



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAWN R. GALLAGHER
COMMISSIONER

Kenneth Davis, Chief Selectman;
Town of East Machias
P.O. Box 117,
East Machias, Maine 04630

October 4, 2005

RE: Maine Pollutant Discharge Elimination System (MEPDES) # ME0102156
Maine Waste Discharge License (WDL) Application # W006521-5L-C-R
Final License

Dear Mr. Davis:

Enclosed please find a copy of your **final** MEPDES permit/Maine WDL which was approved by the Department of Environmental Protection. Please read the permit and its attached conditions carefully. You must follow the conditions in 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 (DMR) may not reflect the revisions in this licensing action for several months however, you are required to report applicable test results for parameters required by this licensing action that do not appear on the DMR. Please see the attached April 2003 O&M Newsletter article regarding this matter.

If you have any questions regarding this matter, please feel free to call me at 287-7658.

Sincerely,

David Silver
Division of Water Resource Regulation
Bureau of Land and Water Quality

Enc. Jim Sohns, DEP/EMRO;


Jon Carman, Operator, JMC Wastewater Services, POBox 397; Unity 04988

WDS:W006521

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: (207) 764-1507

DMR Lag

(reprinted from April 2003 O&M Newsletter)

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.
1. 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.



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

DEPARTMENT ORDER

IN THE MATTER OF

TOWN OF EAST MACHIAS	) MAINE POLLUTANT DISCHARGE
PUBLICLY OWNED TREATMENT WORKS	) ELIMINATION SYSTEM PERMIT
EAST MACHIAS, WASHINGTON COUNTY, MAINE	) AND
#ME0102156	) WASTE DISCHARGE LICENSE
#W006521-5L-C-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 EAST MACHIAS ("Town"), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

The applicant has applied to the Department for renewal of Waste Discharge License (WDL) #W006521-5L-B-R, which was issued on December 8, 2000 and is scheduled to expire on December 8, 2005. The December 8, 2000 WDL authorized the discharge of up to 25,585 gallons per day (0.025585 million gallons per day, MGD) collectively of secondary treated sanitary wastewater from nineteen independent sand filter systems (ten individual and nine cluster systems owned by the town). Eighteen of the systems are chlorinated for disinfection (there are only seventeen chlorinated systems operating now), while one outfall (#005) utilizes ultra-violet disinfection. Two outfalls discharge to Meadow Brook (#002, and 011), and two outfalls discharge to an unnamed brook near the Cutler Road (#015, and 019). Both of these brooks are tributaries of the East Machias River and are classified as Class B waters. The East Machias River in the area of the discharges is both freshwater and also subject to tidal influences and is classified as a Class B and SB waters, respectively.

On January 12, 2001, the Department received authorization from the U.S. Environmental Protection Agency (EPA) to administer the National Pollutant Discharge Elimination System (NPDES) permit program in Maine. From that point forward, the program has been referred to as the Maine Pollutant Discharge Elimination System (MEPDES) permit program and permit #ME0102156 (same as NPDES permit number) will be utilized as the primary reference number. The NPDES permit last issued by the EPA on October 3, 1986 will be superseded by the MEPDES permit upon issuance.

PERMIT SUMMARY

This permitting action is similar to the December 8, 2000 licensing action in that it is:

1. Carrying forward the collective monthly average discharge flow limitation of 25,585 gallons per day (0.025585 MGD);

PERMIT SUMMARY (Cont'd)

2. Carrying forward the daily maximum technology-based concentration limit of 1.0 mg/L for total residual chlorine (TRC) for all outfalls (except outfall #003 where the best practicable treatment (BPT) limit of 0.3 mg/L is imposed)(and except for outfall 005 where a UV disinfection system is employed);
3. Carrying forward the monthly average and daily maximum concentration limits for Fecal Coliform bacteria; and,

This permitting action is different from the December 8, 2000 licensing action in that it is

1. Establishing a requirement for a minimum of 85% removal of BOD₅ and TSS;
2. Revising the pH range limitation;
3. Requiring the permittee to maintain an up-to-date *Operations & Maintenance (O&M) Plan*.
4. Modifying the monthly average, weekly average, and daily maximum technology-based mass limits for biochemical oxygen demand (BOD) and total suspended solids (TSS) to correspond to the flow limitations.
5. Modifying the minimum monitoring frequency for BOD, TSS, TRC, and Fecal Coliform bacteria to address current Departmental guidelines for similar types of facilities.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated July 12, 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.

ACTION

THEREFORE, the Department APPROVES the above noted application of the TOWN OF EAST MACHIAS to collectively discharge a monthly average total flow of up to 25,585 gallons per day (0.025585 MGD) of secondary treated sanitary wastewater to Meadow Brook (Class B water body), an Unnamed Brook (Class B), and to non-tidal portions of the East Machias River (Class B) and also to tidal portions of the Machias River (Class SB), in East Machias, 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 5TH DAY OF OCTOBER, 2005.

