICENSE
#W002726-5L-D-R APPROVAL	) RENEWAL

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, §1251, *et seq.*, and Maine law, 38 M.R.S.A., §414-A *et seq.*, and applicable regulations, the Department of Environmental Protection (Department) has considered the application of the TOWN OF ISLESBORO (Town), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

The Town has applied to the Department for renewal of Waste Discharge License (WDL) #W002726-5L-C-R, which was issued on August 8, 2000 and expired on August 8, 2005. The 8/8/00 WDL authorized the discharge of secondary treated wastewater from a publicly owned treatment works (POTW) to the Atlantic Ocean at East Penobscot Bay, Class SB, in Islesboro, Maine at separate "summer season" (April 1 through September 30) and "winter season" (October 1 through March 31) flow rates of 0.0182 million gallons per day (MGD) and 0.0637 MGD, respectively. This permitting action is establishing a year-round discharge flow limit of 0.0637 MGD based on the design capacity of the treatment system.

On January 12, 2001, the Department received authorization from the U.S. Environmental Protection Agency (USEPA) to administer the National Pollutant Discharge Elimination System (NPDES) permit program in Maine, excluding areas of special interest to Maine Indian Tribes. From that point forward, the program has been referred to as the Maine Pollutant Discharge Elimination System (MEPDES) permit program, and permit #ME0100269 (same as NPDES permit number) will be utilized as the primary reference number for the Town's MEPDES permit.

PERMIT SUMMARY

This permitting action is similar to the 8/8/00 licensing action in that it is:

1. Carrying forward the year-round monthly average, weekly average and daily maximum technology-based concentration limits for biochemical oxygen demand (BOD₅) and total suspended solids (TSS);
2. Carrying forward the year-round daily maximum technology-based concentration limitation for settleable solids;
3. Carrying forward the seasonal (May 15 through September 30) monthly average and daily maximum concentration limitations for fecal coliform bacteria;
4. Carrying forward the technology-based daily maximum concentration limit for total residual chlorine (TRC) and specifying that TRC limits are in effect on a year-round basis;
5. Carrying forward the minimum monitoring frequency requirements for settleable solids, fecal coliform bacteria and pH.

This permitting action is different from the 8/8/00 licensing action in that it is:

1. Eliminating seasonal discharge flow limitations by establishing a monthly average discharge flow limit of 0.0637 MGD and a daily maximum discharge flow reporting requirement;
2. Eliminating separate "winter season" and "summer season" BOD₅ and TSS mass limits by establishing year-round monthly average, weekly average and daily maximum mass limits based on the design criteria of 0.0637 MGD;
3. Establishing a requirement to achieve a minimum 30-day average of 85 percent removal for BOD₅ and TSS;
4. Revising the pH range limitation to 6.0 – 9.0 standard units;
5. Revising the minimum monitoring frequency requirements for discharge flow, BOD₅, TSS and TRC;
6. Requiring the submission of a revised Operation and Maintenance (O&M) manual for Department review and comment; and
7. Requiring the submission of a revised Wet Weather Management Plan for Department review and comment.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated November 18, 2005, and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.
2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with State law.
3. The provisions of the State's antidegradation policy, 38 M.R.S.A. §464(4)(F), will be met, in that:
 - (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;
 - (b) Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected;
 - (c) The standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;
 - (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification that higher water quality will be maintained and protected; and
 - (e) Where a discharge will result in lowering the existing water quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.
4. The discharge will be subject to effluent limitations that require application of best practicable treatment as defined in Maine law, 38 M.R.S.A., §414-A(1)(D).

ACTION

THEREFORE, the Department APPROVES the above noted application of the TOWN OF ISLESBORO to discharge a monthly average flow of up to 0.0637 MGD of secondary treated sanitary wastewater to the Atlantic Ocean at East Penobscot Bay, Class SB, in Islesboro, Maine, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

1. "Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits," revised July 1, 2002, copy attached.
2. The attached Special Conditions, including any effluent limitations and monitoring requirements.
3. The expiration date of this permit is five (5) years from the date of signature below.

DONE AND DATED AT AUGUSTA, MAINE, THIS 2nd DAY OF November, 2005.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

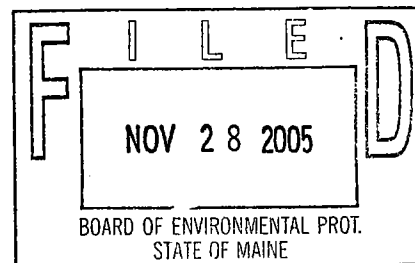
BY: _____

DAWN R. GALLAGHER, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: September 30, 2005

Date of application acceptance: September 30, 2005



Date filed with Board of Environmental Protection: _____

This Order prepared by William F. Hinkel, BUREAU OF LAND & WATER QUALITY
#ME0100269 / #W002726-5L-D-R November 18, 2005

SPECIAL CONDITIONS**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

1. During the period beginning the effective date of this permit and lasting through permit expiration, the permittee is authorized to discharge **secondary treated sanitary wastewater from Outfall #001A** to the Atlantic Ocean at East Penobscot Bay. Such discharges shall be limited and monitored by the permittee as specified below⁽¹⁾.

