STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

December 21, 2006

Mr. Robert Marsh
Pine Tree Trout
2190 Main Street
Sanford, Maine 04073

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0110493
Maine Waste Discharge License (WDL) Application # W-008245-5Q-A-N
Final Permit/License

Dear Mr. Marsh:

Enclosed please find a copy of your **final** MEPDES permit and Maine WDL which was approved by the Department of Environmental Protection. 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.*"

If you have any questions regarding the matter, please feel free to call me at (207) 287-6114 or contact me via email at Robert.D.Stratton@maine.gov.

Sincerely,

Robert D. Stratton
Division of Water Quality Management
Bureau of Land and Water Quality

Enc./cc: Stuart Rose (MEDEP);
Sandy Lao (USEPA);

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

DEPARTMENT ORDER

IN THE MATTER OF

PINE TREE TROUT FISH HATCHERY	)	MAINE POLLUTANT DISCHARGE
SANFORD, YORK COUNTY, MAINE	)	ELIMINATION SYSTEM PERMIT
FISH HATCHERY	)	AND
#ME0110493	)	WASTE DISCHARGE LICENSE
#W-008245-5Q-A-N **APPROVAL**	)	**NEW**

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

APPLICATION SUMMARY

The applicant has applied for a Maine Pollutant Discharge Elimination System (MEPDES) Permit and Maine Waste Discharge License (WDL) for the discharge of a monthly average of 0.072 million gallons per day (MGD) of fish hatchery wastewater to Branch Brook, Class A, from a commercial rainbow trout hatchery and rearing facility in Sanford, Maine. The facility has been assigned MEPDES Permit number #ME0110493 and Maine WDL number #W-008245-5Q-A-N.

PERMIT SUMMARY

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, USEPA extended Maine's NPDES program delegation to all but tribally owned lands. The extent of Maine's delegated authority is under appeal at the time of this permitting action. From this point forward, the program will be referred to as the MEPDES program and permit #ME0110493 will be utilized as the primary reference number for the Sanford facility.

This permitting action establishes the following:

1. a monthly average discharge flow limit of 0.072 MGD;

2. BOD and TSS monthly average and daily maximum mass and concentration limits with a provision for the Department to establish new limits in the future based on technology performance analyses of the industry as a whole;

3. seasonal total phosphorus monthly average and daily maximum mass and concentration monitoring and reporting requirements with implementation of monthly average water quality based mass and concentration limits in three years;

4. seasonal orthophosphate monthly average and daily maximum monitoring and reporting requirements for one year;

5. monthly average and daily maximum reporting requirements for mass of fish on hand;

6. seasonal monthly average and daily maximum concentration monitoring and reporting requirements and a daily minimum concentration limit for effluent dissolved oxygen;

7. a pH limit of 6.0-8.5 standard units.

8. minimum monitoring frequency and sample type requirements based on Department best professional judgement (BPJ);

9. a requirement for a current facility Operation and Maintenance Plan;

10. requiring submittal of an Alternative Discharge Study report six months prior to permit expiration;

11. requirements for settling pond cleaning;

12. a requirement for compliance with existing state salmonid fish health rules;

13. requirements related to proper use and record keeping of therapeutic agents;

14. record keeping requirements for disinfecting/sanitizing agents;

15. Department BPJ derived minimum treatment technology requirements for the Sanford facility,

16. requirements for ambient macroinvertebrate biomonitoring if MEDEP monitoring indicates non-attainment conditions and;

17. requirements for ambient dissolved oxygen and temperature monitoring studies.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated November 8, 2006 and revised December 8, 2006, 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 MRSA Section 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 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.

5. The discharge is necessary and there are no other practical alternatives available.

ACTION

THEREFORE, the Department APPROVES the above noted application of the PINE TREE TROUT FISH HATCHERY to discharge fish hatchery wastewater consisting of a monthly average flow of 0.072 MGD of fish hatchery and rearing facility wastewater to Branch Brook, Class A, 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. This permit expires five (5) years from the date of signature below.

DONE AND DATED AT AUGUSTA, MAINE, THIS 22ND DAY OF December, 2006.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
David P. Littell, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: September 26, 2006
Date of application acceptance: October 4, 2006

FILED
DEC 22 2006
BOARD OF ENVIRONMENTAL PROT.
STATE OF MAINE

Date filed with Board of Environmental Protection _____.