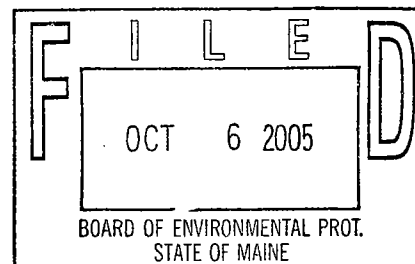
DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: 
DAWN R. GALLAGHER, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: September 8, 2005

Date of application acceptance: September 22, 2005



Date filed with Board of Environmental Protection: _____

This Order prepared by David Silver, BUREAU OF LAND & WATER QUALITY
#ME0102156 / #W006521-5L-C-R 30SEP05

#W006521-5L-C-R

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

- 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 #001** to the East Machias River. Such discharges shall be limited and monitored by the permittee as specified below^(*):

Effluent Characteristic			Discharge Limitations				Monitoring Requirements			Minimum
	<u>Monthly Average</u> as specified	<u>Weekly Average</u> as specified	<u>Daily Maximum</u> as specified	<u>Monthly Average</u> as specified	<u>Weekly Average</u> as specified	<u>Daily Maximum</u> as specified	<u>Measurement Frequency</u> as specified	<u>Sample Type</u> as specified		
Flow (*) [50050]	3,575 gpd [07]	---	---	---	---	---	1/Month [01/30]	Estimate [ES]		
BOD ₅ ⁽²⁾ [00310]	1.0 lbs./day [26]	1.0 lbs./day [26]	1.0 lbs./day [26]	30 mg/L [19]	45 mg/L [19]	50 mg/L [19]	1/Month [01/30]	Grab [GR]		
TSS ⁽²⁾ [00530]	1.0 lbs./day [26]	1.0 lbs./day [26]	1.0 lbs./day [26]	30 mg/L [19]	45 mg/L [19]	50 mg/L [19]	1/Month [01/30]	Grab [GR]		
Settleable Solids [00545]	---	---	---	---	---	0.3 ml/L [25]	1/Month [01/30]	Grab [GR]		
Fecal Bacteria ⁽³⁾ [31633]	---	---	---	15/100 ml ⁽⁴⁾ [13]	---	50/100 ml [13]	2/Month [02/30]	Grab [GR]		
Total Residual Chlorine [00665]	---	---	---	---	---	1.0 mg/L [19]	1/Week [01/07]	Grab [GR]		
pH [00400]	---	---	---	---	---	6.0 – 9.0 SU ⁽⁵⁾ [12]	1/Month [01/30]	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.

(*) Note: Outfall #001 is located at Factory Road and serves 6 dwellings and one school.

FOOTNOTES: See Page 9 of this permit for applicable footnotes.

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

2. 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 004** to the East Machias River. 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 3,000 gpd [07]	as specified ---	as specified ---	as specified ---	as specified ---	as specified ---	as specified 1/Month [01/30]	as specified Estimate [ES]
BOD ₅ ⁽²⁾ [00310]	1.0 lbs./day [26]	1.0 lbs./day [26]	1.0 lbs./day [26]	30 mg/L [19]	45 mg/L [19]	50 mg/L [19]	1/Month [01/30]	Grab [GR]
TSS ⁽²⁾ [00530]	1.0 lbs./day [26]	1.0 lbs./day [26]	1.0 lbs./day [26]	30 mg/L [19]	45 mg/L [19]	50 mg/L [19]	1/Month [01/30]	Grab [GR]
Settleable Solids [00545]	---	---	---	---	---	0.3 ml/L [25]	1/Month [01/30]	Grab [GR]
Fecal Bacteria ⁽³⁾ [31633]	---	---	---	15/100 ml ⁽⁴⁾ [13]	---	50/100 ml [13]	2/Month [02/30]	Grab [GR]
Total Residual Chlorine [00665]	---	---	---	---	---	1.0 mg/L [19]	1/Week [01/07]	Grab [GR]
pH [00400]	---	---	---	---	---	6.0 – 9.0 SU ⁽⁵⁾ [12]	1/Month [01/30]	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.

(*) Note: Outfall #004 is located at Water Street at Academy Hill and serves one school.

FOOTNOTES: See Page 9 of this permit for applicable footnotes.

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

3. 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 #003** to the East Machias River. Such discharges shall be limited and monitored by the permittee as specified below^(*):

Effluent Characteristic			Discharge Limitations				Monitoring Requirements		Minimum
	<u>Monthly</u> <u>Average</u> as specified	<u>Weekly</u> <u>Average</u> as specified	<u>Daily</u> <u>Maximum</u> as specified	<u>Monthly</u> <u>Average</u> as specified	<u>Weekly</u> <u>Average</u> as specified	<u>Daily</u> <u>Maximum</u> as specified	<u>Measurement</u> <u>Frequency</u> as specified	<u>Sample</u> <u>Type</u> as specified	
Flow(*) [50050]	3,800 gpd [07]	---	---	---	---	---	1/Month [01/30]	Estimate [ES]	
BOD ₅ ⁽²⁾ [00310]	1.0 lbs./day [26]	1.0 lbs./day [26]	1.0 lbs./day [26]	30 mg/L [19]	45 mg/L [19]	50 mg/L [19]	1/Month [01/30]	Grab [GR]	
TSS ⁽²⁾ [00530]	1.0 lbs./day [26]	1.0 lbs./day [26]	1.0 lbs./day [26]	30 mg/L [19]	45 mg/L [19]	50 mg/L [19]	1/Month [01/30]	Grab [GR]	
Settleable Solids [00545]	---	---	---	---	---	0.3 ml/L [25]	1/Month [01/30]	Grab [GR]	
Fecal Bacteria ⁽³⁾ [31633]	---	---	---	15/100 ml ⁽⁴⁾ [13]	---	50/100 ml [13]	2/Month [02/30]	Grab [GR]	
Total Residual Chlorine [00665]	---	---	---	---	---	0.3 mg/L [19]	1/Week [01/07]	Grab [GR]	
pH [00400]	---	---	---	---	---	6.0 – 9.0 SU ⁽⁵⁾ [12]	1/Month [01/30]	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.