Effluent Characteristic	Discharge Limitations				Monitoring Requirements		
	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Daily Maximum</u>	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency</u> <u>Sample Type</u>
Flow [50050]	as specified	as specified	as specified	as specified	as specified	as specified	as specified
	0.0637 MGD [03]	--	Report MGD [03]	--	--	--	3/Week [03/07] Metered [MT]
BOD ₅ [00310]	16 lbs./day [26]	24 lbs./day [26]	27 lbs./day [26]	30 mg/L [19]	45 mg/L [19]	50 mg/L [19]	2/Month [02/30] Grab [GR]
BOD ₅ Percent Removal ⁽²⁾ [81010]	---	---	---	85% [23]	---	---	1/Month [01/30] Calculate [CA]
TSS [00530]	16 lbs./day [26]	24 lbs./day [26]	27 lbs./day [26]	30 mg/L [19]	45 mg/L [19]	50 mg/L [19]	2/Month [02/30] Grab [GR]
TSS Percent Removal ⁽²⁾ [81011]	---	---	---	85% [23]	---	---	1/Month [01/30] Calculate [CA]
Settleable Solids [00545]	--	--	--	--	--	0.3 ml/L [25]	1/Week [01/07] Grab [GR]
Fecal Coliform Bacteria ⁽³⁾ [31616] May 15–September 30	--	--	--	15/100 ml ⁽⁴⁾ [13]	--	50/100 ml [13]	2/Month [02/30] Grab [GR]
Total Residual Chlorine ⁽⁵⁾ [50060]	--	--	--	--	--	1.0 mg/L [19]	3/Week [03/07] Grab [GR]
pH [00400]	--	--	--	--	--	6.0 – 9.0 SU [12]	1/Week [01/07] Grab [GR]

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

FOOTNOTES: See Page 6 of this permit for applicable footnotes.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

FOOTNOTES:

1. **Monitoring** – All effluent monitoring shall be conducted at a location following the last treatment unit in the treatment process as to be representative of end-of-pipe effluent characteristics. Effluent monitoring shall be conducted at the final effluent chamber following disinfection and immediately preceding discharge, unless otherwise specified by the Department. Any change in sampling location must be approved by the Department in writing. Sampling and analysis must be conducted in accordance with: a) methods approved by 40 Code of Federal Regulations (CFR) Part 136; b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136; or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services.
2. **Percent Removal** – The treatment facility shall maintain a minimum of 85 percent removal of both biochemical oxygen demand and total suspended solids for all flows receiving secondary treatment. The percent removal shall be calculated based on assumed BOD₅ and TSS influent values of 300 mg/L and actual effluent concentration values.
3. **Bacteria Limits** – Fecal coliform bacteria limits and monitoring requirements are seasonal and apply between May 15 and September 30 of each year. The Department reserves the right to require year-round disinfection to protect the health, safety and welfare of the public.
4. **Bacteria Reporting** – The monthly average fecal coliform bacteria limitation is a geometric mean limitation and sample results shall be reported as such.
5. **TRC Monitoring** – Monitoring for TRC is only required when elemental chlorine or chlorine-based compounds are in use for effluent disinfection. TRC shall be tested using Amperometric Titration or the DPD Spectrophotometric Method. The USEPA approved methods are found in Standard Methods for the Examination of Water and Waste Water, (Most current edition), Method 4500-CL-E and Method 4500-CL-G or USEPA Manual of Methods of Analysis of Water and Wastes. For the purposes of Discharge Monitoring Report (DMR) reporting when a facility has not disinfected with chlorine-based compounds for an entire reporting period, enter "NODI-9" indicating "monitoring not required this monitoring period."

SPECIAL CONDITIONS

B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent shall not contain a visible oil sheen, foam or floating solids at any time which would impair the usages designated by the classification of the receiving waters.
2. The effluent shall not contain materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the usages designated by the classification of the receiving waters.
3. The discharge shall not impart color, taste, turbidity, toxicity, radioactivity or other properties which cause those waters to be unsafe for the designated uses and characteristics ascribed to their classification.
4. Notwithstanding specific conditions of this permit, the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

C. DISINFECTION

If chlorination is used as the means of disinfection, an approved chlorine contact tank providing the proper detention time consistent with good engineering practice must be utilized followed by a dechlorination system if the imposed total residual chlorine (TRC) limit cannot be achieved by dissipation in the detention tank. The total residual chlorine in the effluent shall at no time cause any demonstrable harm to aquatic life in the receiving waters. The dose of chlorine applied shall provide a TRC concentration that will effectively reduce fecal coliform bacteria levels to or below those specified in Special Condition A, "*Effluent Limitation and Monitoring Requirements*," above.

D. TREATMENT PLANT OPERATOR

The treatment facility must be operated by a person holding a minimum of a **Grade II** certificate (or Maine Registered Professional Engineer) pursuant to Title 32 M.R.S.A. §4171 *et seq.* All proposed contracts for facility operation by any person must be approved by the Department before the permittee may engage the services of the contract operator.

E. LIMITATIONS FOR INDUSTRIAL USERS

Pollutants introduced into the waste water collection and treatment system by a non-domestic source (user) shall not pass through or interfere with the operation of the treatment system.

SPECIAL CONDITIONS

F. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and **postmarked on or before the thirteenth (13th) day of the month or hand-delivered to the Department's Regional Office such that the DMR's are received by the Department on or before the fifteenth (15th) day of the month** following the completed reporting period. A signed copy of the DMR and all other reports required herein shall be submitted to the following addresses:

Department of Environmental Protection
Bureau of Land and Water Quality
Division of Engineering, Compliance and Technical Assistance
17 State House Station
Augusta, Maine 04333-0017

G. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee shall notify the Department of the following.