This Order prepared by Robert D. Stratton, BUREAU OF LAND & WATER QUALITY
W-008245-5Q-A-N / #ME0110493 December 8, 2006

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge **fish hatchery wastewater from Outfall #001A (fish hatchery and rearing station)** to Branch Brook. Such discharges shall be limited and monitored by the permittee as specified below[1]:

Monitoring Parameter	**Discharge Limitations and Reporting Requirements**				**Minimum Monitoring Requirements**		
	Monthly Average as specified	Daily Maximum as specified	Monthly Average as specified	Daily Maximum as specified	Daily Minimum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	0.072 MGD *[03]*	---	---	---	---	Daily *[01/01]*	Measured *[MS]*
BOD[2] *[00310]*	3.6 lbs/day *[26]*	6 lbs/day *[26]*	6 mg/L *[19]*	10 mg/L *[19]*	---	Once/2 weeks *[01/14]*	Composite[3] *[CP]*
TSS[2] *[00530]*	3.6 lbs/day *[26]*	6 lbs/day *[26]*	6 mg/L *[19]*	10 mg/L *[19]*	---	Once/2 weeks *[01/14]*	Composite[3] *[CP]*
Total Phosphorus[4] **From June 1 – Sept 30 yearly during 2007-2008** *[00665]*	report lbs/day *[26]*	report lbs/day *[26]*	report mg/L *[19]*	report mg/L *[19]*	---	Once/2 weeks *[01/14]*	Composite[3] *[CP]*
Total Phosphorus[4] **From June 1 – Sept 30 yearly beginning 2009** *[00665]*	0.23 lbs/day *[26]*	report lbs/day *[26]*	0.39 mg/L *[19]*	report mg/L *[19]*	---	Once/2 weeks *[01/14]*	Composite[3] *[CP]*
Orthophosphate (as P)[4] **June 1 -Sept 30, 2007** *[04175]*	report lbs/day *[26]*	report lbs/day *[26]*	report mg/L *[19]*	report mg/L *[19]*	---	Once/2 weeks *[01/14]*	Composite[3] *[CP]*
Fish on Hand *[45604]*	report lbs/day *[26]*	report lbs/day *[26]*	---	---	---	Once/2 weeks *[01/14]*	Calculated *[CA]*
Dissolved Oxygen[5] **From June 1 – Sept 30 yearly** *[00300]*	---	---	report mg/L *[19]*	report mg/L *[19]*	7.5 mg/L *[19]*	1/week *[01/07]*	Measured *[MS]*
pH *[00400]*	---	---	---	6.0-8.5 S.U. *[12]*	---	Once/2 weeks *[01/14]*	Grab *[GR]*

The italicized numeric values bracketed in the table above and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports (DMRs). Footnotes are found on Page 7.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. The permittee is required to conduct **Ambient Water Quality Monitoring** in Branch Brook as specified below **from June 1 through September 30 each year**, designated as **Outfall #001B** for the purpose of Permit Compliance System tracking.

Monitoring Parameter	**Discharge Limitations and Reporting Requirements**					**Minimum Monitoring Requirements**	
	Monthly Average as specified	Daily Maximum as specified	Monthly Average as specified	Daily Maximum as specified	Daily Minimum as specified	Measurement Frequency as specified	Sample Type as specified
Dissolved Oxygen[5] **Ambient Location 1:** In Branch Brook above outfall. *[00300]*	---	---	Report mg/L *[19]*	Report mg/L *[19]*	Report mg/L *[19]*	1/week *[01/07]*	Measured *[MS]*
Water Temperature[5] Ambient Location 1 *[00010]*	---	---	Report Degrees Celsius *[04]*	Report Degrees Celsius *[04]*	Report Degrees Celsius *[04]*	1/week *[01/07]*	Measured *[MS]*
Time of Day[5,6] Ambient Location 1 *[80273]*	---	---	---	Report 24-hour time *[1Q]*	---	1/week *[01/07]*	Record *[RC]*
Dissolved Oxygen[5] **Ambient Location 2:** In Branch Brook below outfall. *[00300]*	---	---	Report mg/L *[19]*	Report mg/L *[19]*	Report mg/L *[19]*	1/week *[01/07]*	Measured *[MS]*
Water Temperature[5] Ambient Location 2 *[00010]*	---	---	Report Degrees Celsius *[04]*	Report Degrees Celsius *[04]*	Report Degrees Celsius *[04]*	1/week *[01/07]*	Measured *[MS]*
Time of Day[5,6] Ambient Location 2 *[80273]*	---	---	---	Report 24-hour time *[1Q]*	---	1/week *[01/07]*	Record *[RC]*