(*) Notes: Outfall 003 is located at Water Street at park and serves 19 dwellings. **See Page 9 of this permit for applicable footnotes.**

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

4. 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 #005** to the East Machias River. Such discharges shall be limited and monitored by the permittee as specified below^(*):

Effluent Characteristic	Discharge Limitations				Monitoring Requirements		
	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Daily Maximum</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
	as specified	as specified	as specified	as specified	as specified	as specified	as specified
Flow(*) [50050]	6,900 gpd [07]	---	---	---	---	1/Month [01/30]	Estimate [ES]
BOD ₅ ⁽²⁾ [00310]	2.0 lbs./day [26]	2.6 lbs./day [26]	2.9 lbs./day [26]	30 mg/L [19]	50 mg/L [19]	1/Month [01/30]	Grab [GR]
TSS ⁽²⁾ [00530]	2.0 lbs./day [26]	2.6 lbs./day [26]	2.9 lbs./day [26]	30 mg/L [19]	50 mg/L [19]	1/Month [01/30]	Grab [GR]
Settleable Solids [00545]	---	---	---	---	0.3 ml/L [25]	1/Month [01/30]	Grab [GR]
Fecal Bacteria ⁽³⁾ [31633]	---	---	---	15/100 ml ⁽⁴⁾ [13]	50/100 ml [13]	2/Month [02/30]	Grab [GR]
pH [00400]	---	---	---	---	6.0 – 9.0 SU ⁽⁵⁾ [12]	1/Month [01/30]	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.

(*) Note: Outfall #005 is located on Main St. at the post office and serves up to 23 dwellings.

FOOTNOTES: See Page 9 of this permit for applicable footnotes.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

5. 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 **Outfalls #002 and 006-019 (except for discontinued outfall #018)** to the East Machias River and tributaries. Such discharges shall be limited and monitored by the permittee as specified below⁽¹⁾:

Effluent Parameters			Discharge Limitations as specified				Minimum 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]	Report, MGD [03]	---	---	---	---	---	1/Month [01/30]	Estimate [ES]		
BOD ₅ ⁽²⁾ [00310]	Report lbs./day [26]	Report lbs./day [26]	Report lbs./day [26]	30 mg/L [19]	45 mg/L [19]	50 mg/L [19]	---	---		
TSS ⁽²⁾ [00530]	Report lbs./day [26]	Report lbs./day [26]	Report lbs./day [26]	30 mg/L [19]	45 mg/L [19]	50 mg/L [19]	---	---		
Settleable Solids [00545]	---	---	---	---	---	0.3 ml/L [25]	---	---		
Fecal Bacteria ⁽³⁾ [31633]	---	---	---	15/100 ml ⁽⁴⁾ [13]	---	50/100 ml [13]	1/Month [01/30]	---		
Total Residual Chlorine [00665]	---	---	---	---	---	1.0 mg/L [19]	1/Month [01/30]	---		
pH [00400]	---	---	---	---	---	6.0 – 9.0 SU ⁽⁵⁾ [12]	---	---		

Flow Limits(*)									
Outfall	Location/Source Generation	Limit	Outfall	Location/Source Generation	Limit	Outfall	Location/Source Generation	Limit	
002	Rt 1 S (town property)/ 2 homes/business	1,000	010	Rt 1 Scotts Hill-Hammond/1 home, store, cabins	1,200	015	River Rd Murphy/1 home	300	
006	Rt. 1 old pharmacy/ 10 homes, 1 business	1,450	011	Rt 1 Lincoln Co/1 home, 1 business	320	016	River Rd Archibald/1 home	300	
007	Rt 1 at Scotts Hill Rd/5 homes	1,100	012	Rt 1 Vandergrift/1 home	300	017	Rt 1 Doucette/1 home	380	
008	Rt 1 N (town)/3 homes	900	013	River Rd-Young/1 home	300	018	Discontinued	---	
009	River Road/1 barber shop	100	014	Rt 1 Clark/1 home	300	019	Wiswell Rd/1 home	360	

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.

NOTES: Flow shall not exceed the limits established in the table above for each outfall location. See Page 9 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. Any change in sampling location must be approved by the Department in writing. Sampling for Settleable Solids is not required when a TSS analysis is conducted on the same sample. 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 facilities 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 based on a monthly average calculation using influent and effluent concentrations (influent concentrations may be assumed to be 300 mg/L [see fact sheet for more specifications on this parameter]). The percent removal shall be waived when the monthly average influent concentration is less than 200 mg/L.
3. **Seasonal Limits** – *Fecal Coliform* bacteria limits and monitoring requirements are year-round to protect shellfish harvesting areas. The permittee shall monitor effluent TRC levels during all periods in which chlorine-based compounds are in use.
4. **Bacteria Reporting** – The monthly average *Fecal Coliform* bacteria limitation is a geometric mean limitation and sample results shall be reported as such.
5. **pH Range Limitation** – Effluent pH results outside the range of 6.0 – 9.0 SU are not to be reported as exceptions provided the cause(s) for the exceedences are not as a result of inorganic chemicals added to the waste stream or contributions from industrial sources. The permittee shall provide the Department with written documentation as to the cause(s) of the pH results if determined to be outside the 6.0 – 9.0 SU range and shall provide documentation of ambient receiving water pH from a sampling location immediately above the point of discharge.

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 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 discharges shall not cause visible discoloration or turbidity in the receiving waters which would impair the usages designated by the classification of the receiving waters.
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 TRC 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 facilities must be operated by a person holding a minimum of a **Grade II** certificate 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.