1. Any introduction of pollutants into the wastewater collection and treatment system from an indirect discharger in a primary industrial category discharging process wastewater; and
2. Any substantial change in the volume or character of pollutants being introduced into the wastewater collection and treatment system by a source introducing pollutants into the system at the time of permit issuance. For the purposes of this section, notice regarding substantial change shall include information on:
 - (a) the quality and quantity of wastewater introduced to the wastewater collection and treatment system; and
 - (b) any anticipated impact caused by the change in the quantity or quality of the wastewater to be discharged from the treatment system.

H. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from Outfall #001A. Discharges of wastewater from any other point source are not authorized under this permit, and shall be reported in accordance with Standard Condition B(5), *Bypasses*, of this permit.

SPECIAL CONDITIONS

I. WET WEATHER FLOW MANAGEMENT PLAN

On or before April 1, 2006, the permittee shall submit to the Department for review and approval, a new or revised Wet Weather Management Plan [*PCS Code 06799*] that conforms to Department guidelines for such plans. The revised plan shall include operating procedures for a range of intensities, address solids handling procedures (including septic waste and other high strength wastes if applicable) and provide written operating and maintenance procedures during the events.

The treatment facility staff shall develop and maintain a Wet Weather Management Plan to direct the staff on how to operate the facility effectively during periods of high flow. The Department acknowledges that the existing collection system may deliver flows in excess of the monthly average design capacity of the treatment plant during periods of high infiltration and rainfall.

The permittee shall review their plan at least annually and record any necessary changes to keep the plan up to date. Any changes to the plans must be submitted to the Department for review and approval.

J. OPERATION & MAINTENANCE (O&M) PLAN

On or before April 1, 2006, the permittee shall submit to the Department a current written comprehensive Operation & Maintenance (O&M) Plan [*PCS Code 09699*]. The plan shall provide a systematic approach by which the permittee shall at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit.

By December 31 of each year, or within 90 days of any process changes or minor equipment upgrades, the permittee shall evaluate and modify the O&M Plan including site plan(s) and schematic(s) for the wastewater treatment facility to ensure that it is up-to-date. The O&M Plan shall be kept on-site at all times and made available to Department and USEPA personnel upon request.

Within 90 days of completion of new and or substantial upgrades of the wastewater treatment facility, the permittee shall submit the updated O&M Plan, or revised sections thereof, to their Department inspector for review and comment.

SPECIAL CONDITIONS

K. REOPENING OF PERMIT FOR MODIFICATIONS

Upon evaluation of the tests results or monitoring requirements specified in Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at any time and with notice to the permittee, modify this permit to: (1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded; (2) require additional effluent or ambient water quality monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

L. SEVERABILITY

In the event that any provision, or part thereof, of this permit is declared to be unlawful by a reviewing court, the remainder of the permit shall remain in full force and effect, and shall be construed and enforced in all respects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

2. PERMIT SUMMARY

- a. Regulatory: On January 12, 2001, the Department received authorization from the U.S. Environmental Protection Agency (USEPA) to administer the National Pollutant Discharge Elimination System (NPDES) permit program in Maine, excluding areas of special interest to Maine Indian Tribes. On October 30, 2003, after consultation with the U.S. Department of Justice, the USEPA extended Maine's NPDES program delegation to all but tribally owned lands. In those areas, the Department maintains the authority to issue WDLs pursuant to Maine law. The extent of Maine's delegated authority is under appeal at the time of this permitting action. From that point forward, the program has been referred to as the Maine Pollutant Discharge Elimination System (MEPDES) program and permit #ME0100269 (same as NPDES permit number) will be utilized as the primary reference number for the Town's MEPDES permit.
- b. Terms and Conditions: **This permitting action is similar to the 8/8/00 licensing action in that it is:**
1. Carrying forward the year-round monthly average, weekly average and daily maximum technology-based concentration limits for biochemical oxygen demand (BOD₅) and total suspended solids (TSS);
 2. Carrying forward the year-round daily maximum technology-based concentration limitation for settleable solids;
 3. Carrying forward the seasonal (May 15 through September 30) monthly average and daily maximum concentration limitations for fecal coliform bacteria;
 4. Carrying forward the technology-based daily maximum concentration limit for total residual chlorine (TRC), but specifying that TRC limits are in effect on a year-round basis;
 5. Carrying forward the minimum monitoring frequency requirements for settleable solids, fecal coliform bacteria and pH.

This permitting action is different from the 8/8/00 licensing action in that it is:

1. Eliminating seasonal discharge flow limitations by establishing a monthly average discharge flow limit of 0.0637 MGD and a daily maximum discharge flow reporting requirement;
2. Eliminating separate "winter season" and "summer season" BOD₅ and TSS mass limits by establishing year-round monthly average, weekly average and daily maximum mass limits based on the design criteria of 0.0637 MGD;
3. Establishing a requirement to achieve a minimum 30-day average of 85 percent removal for BOD₅ and TSS;
4. Revising the pH range limitation to 6.0 – 9.0 standard units;
5. Revising the minimum monitoring frequency requirements for discharge flow, BOD₅, TSS and TRC;

2. PERMIT SUMMARY (cont'd)

6. Requiring the submission of a revised Operation and Maintenance (O&M) manual for Department review and comment; and
 7. Requiring the submission of a revised Wet Weather Management Plan for Department review and comment.
- c. Facility History: This section provides a summary of significant licensing/permitting actions that have been completed for the Town of Islesboro's Dark Harbor wastewater treatment facility.