The italicized numeric values bracketed in the table above and in subsequent text are code numbers that Department personnel utilize to code the monthly DMRs. Footnotes are found on Page 7.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS , FOOTNOTES:

All 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 Health and Human Services unless otherwise approved by the Department. **All effluent limits are gross, end of pipe limits, unless otherwise specified.**

1. Effluent Monitoring: Effluent values shall be determined through sampling at Outfall #001A, the only authorized facility discharge, following all means of wastewater treatment. All monitoring shall be conducted so as to capture conditions representative of wastewater generating processes at the facility, such as flow-through and cleaning discharge flows, use of therapeutic and disinfecting/sanitizing agents, etc. and in consideration of settling pond detention times. Any change in sampling location must be approved by the Department in writing.

2. BOD and TSS: BOD and TSS effluent concentration limits are based on results of secondary level fish hatchery wastewater treatment, developed by EPA. It is the Department's intent to re-evaluate and potentially revise concentration limits in the future based on statistical evaluations of demonstrated performance of consistently and properly utilized treatment technology for the industry.

3. Composite Samples: Composite sample means a sample consisting of a minimum of four grab samples collected at two-hour intervals during the working day at the facility. Alternatively, upon Department approval, the permittee may elect to use an automatic compositer for sampling.

4. Total Phosphorus and Orthophosphate: Phosphorus limits and monitoring requirements are seasonal and are only in effect from June 1 through September 30 each year. Orthophosphate monitoring requirements are only in effect from June 1 through September 30, 2007. Laboratory analysis shall be conducted on the same sample and shall consist of a low-level phosphorus analysis with a minimum detection limit of 1 part per billion (1 ug/L). See Attachment A of this Permit for sample protocols.

5. Supplemental Data Forms: In addition to specified DMR reporting requirements, the permittee shall submit all data from effluent dissolved oxygen, ambient dissolved oxygen, water temperature, and time of day monitoring to the Department in a supplemental report accompanying the appropriate monthly discharge monitoring report pursuant to Permit Special Conditions E and O.

6. Time of Day: Time of day of ambient dissolved oxygen and temperature monitoring shall be reported using 24-hour time as HH hours, MM minutes, such as 05 hours 10 minutes.

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 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. UNAUTHORIZED DISCHARGES:

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from Outfall #001A, the only authorized facility discharge. 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) (*Bypass*) of this permit.

D. NOTIFICATION REQUIREMENT:

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

1. Any substantial change in the volume or character of pollutants being introduced into the wastewater collection and treatment system.

2. For the purposes of this section, adequate notice shall include information on:

   a. The quality or quantity of wastewater introduced to the waste water collection and treatment system; and

   b. Any anticipated impact of the change in the quantity or quality of the wastewater to be discharged from the treatment system.

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 (13^{th}) day of the month or hand-delivered to a Department regional office such that the DMR's are received by the Department on or before the fifteenth (15^{th}) day of the month following the completed reporting period. A signed copy of the DMR and all other reports required herein including reports required pursuant to Permit Special Conditions A (footnote 5), F, G, H, N, and O, shall be submitted to the Department's assigned compliance inspector (unless otherwise specified) at the following address:

Department of Environmental Protection
Bureau of Land and Water Quality
Division of Water Quality Management
312 Canco Road
Portland, Maine 04103

F. OPERATION & MAINTENANCE (O&M) PLAN:

On or before June 1, 2007, the permittee shall submit to the Department a current written comprehensive Operation & Maintenance (O&M) Plan ***[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.

The O&M Plan shall establish Best Management Practices (BMP) to be followed in operating the facility, cleaning the raceways/culture tanks, screens, and other equipment and disposing of any solid waste. The purpose of the BMP portion of the plan is to identify and to describe the practices which minimize the amounts of pollutants (biological, chemical, and medicinal) discharged to surface waters. Among other items, the plan shall describe in detail efficient feed management and feeding strategies to minimize discharges of uneaten feed and waste products, how and when the accumulated solids are to be removed, dewatered, and methods of disposal. The plan shall also describe where the removed material is to be placed and the techniques used to prevent it from re-entering the surface waters from any onsite storage. The plan shall document the recipients and methods of any offsite waste disposal.

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 EPA 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.