SPECIAL CONDITIONS

E. 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 address:

Maine Department of Environmental Protection
Eastern Maine Regional Office
106 Hogan Road
Bangor, ME 04401

F. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee shall notify the Department of any substantial change in the volume or character of pollutants being introduced into the wastewater collection and treatment systems by a source introducing pollutants into the systems 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 systems; and
- (b) any anticipated impact caused by the change in the quantity or quality of the wastewater to be discharged from the treatment systems.

G. LIMITATIONS FOR INDUSTRIAL USERS

The treatment system is not authorized to accept and is prohibited from accepting industrial waste into any of the treatment systems.

SPECIAL CONDITIONS

H. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from Outfall #001-019 (excluding 018 that has been discontinued). 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.

I. OPERATION & MAINTENANCE (O&M) PLAN

The permittee shall maintain a current written comprehensive Operation & Maintenance (O&M) Plan for the facilities. 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 to their Department inspector for review and comment.

J. 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 anytime 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.

K. 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.

**MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
WASTE DISCHARGE LICENSE**

FACT SHEET

Date: July 12, 2005

MEPDES PERMIT: #ME0102156
WASTE DISCHARGE LICENSE: #W006521-5L-C-R

NAME AND ADDRESS OF APPLICANT:

**TOWN OF EAST MACHIAS (TOWN)
Wastewater Treatment Facility
P.O. Box 117
East Machias, ME 04630**

COUNTY: Washington

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

Wastewater Treatment Facility
Route One
East Machias, Maine 04630

RECEIVING WATER / CLASSIFICATION: East Machias River/Class B (non-tidal)
East Machias River/Class SB (tidal)
Meadow Brook/Class B
Unnamed Stream/Class B

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: Mr. Kenneth Davis
(207) 255-8598

1. APPLICATION SUMMARY

Application: The applicant has applied to the Department for renewal of Waste Discharge License (WDL) #W006521-5L-B-R, which was issued on December 8, 2000 and is scheduled to expire on December 8, 2005. The December 8, 2000 WDL authorized the discharge of up to 25,585 gallons per day (0.025585 million gallons per day, MGD) collectively of secondary treated sanitary wastewater from nineteen independent sand filter systems (ten individual and nine cluster systems owned by the town). Eighteen of the systems are chlorinated for disinfection (there are only seventeen chlorinated systems operating now), while one outfall (#005) utilizes ultra-violet disinfection. Two outfalls discharge to Meadow Brook (#002, and 011), and two outfalls discharge to an unnamed brook near the Cutler Road (#015, and 019). Both of these brooks are tributaries of the East Machias River and are classified as Class B waters. The East Machias River in the area of the discharges is both freshwater and also subject to tidal influences and is classified as a Class B and SB waters, respectively.

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. From that point forward, the program has been referred to as the Maine Pollutant Discharge Elimination System (MEPDES) program and permit #ME0102156 (same as NPDES permit number) will be utilized as the primary reference number for the Town's MEPDES permit. NPDES permit #ME0102156, last issued by the USEPA on October 3, 1986, will be superseded by the final MEPDES permit upon issuance by the Department.

b. Terms and Conditions: **This permitting action is similar to the December 8, 2000 licensing action in that it is:**

1. Carrying forward the collective monthly average discharge flow limitation of 25,585 gallons per day (0.025585 MGD);
2. Carrying forward the daily maximum technology-based concentration limit of 1.0 mg/L for total residual chlorine (TRC) for all outfalls (except outfall #003 where the best practicable treatment (BPT) limit of 0.3 mg/L is imposed)(and except for outfall 005 where a UV disinfection system is employed);
3. Carrying forward the monthly average and daily maximum concentration limits for Fecal Coliform bacteria; and,

This permitting action is different from the December 8, 2000 licensing action in that it is

1. Establishing a requirement for a minimum of 85% removal of BOD₅ and TSS;
2. Revising the pH range limitation;
3. Requiring the permittee to maintain an up-to-date *Operations & Maintenance (O&M) Plan*.
4. Modifying the monthly average, weekly average, and daily maximum technology-based mass limits for biochemical oxygen demand (BOD) and total suspended solids (TSS) to correspond to the flow limitations.
5. Modifying the minimum monitoring frequency for BOD, TSS, TRC, and Fecal Coliform bacteria to address current Departmental guidelines for similar types of facilities.

c. Facility History: This section provides a summary of significant licensing/permitting actions and milestones that have been completed.

September 24, 1986 – The Department issued WDL #W006521-45-A-N. The license expired on September 24, 1991.

October 3, 1986 – The EPA issued NPDES permit #ME0102156, establishing limitations and monitoring requirements for all nineteen outfall locations.

March 27, 1992 – The EPA accepted the Town's application for renewal of permit #ME0102156.

February 15, 1995 – The Department issued a letter to the Town that exempted the facilities from the *Surface Water Toxics Control Program* (Chapter 530.5).

2. PERMIT SUMMARY (Cont'd)

March 28, 1997 – The Department issued a Notice of Violation (NOV) to the Town for failure to (i) submit effluent data on licensed point source discharges, (ii) properly disinfect several discharges, and (iii) submit an annual summary report as required. The issues outlined in the NOV were subsequently addressed by the Town to the satisfaction of the Department.

December 8, 2000 – The Department issued WDL #W006521-5L-B-R that renewed authorization to discharge secondarily treated wastewater as described in WDL #W006521-45-A-N.

September 8, 2005 – The Town submitted to the Department an application for renewal of the authorization to discharge secondary treated waste water to the receiving waters as described in the December 8, 2000 WDL.