April 30, 1986 – The USEPA issued NPDES permit #ME0100269 to the Town for the discharge of secondary treated sanitary wastewater to Penobscot Bay in the Atlantic Ocean. The 4/30/86 NPDES permit expired on April 30, 1991.

April 17, 1991 – The USEPA issued a letter to the Town informing them that their reapplication for a NPDES permit had been reviewed and appeared to be complete for processing. As of the effective date of this permitting action, the USEPA had not issued a final renewal permit for the Town's Dark Harbor facility.

March 6, 1992 – The Department issued WDL #W002726-5L-C-R to the Town for the discharge of secondary treated sanitary wastewater from the Dark Harbor wastewater treatment facility to Penobscot Bay. The 3/6/92 WDL superseded WDL #W002726-45-A-R issued on August 13, 1984.

Spring 1994 – As required by WDL #W002726-58-B-R issued on March 6, 1992, the Town conducted an internal sewer system evaluation and limited work was performed to clean and remove roots, excavate manholes, and remove sources of inflow and infiltration (I/I). The Department documented in WDL #W002726-5L-C-R issued on August 8, 2000 that I/I into the wastewater treatment system had not been materially reduced.

November 6, 1997 – The Department issued a letter to the Town thereby administratively modifying WDL #W002726-58-B-R to revise the daily maximum concentration limit for fecal coliform bacteria from 15 colonies/100 ml to 50 colonies/100 ml and to establish a monthly average concentration limit of 15 colonies/100 ml to be consistent with National Shellfish Sanitation Program standards.

June 9, 2000 – The Maine Department of Marine Resources (DMR) provided the Department with a memorandum in support of seasonal rather than continuous effluent disinfection for the Town's Dark Harbor facility.

August 8, 2000 – The Department issued WDL #W002726-5L-C-R to the Town for the discharge of secondary treated sanitary wastewater from the Dark Harbor wastewater treatment facility to Penobscot Bay. The 8/8/00 WDL established separate "summer season" and "winter season" effluent discharge limitations. The 8/8/00 WDL expired on August 8, 2005 and superseded 3/6/92 WDL.

2. PERMIT SUMMARY (cont'd)

to provide a "resting period" whereby any organic matter clogging the media has a chance to dry out and be biologically oxidized.

Treated wastewater is conveyed to a 1,000-gallon (7 feet wide by 10 feet high by 7 feet deep) chlorine contact chamber for disinfection using sodium hypochlorite. Final effluent is conveyed for discharge to the Atlantic Ocean at East Penobscot Bay via a 6-inch diameter gravity outfall pipe. Based on information provided by the permittee, the outfall pipe extends from the treatment facility through a partially impounded area of Dark Harbor (Dark Harbor Pool) and the impounding dam before terminating approximately 60 feet out into the Atlantic Ocean at East Penobscot Bay on the eastern side of Islesboro Island. The outfall pipe is submerged to a depth of approximately 25 feet below the surface at mean low water and is not fitted with diffusers or other structures intended to enhance mixing of the effluent with the receiving water.

A schematic of the wastewater treatment process is included as Fact Sheet Attachment B.

3. CONDITIONS OF PERMIT

Maine law, 38 M.R.S.A. Section 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S.A., §420 and Department rule 06-096 CMR Chapter 530, *Surface Water Toxics Control Program*, require the regulation of toxic substances not to exceed levels set forth in Department rule 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

4. RECEIVING WATER QUALITY STANDARDS

Maine law, 38 M.R.S.A. §469 classifies all estuarine and marine waters lying within the boundaries of the State and which are not otherwise classified, which includes the Atlantic Ocean at East Penobscot Bay, as Class SB waters. Maine law, 38 M.R.S.A. §465-B(2) describes the standards for Class SB waters.

5. RECEIVING WATER QUALITY CONDITIONS

The State of Maine 2004 Integrated Water Quality Monitoring and Assessment Report, prepared pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists the marine waters at Islesboro (Waterbody #722-27) as, "Category 2: Estuarine and Marine Attaining Some Designated Uses – Insufficient Information for Other Uses." The Report lists incomplete Maine Department of Marine Resources (DMR) sanitary surveys, overboard discharges, discharges from boats, and septic system problems as potential sources of pollution requiring collection of additional information.

The Maine Department of Marine Resources assesses information on shellfish growing areas to ensure that shellfish harvested are safe for consumption. The DMR has authority to close shellfish harvesting areas wherever there is a pollution source, a potential pollution threat, or poor water quality. The DMR traditionally closes shellfish harvesting areas if there are known sources of discharges with unacceptable

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

bacteria levels (instream thresholds established in the National Shellfish Sanitation Program) or maintains shellfish harvesting closure areas due to lack of updated information regarding ambient water quality conditions. In addition, the DMR prohibits shellfish harvesting in the immediate vicinity of all wastewater treatment outfall pipes as a precautionary measure in the event of a failure in the treatment plant's disinfection system. Thus, shellfish harvesting area #C36-F is closed to the harvesting of shellfish due to insufficient or limited ambient water quality data to determine that the area meets the standards in the National Shellfish Sanitation Program. The shellfish closure area is identified on the map included as Fact Sheet Attachment A. The Department is making the determination that compliance with the fecal coliform bacteria and other secondary wastewater treatment limits established in this permitting action ensure that the discharge of secondary treated wastewater from the Town's Dark Harbor Wastewater Treatment Facility will not cause or contribute to the failure of the receiving waters to meet the standards of its designated classification.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

- a. Flow: The previous permitting action established a monthly average "summer season" (April 1 through September 30) discharge flow limit of 0.0182 MGD and a monthly average "winter season" (October 1 through March 31) discharge flow limit of 0.0637. Based on information provided by the Town in their general application for renewal, the treatment system has a summer design capacity of 63,700 gallons per day and a winter design capacity of 18,200 GPD. Thus, the previous licensing action should have established a "summer season" limit of 0.0637 MGD and a "winter season" limit of 0.0182 MGD.

Department rule 06-096 CMR Chapter 523(6)(b)(1) states, "*in the case of POTWs, permit effluent limits, standards, or prohibitions shall be calculated based on design flow.*" Therefore, this permitting action is establishing a year-round, monthly average discharge flow limit of 0.0637 MGD based on the design capacity of the treatment system. This permitting action is also establishing a daily maximum discharge flow limit to assist in compliance evaluations. This permitting action is increasing the flow monitoring requirement from once per week to three times per week to facilitate the collection of sufficient flow data and ensure representative sampling of the discharge. It is noted that effluent flow values are determined by measuring (ultrasonic flow meter) the influent wastewater level in the influent pump station.

- b. Dilution Factors: Department rule, 06-096 CMR Chapter 530(4)(A)(2)(a), *Surface Water Toxics Control Program*, states that, "*For discharges to the ocean, dilution must be calculated as near-field or initial dilution, or that dilution available as the effluent plume rises from the point of discharge to its trapping level, at mean low water level and slack tide for the acute exposure analysis, and at mean tide for the chronic exposure analysis using appropriate models determined by the Department such as MERGE, CORMIX or another predictive model.*" Based on the location and configuration of the outfall pipe and the permitted discharge flow limit of 0.0637 MGD, the Department has determined that the dilution factors associated with the discharge from the Dark Harbor WWTF are as follows:

Acute = 103:1

Chronic = 1,611:1

Harmonic Mean¹ = 4,833:1

¹ The harmonic mean dilution factor is approximated by multiplying the chronic dilution factor by three (3). This multiplying factor is based on guidelines for estimation of human health dilution presented in the U.S. EPA publication, "*Technical Support Document for Water Quality-Based Toxics Control*" (Office of Water; EPA/505/2-90-001, page 88), and represents an estimation of harmonic mean flow on which human health dilutions are based in a riverine 7Q10 flow situation.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

- c. Biochemical Oxygen Demand (BOD₅) and Total Suspended Solids (TSS): The previous licensing action established monthly average and weekly average BOD₅ and TSS concentration limits of 30 mg/L and 45 mg/L, respectively, that were based on secondary treatment requirements of the Clean Water Act of 1977 §301(b)(1)(B), as defined in 40 CFR 133.102, and Department rule, 06-096 CMR Chapter 525(3)(III). The previous permitting action also established a daily maximum BOD₅ and TSS concentration limit of 50 mg/L based on a Department best professional judgement of best practicable treatment (BPT). All three concentration limits are being carried forward in this permitting action. The previous licensing action established "summer season" monthly average, weekly average, and daily maximum BOD₅ and TSS mass limits of 5 lbs./day, 7 lbs./day, and 8 lbs./day, respectively. The previous licensing action established "winter season" monthly average, weekly average, and daily maximum BOD₅ and TSS mass limits of 16 lbs./day, 24 lbs./day, and 27 lbs./day, respectively. This permitting action is eliminating seasonal mass limits for BOD₅ and TSS and is establishing year-round monthly average, weekly average and daily maximum mass limits based on the permitted discharge flow limit of 0.0637 MGD. Thus, mass limits (after mathematical rounding) were derived as follows:

Monthly Average Mass Limit: $(30 \text{ mg/L})(8.34 \text{ lbs./gallon})(0.0637 \text{ MGD}) = 16 \text{ lbs./day}$

Weekly Average Mass Limit: $(45 \text{ mg/L})(8.34 \text{ lbs./day})(0.0637 \text{ MGD}) = 24 \text{ lbs./day}$

Daily Maximum Mass Limit: $(50 \text{ mg/L})(8.34 \text{ lbs./day})(0.0637 \text{ MGD}) = 27 \text{ lbs./day}$

The Department is making a determination that a technical error was made in establishing the previous discharge flow limits in that the seasonal limits were not established correctly. The Department typically utilizes the facility's discharge flow design criteria to establish a monthly average discharge flow limitation. Thus, the Department is making the determination that the design flow of 0.0637 MGD should be applied as a monthly average discharge flow limit for the Dark Harbor facility on a year-round basis.