- d. Source Description: East Machias' nine individual and nine cluster sand filter systems receive sanitary waste water flows from approximately 8 commercial and 76 residential users. There are no combined sewer overflows associated with the facility. The facility is not authorized to treat or receive septage from local septage haulers. A map showing the location of the treatment facility and the receiving waters is included as an Attachment to this permit.
- e. Wastewater Treatment: The Town provides conventional primary wastewater treatment via sedimentation/floatation separation followed by secondary treatment via sand filtration. Sanitary waste water generated by users first undergo septic tank treatment and then are directed to conventional sand filters by small diameter gravity sewers and pumping stations. Septic tank sludge is periodically collected and disposed of via land spreading. The secondary treated waste water from the sand filters are directed through subsurface piping and conveyed to a tablet chlorination system for disinfection in 17 out of the 18 systems. One system (outfall designator #005) utilizes Ultra-Violet disinfection technology. The effluent is then discharged to the receiving water via four-inch diameter PVC pipes for the 17 chlorinated systems and a six-inch diameter pipe for discharge outfall #005.

3. CONDITIONS OF PERMIT

Maine law, 38 M.R.S.A. §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 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 require the regulation of toxic substances at the levels set forth for Federal Water Quality Criteria as published by the U.S. Environmental Protection Agency pursuant to the Clean Waters Act.

4. RECEIVING WATER QUALITY STANDARDS

Maine law, 38 M.R.S.A. §467(3)(A)(2)/(B)(1) and §469 classifies the East Machias River and its tributaries at the points of discharge as a Class B and SB waters respectively. Maine law, 38 M.R.S.A. §465(3) and §465-B describe the standards for Class B and 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 East Machias River and its tributaries at the points of discharge as “*Category 2: Rivers and Streams Attaining Some of the Designated Uses with Insufficient Information for Other Uses.*” Based on available in-stream monitoring data, the Department’s Bureau of Land and Water Quality, Division of Environmental Assessment (DEA) concludes that the East Machias River and its tributaries are achieving the standards of classification for Class B and SB waters, and the Department concludes that, as permitted, the existing uses for Class B waters will be maintained and protected and the discharge will not cause or contribute to the failure of the water bodies to meet standards for Class B and SB classification. This permitting action is requiring year-round disinfection in order to protect shellfish harvesting areas and prevent the closure of shellfish harvesting areas.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

- a. **Flow:** The previous licensing action established a collective monthly average discharge flow limit of 25,585 gpd (0.025585 MGD). This permitting action is carrying forward the collective monthly average flow limit of 25,585 gpd, as it remains representative of the design capacity of the treatment works. Each outfall has been assigned its own flow limitation based on its design capacity.
- b. **Dilution Factors:** The Department established applicable dilution factors for the discharge in accordance with freshwater protocols established in Department Rule Chapter 530.5, *Surface Water Toxics Control Program*, October 1994. With a monthly average flow limit of 0.026885 MGD, dilution factors associated with the discharge from Town of East Machias WWTF may be calculated as follows:

$$\text{Acute: } 1Q_{10} = 15.7 \text{ cfs} \quad \Rightarrow \frac{(15.7 \text{ cfs})(0.6464) + 0.025585 \text{ MGD}}{0.025585 \text{ MGD}} = 397:1$$

$$\text{Chronic: } 7Q_{10} = 17.7 \text{ cfs} \quad \Rightarrow \frac{(17.7 \text{ cfs})(0.6464) + 0.025585 \text{ MGD}}{0.025585 \text{ MGD}} = 448:1$$

$$\text{Harmonic Mean}^1 = 53.1 \text{ cfs} \quad \Rightarrow \frac{(53.1 \text{ cfs})(0.6464) + 0.025585 \text{ MGD}}{0.025585 \text{ MGD}} = 1,342:1$$

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 & TSS concentration limits of 30 mg/L and 45 mg/L, respectively, which 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 licensing action also established daily maximum BOD₅ & TSS concentration limits of 50 mg/L based on a Department best professional judgement of best practicable treatment (BPT). All three concentration limits are being carried forward for each outfall in this permitting action.

This permitting action is establishing mass limits for each of the four largest outfall locations, for example, at outfall #005, mass limits are based on the following:

Monthly Average Mass Limit: $(30 \text{ mg/L})(8.34 \text{ lbs./gallon})(0.0069 \text{ MGD}) = 2.0 \text{ lbs./day}$

Weekly Average Mass Limit: $(45 \text{ mg/L})(8.34 \text{ lbs./day})(0.0069 \text{ MGD}) = 2.6 \text{ lbs./day}$

Daily Maximum Mass Limit: $(50 \text{ mg/L})(8.34 \text{ lbs./day})(0.0069 \text{ MGD}) = 2.9 \text{ lbs./day}$

Department rule 06-096 CMR Chapter 523(6)(f) states that all pollutants limited in permits shall have limitations, standards or prohibitions expressed in terms of mass. This permitting action is modifying all three mass limits by establishing appropriate limits for each outfall. This permitting action is also establishing a new requirement for a minimum of 85% removal of BOD₅ & TSS pursuant to Department rule 06-096 CMR Chapter 525(3)(III)(a)(3) and (b)(3). Influent values for BOD and TSS may be assumed to be 300 mg/L [according to the EPA'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] until the infrastructure is modified or replaced such that influent sample collection is practical.

This permitting action is modifying the minimum monitoring frequency requirement of once per quarter (1/90) from the previous licensing action to monthly (1/30) in this permitting action because there have been instances of overloaded beds that have caused recent exceedences of the numeric limitations previously established.

- d. Settleable Solids: The previous licensing action established daily maximum concentration reporting requirements for settleable solids and a minimum monitoring frequency requirement of once per quarter. This permitting action is establishing a daily maximum technology-based concentration limitation of 0.3 ml/L for all outfalls but is only carrying forward the minimum monitoring frequency for outfalls 001, 003, 004, and 005. Sampling for settleable solids is not required when conducting analysis for TSS on the same sample.