The mass limits established by this permitting action are less stringent than the previous seasonal summer season limits, as stated above, but are equivalent to the winter season limits associated with the previous licensing action. The anti-backsliding provisions of Department rule Chapter 523(5)(1)(2) state, *"In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued or modified on the basis of effluent guidelines promulgated under section 304(b) of the CWA subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit."* Chapter 523(5)(1)(2)(i)(B)(2) of the Department's rules, however, authorizes backsliding if the Department determines that *"technical mistakes or mistaken interpretations of law were made in issuing the permit."* In the case of the Town's previous license, the Department is identifying that a technical mistake was made in establishing seasonal discharge flow limits and seasonal BOD₅ and TSS limits based on incorrect discharge flow limits. This permitting action serves to correct those technical mistakes by establishing a monthly average discharge flow limit of 0.0637, which is based on the design capacity of the treatment facility and is consistent with the basis for discharge flow limits established in permits for other POTWs, and establishing year-round mass limits for BOD₅ and TSS based on the flow limit of 0.0637 MGD. Therefore, the anti-backsliding provisions of Department rules have been sufficiently satisfied in that revising the discharge flow and BOD₅ and TSS mass limits is appropriate and justified at this time, and the Department has determined that this action will not cause or contribute to the failure of the receiving water to meet the standards of its assigned classification.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

This permitting action is carrying forward the “grab” sample type for BOD₅ and TSS revising the minimum monitoring frequency requirement for BOD₅ and TSS from once per month to twice per month (2/Month) based on Department guidance for POTWs permitted to discharge up to 0.1 MGD.

This permitting action is also establishing a new requirement for a minimum of 85% removal of BOD₅ and TSS pursuant to Chapter 525(3)(III)(a)(3) and (b)(3) of the Department’s rules. Raw wastewater enters three separate septic tanks before the waste stream is combined in the influent pump station chamber. Thus, the Dark Harbor wastewater treatment system does not contain an influent sampling location that is representative of raw wastewater conditions. According to the USEPA’s *Onsite Wastewater Treatment Systems Manual*, dated February 2002, table 3-7 entitled “Constituent Mass Loadings and Concentrations in Typical Residential Wastewater” high end range of values, influent values for BOD₅ and TSS may be assumed to be 300 mg/L. Therefore, this permitting action authorizes the Town to assume an influent BOD₅ and TSS concentration value of 300 mg/L for purposes of calculating the monthly percent removal value until such time that the infrastructure is modified or replaced such that collection of a representative raw influent sample is practical.

- d. Settleable Solids: The previous licensing action established a daily maximum technology-based concentration limit of 0.3 ml/L for settleable solids, which is being carried forward in this permitting action as it is considered by the Department as BPT for secondary treated wastewater. This permitting action is carrying forward the minimum monitoring frequency requirement of once per week (1/Week), which is less frequent than Department guidance, based on the facility’s past demonstrated performance with this parameter.
- e. Fecal Coliform Bacteria: The previous licensing action established seasonal (May 15 through September 30) monthly average and daily maximum concentration limits of 15 colonies/100 ml (geometric mean) and 50 colonies/100 ml (instantaneous level), respectively, for fecal coliform bacteria consistent with the National Shellfish Sanitation Program, and a minimum monitoring frequency requirement of once per month. This permitting action is carrying forward both seasonal concentration limits consistent with the National Shellfish Sanitation Program, and is revising the minimum monitoring frequency requirement two twice per month (2/Month), which is consistent with Department guidance for POTWs permitted to discharge up to 0.1 MGD and with the monitoring frequency for BOD₅ and TSS.
- f. Total Residual Chlorine (TRC): The previous licensing action established a technology-based daily maximum concentration limit of 1.0 mg/L and a minimum monitoring frequency requirement of once per week for TRC. Limitations on TRC are specified to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. Department licensing/permitting actions impose the more stringent of either a water quality-based or BPT-based limit. With dilution factors as determined above, end-of-pipe (EOP) water quality-based concentration thresholds for TRC may be calculated as follows:

Acute (A) Criterion	Chronic (C) Criterion	A & C Dilution Factors	Calculated	
			Acute Threshold	Chronic Threshold
0.013 mg/L	0.0075 mg/L	103:1 (A) 1,611:1 (C)	1.4 mg/L	12.1 mg/L

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

The Department has established a daily maximum BPT limitation of 1.0 mg/L for facilities that disinfect their effluent with elemental chlorine or chlorine-based compounds. The daily maximum technology-based standard of 1.0 mg/L is more stringent than either calculated water quality-based threshold above and is therefore being carried forward in this permitting action. This permitting action is revising the minimum monitoring frequency requirement from once per week to three times per week (3/Week) based on the facility's past demonstrated performance with this parameter. Effluent monitoring for TRC is only required when chlorine or chlorine-based compounds are in use for effluent disinfection. For instances when effluent disinfection is not performed during an entire reporting period, the permittee shall enter "NODI-9" (no testing done this monitoring period) for this parameter on the monthly Discharge Monitoring Report (DMR).