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

- e. Fecal Coliform Bacteria: The previous licensing action established year-round monthly average and daily maximum concentration limits for *Fecal Coliform* bacteria in order to maintain shellfish harvesting areas in the vicinity of the outfalls. Limitations of 15 colonies/100 ml (geometric mean) and 50 colonies/100 ml (instantaneous level), respectively, based on the State of Maine Water Classification Program criteria for Class SB waters found at 38 M.R.S.A. §465-B(2), are being carried forward in this permitting action for both the monthly average and daily maximum concentration limits. This permitting action is modifying the minimum monitoring frequency requirements to twice monthly in order to provide for the maintenance of the shellfish harvesting areas for outfalls #001, 003, 004, and 005 (and once per month for the remaining, smaller flow discharge outfalls, #002 and 006-019 [excluding discontinued 018]).
- f. Total Residual Chlorine (TRC): The previous licensing action established a year-round daily maximum technology-based concentration limitation of 1.0 mg/L for TRC and a minimum monitoring frequency requirement of once per calendar quarter (except for outfall #003 where the limits were 0.3 mg/L). 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. End-of-pipe water quality based concentration thresholds based on the collective monthly average flow limit of 0.025585 MGD may be calculated as follows:

Acute (A) Criterion	Chronic (C) Criterion	A & C Dilution Factors	Calculated	
			Acute Limit	Chronic Limit
0.019 mg/L	0.011 mg/L	391:1 (A) 441:1 (C)	7.43 mg/L	4.85 mg/L

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 BPT-based standard of 1.0 mg/L is more stringent than the calculated acute water quality-based threshold of 7.43 mg/L and is therefore being carried forward for each outfall in this permitting action (except for outfall #003 where the limit is 0.3 mg/L). TRC monitoring frequency is being modified in this permitting action to once weekly (01/07) in order to be address Department guidelines for similar types of facilities and must occur during any periods that chlorine-based compounds are in use at the facility. As permitted, the discharge of total residual chlorine is not anticipated to cause or contribute to non-attainment of the aquatic life standards for Class B or SB waters.

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

- 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 month. Pursuant to a new Department rule found at Department rule 06-096 CMR Chapter 525(3)(III)(c), the pH range limitation is being revised 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 month (1/Month) based on a Department BPJ determination of the minimum level of monitoring necessary to assess compliance with this parameter. Effluent pH results shall be maintained within the range of 6.0 – 9.0 SU unless the facility demonstrates that (1) inorganic chemicals are not added to the waste stream as part of the treatment works and (2) contributions from industrial sources do not cause the pH of the effluent to be less than 6.0 or greater than 9.0. and that the result(s) does not vary from the ambient receiving water pH value by more than 0.5 SU. The permittee shall provide the Department with written documentation as to the cause(s) of the pH results if determined to be outside the 6.0 – 9.0 SU range and shall provide documentation of ambient receiving water pH from a sampling location immediately above the point of discharge.

7. 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 Machias River, Meadow Brook, unnamed brook or the tidal areas of the East Machias River to meet standards for Class B or SB classification.

8. PUBLIC COMMENTS

Public notice of this application was made in the Machias Valley News newspaper on or about August 31, 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.

9. DEPARTMENT CONTACTS

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

David Silver
Division of Water Resource Regulation
Bureau of Land & Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 287-7658

10. RESPONSE TO COMMENTS

During the period of July 12, 2005 through final license issuance, the Department solicited comments on the proposed draft Maine Waste Discharge License to be issued to the Town of East Machias for the proposed discharge. The Department did not receive comments from the licensee, state or federal agencies or interested parties that resulted in any substantive change(s) in the terms and conditions of the license. Therefore, a Response to Comments section has not been prepared.

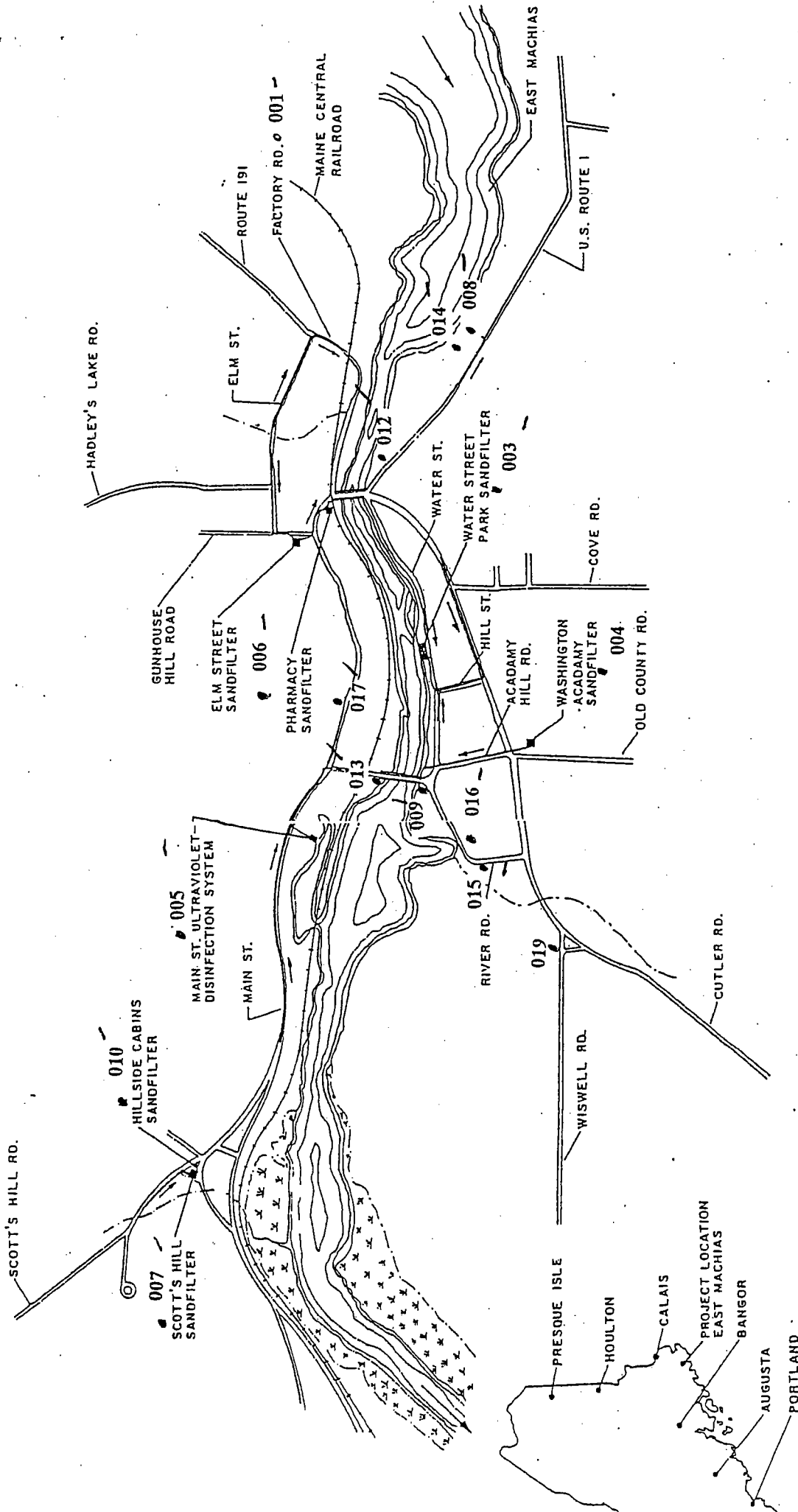
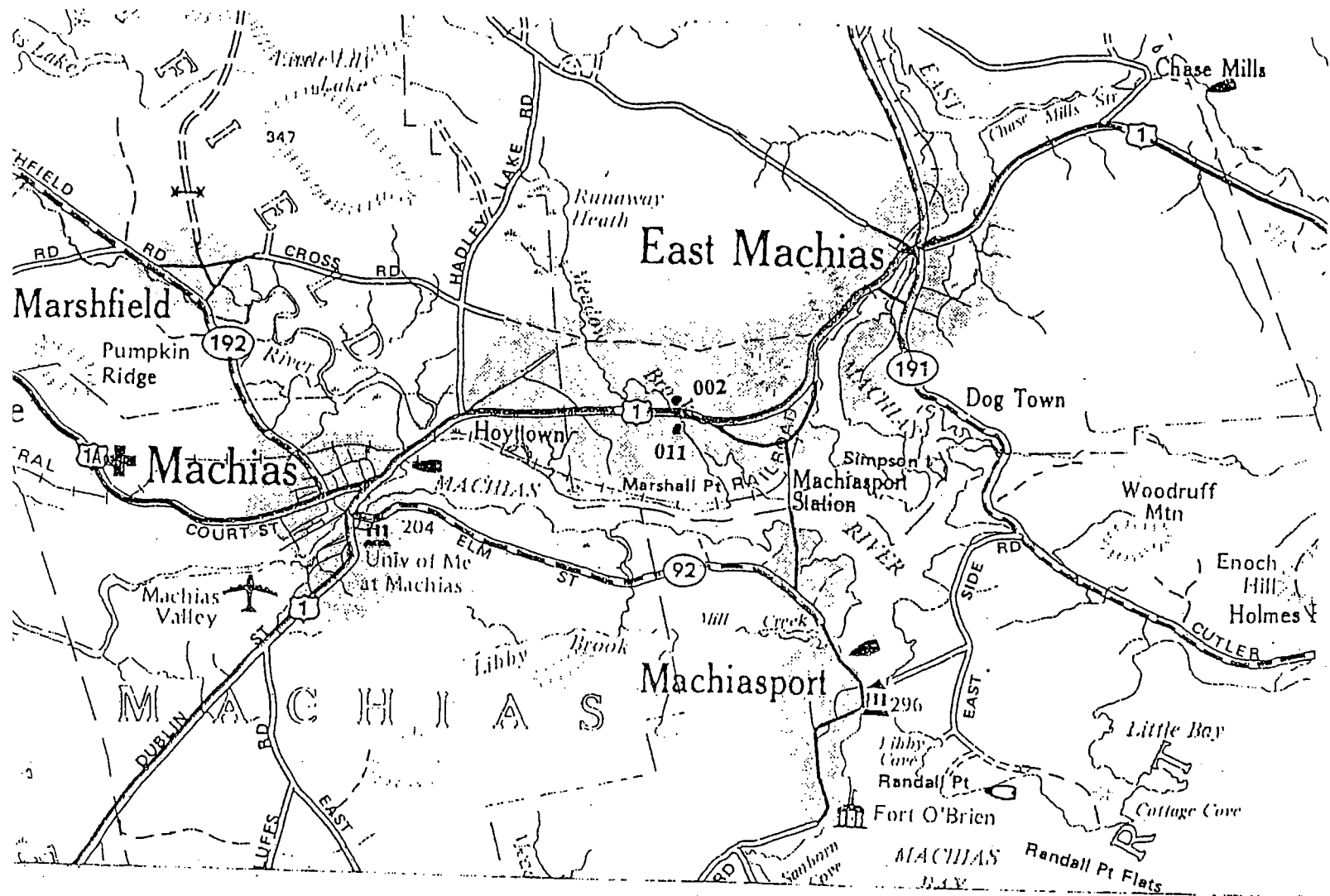