- g. pH: The previous licensing action established a pH range limit of 6.0 – 8.5 standard units (SU), considered by the Department at the time as BPT for secondary treated wastewater and a minimum monitoring frequency requirement of once per week. Pursuant to a new Department rule found at Chapter 525(3)(III)(c), this permitting action is revising the pH range limitation to 6.0 – 9.0 SU, which is now considered BPT for secondary treated wastewater. This permitting action is carrying forward the minimum monitoring frequency requirement of once per week (1/Week), which is less frequent than Department guidance for POTWs permitted to discharge up to 0.1 MGD, based on the facility's past demonstrated performance with this parameter.
- h. Whole Effluent Toxicity (WET), Priority Pollutant, and Analytical Chemistry Testing: Maine law, 38 M.R.S.A., §414-A and §420, prohibit the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. Department rule, 06-096 CMR Chapter 530, *Surface Water Toxics Control Program* (toxics rule) sets forth effluent monitoring requirements and procedures to establish safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected and narrative and numeric water quality criteria are met. Department rule 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, sets forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

The previous licensing action neither established nor addressed WET or chemical-specific testing requirements of the toxics rule. Chapter 530(2)(A) specifies the criteria for exemption of certain discharges from toxics testing as follows:

- (1) *Discharges from individual discharge points licensed to discharge less than 50,000 gallons per day of solely domestic wastewater and with a chronic dilution factor of at least 50 to 1, provided no holding tank wastes containing chemicals are accepted by the facility;*
- (2) *Discharges from residential overboard discharge systems; or*
- (3) *Discharges from combined sewer overflow discharge points, provided the owner of the sewerage system is conducting or participating in a discharge abatement program.*

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

With a permitted discharge flow limit of 63,700 gallons per day, the Town's Dark Harbor facility does not qualify for an outright exemption from the toxics testing requirements of Chapter 530. Chapter 530 Section 2.B. categorizes dischargers subject to the toxics rule into one of four levels (Levels I through IV). Level IV dischargers are those "*dischargers having a chronic dilution factor of at least 500 to 1 and a permitted flow of less than 1 million gallons per day.*" The Dark Harbor facility is permitted to discharge a flow of 0.0637 MGD and has a chronic dilution factor of 1,611 to 1. Therefore, the Town is considered a Level IV facility for purposes of toxics testing. Chapter 530 Section 2.D specifies, in part, that:

Testing requirements for Level IV are waived, except that the Department shall require an individual discharger to conduct testing under the following conditions:

- (a) The discharger's permit application or information available to the Department indicate that toxic compounds may be present in toxic amounts; or*
- (b) Previous testing conducted by the discharger or similar dischargers indicates that toxic compounds may be present in toxic amounts.*

The Department is making a best professional judgment determination to waive toxics testing requirements for the Dark Harbor facility based on the nature (domestic) and actual discharge flows associated with the treatment system. Actual discharge flows are typically less than 50,000 gallons per day. The Department reserves the right to reopen this permit, as necessary and in accordance with Special Condition K of this permit, to establish WET, priority pollutant, or analytical chemistry testing requirements to control levels of toxic pollutants discharged to the receiving waters.

7. ANTI-BACKSLIDING/ANTIDEGRADATION

This permitting action revises the "summer season" monthly average, weekly average and daily maximum mass limits for BOD₅ and TSS by establishing year-round mass limits based on the revised discharge flow limit of 0.0637 MGD. The anti-backsliding provisions of Department rule Chapter 523(5)(1)(2) state, "*in the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued or modified on the basis of effluent guidelines promulgated under section 304(b) of the CWA subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.*" Chapter 523(5)(1)(2)(i)(B)(2) of the Department's rules authorizes backsliding if the Department determines that "*technical mistakes or mistaken interpretations of law were made in issuing the permit.*" In the case of the Town's previous license, the Department is identifying that a technical mistake was made in establishing seasonal discharge flow limits and seasonal BOD₅ and TSS limits. This permitting action serves to correct those technical mistakes by establishing a monthly average discharge flow limit of 0.0637, which is based on the design capacity of the treatment facility and is consistent with the basis for discharge flow limits established in permits for other POTWs, and establishing year-round mass limits for BOD₅ and TSS based on the flow limit of 0.0637 MGD. Therefore, the anti-backsliding provisions of Department rules have been sufficiently satisfied in that revising the discharge flow and BOD₅ and TSS mass limits is appropriate and justified at this time, and the Department has determined that this action will not cause or contribute to the failure of the receiving water to meet the standards of its assigned classification.

8. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted, the Department has determined the existing water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the water body to meet standards for Class SB classification.

9. PUBLIC COMMENTS

Public notice of this application was made in the *Bangor Daily* newspaper on or about October 1, 2005. The Department receives public comments on an application until the date a final agency action is taken on the application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

10. DEPARTMENT CONTACTS

Additional information concerning this permitting action may be obtained from, and written comments sent to:

William F. Hinkel
Division of Water Resource Regulation
Bureau of Land & Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 287-7659

11. RESPONSE TO COMMENTS

During the period of October 17, 2005 through November 17, 2005, the Department solicited comments on the proposed draft Maine Pollutant Discharge Elimination System Permit to be issued to the Town. No significant comments were received during the public comment period; therefore, a response to comments was not prepared.

ATTACHMENT A

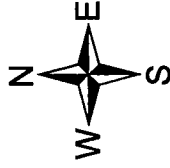
Legend

Wastewater_Facilities
Wastewater_Outfalls

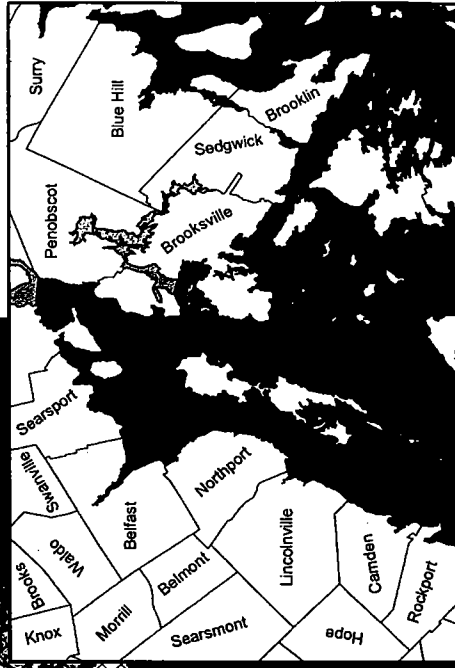
Shellfish_Bed_Closures

CLASS

Approved (within another classification)
Conditionally Restricted
Conditionally Approved
Restricted
Prohibited
Ponds and Lakes



Regional Map Inset



East Penobscot Bay

DMR Shellfish
Closure Area
C36F

Dark Harbor WWTF
Outfall #001A
(Approximate Location
Not Geolocated)

Dark Harbor

Dark Harbor Dam

Dark Harbor
Pool
(Partial Impoundment)

Town of Islesboro
Dark Harbor WWTF
#ME0100269

Colony Rd

Bath Rd

Gilkey Ln

Pendellon Point Rd

Derby Rd

Jetty Rd

0 0.1 0.2 0.4
Miles

Islesboro, Maine

Map created by Bill Hinkel
Division of Water Resource Regulation
Maine Department of Environmental Protection
October 12, 2005

ATTACHMENT B

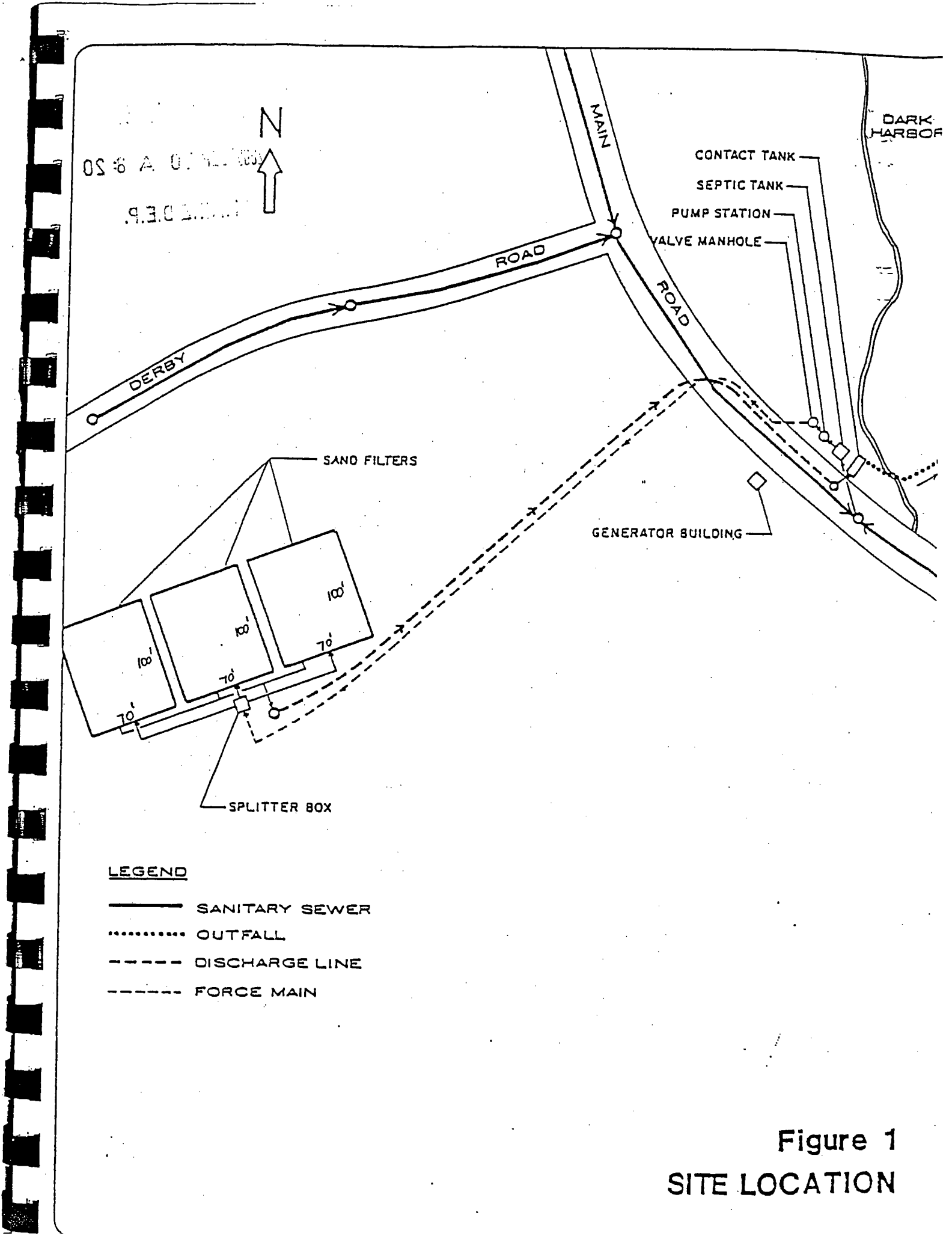


Figure 1
SITE LOCATION