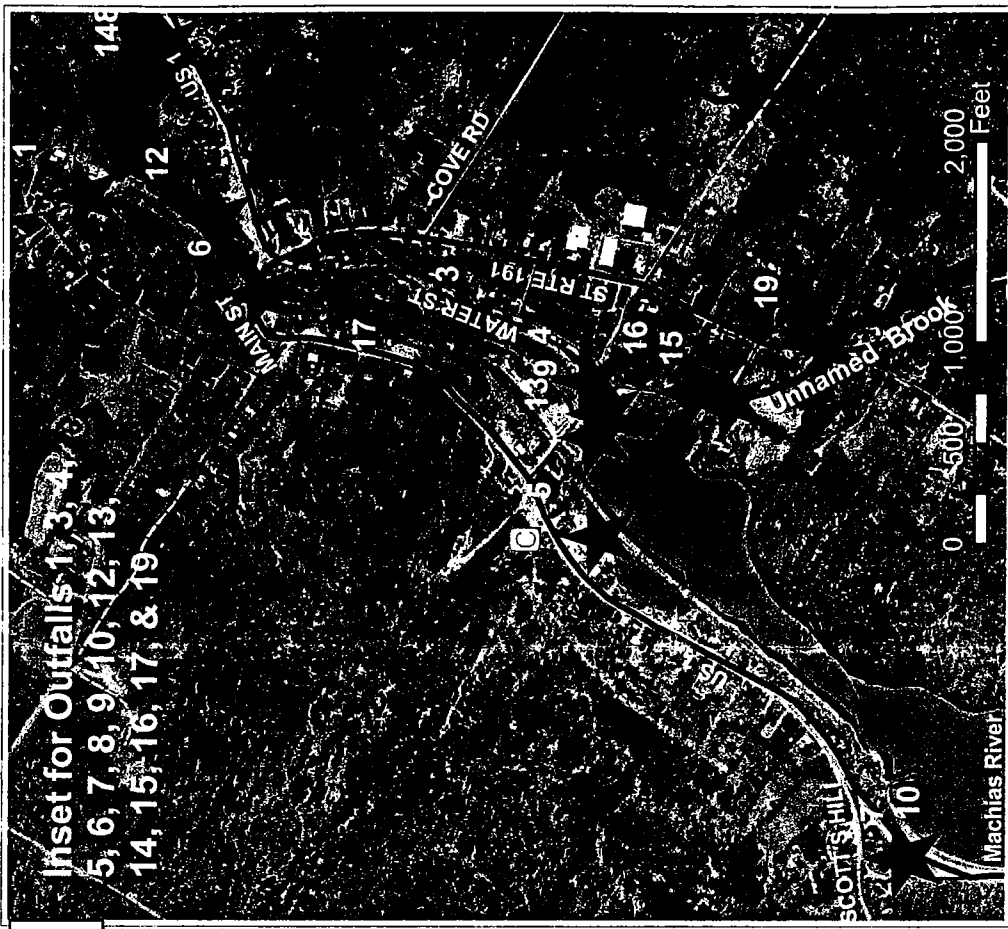
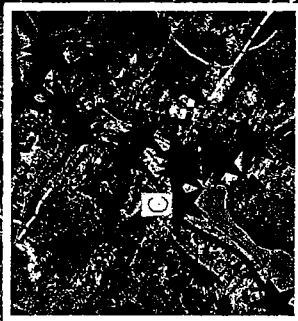
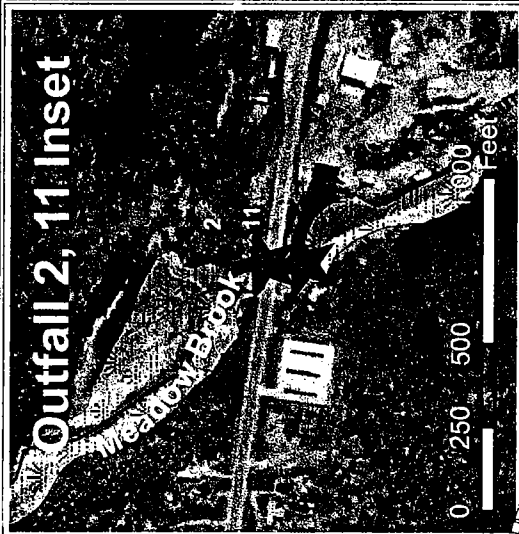
FIGURE 1-1
VICINITY AND
LOCATION MA

002 and 011 locations are on map on reverse side

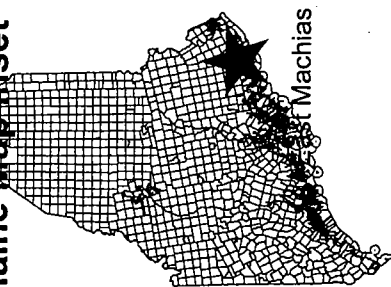


EAST MACHIAS POTW AND VICINITY

Outfall 2, 11 Inset



Maine Map Inset



MEQ102156
W006521-5L-C-R
Kenneth Davis, Town of East Machias
Jonathan Carman, JMC Wastewater Services
PO Box 397
Unity Maine 04988