SPECIAL CONDITIONS

G. SCHEDULE OF COMPLIANCE

The Department is establishing a Schedule of Compliance for implementation of the following effluent limits and requirements established in this permitting action to provide for infrastructure, operation and maintenance upgrades as appropriate to ensure compliance. The permittee shall adhere to the specific required tasks and deadlines detailed below:

1. **Technology and Water Quality Based Effluent Limitations:** The permittee shall ensure that the facility provides wastewater treatment equal to or better than the minimum treatment technology for all wastewater discharges and complies with all technology based effluent limitations, monitoring requirements, and operational requirements established in this permitting action **upon its effective date** and shall ensure that the facility complies with all new water quality based limits (total phosphorus) **on or before June 1, 2009**.

   A. **On or before June 1, 2007 and 2008**, the permittee shall submit to the Department for review, facility wide plans (reports) to address operational and physical modifications necessary to ensure compliance with the total phosphorus limits established in this permit ***[90199,90299]***. The plans shall encompass methods, technologies, and implementation schedules for attainment of the total phosphorus limits. For any alternatives involving design and construction, see Fact Sheet Attachment C for Department guidance on developing an Engineer's Facilities Planning Report.

H. ALTERNATIVE DISCHARGE STUDY:

On or before six-months prior to expiration of this permit, Pine Tree Trout is required to submit to the Department for review, an Alternative Discharge Study (ADS) report for the Sanford facility to determine if practical alternatives to the discharge exist. The ADS report shall evaluate wastewater treatment infrastructure, technologies, practices or other modifications that will result in the elimination of the discharge to the receiving water or improvement in the effluent quality, pursuant to guidance in Fact Sheet Section 8. *[34099]*

I. SETTLING POND CLEANING:

All wastewater settling structures shall be cleaned when accumulated materials occupy 20% of a basin's capacity, when material deposition in any area of the basins exceeds 50% of the operational depth, or at any time that said materials in or from the basins are contributing to a violation of permit effluent limits. The permittee is responsible for reporting effluent violations pursuant to Standard Conditions D.1 (f) and (g).

SPECIAL CONDITIONS

J. DISEASE AND PATHOGEN CONTROL AND REPORTING:

Pine Tree Trout must comply with Maine Department of Inland Fisheries and Wildlife and Maine Department of Marine Resources salmonid fish health rules (12 MRSA, §6071; 12 MRSA, §§7011, 7035, 7201, and 7202, or revised rules). The cited rules include requirements for notification to the appropriate agency within 24-hours of pathogen detection. In the event of a catastrophic pathogen occurrence, the permittee shall submit to the Department for review, information on the proposed treatment including materials/chemicals to be used, material/chemical toxicity to aquatic life, the mass and concentrations of materials/chemicals as administered, and the concentrations to be expected in the effluent. The Department will address such occurrences through administrative modifications of the permit.

K. THERAPEUTIC AGENTS:

All medicated fish feeds, drugs, and other fish health therapeutants shall be registered with USEPA as appropriate, approved by the US Food and Drug Administration (USFDA), and applied according to USFDA accepted guidelines and manufacturer's label instructions. Records of all such materials used are to be maintained at the facility for a period of five years. This permitting action does not authorize routine off-label or extra-label drug use. Such uses shall only be permitted in emergency situations when they are the only feasible treatments available and only under the authority of a veterinarian. **The permittee shall notify the Department in writing within 24-hours of such use.** This notification must be provided by the veterinarian involved and must include the agent(s) used, the concentration and mass applied, a description of how the use constitutes off-label or extra-label use, the necessity for the use in terms of the condition to be treated and the inability to utilize accepted drugs or approved methods, the duration of the use, the likely need of repeat treatments, and information on aquatic toxicity. If, upon review of information regarding the use of a drug pursuant to this section, the Department determines that significant adverse effects are likely to occur, it may restrict or limit such use.

L. DISINFECTING/SANITIZING AGENTS:

Records of all disinfectants and/or sanitizing agents used that have the potential to enter the waste stream or receiving water, their volumes and concentrations as used and concentrations at the point of discharge, shall be maintained at the facility for a period of five years. This permitting action only authorizes the discharge of those materials applied for, evaluated by the Department, and either regulated or determined to be deminimus in this permitting action or in subsequent Department actions.

SPECIAL CONDITIONS

M. MINIMUM TREATMENT TECHNOLOGY REQUIREMENT:

Based on information provided and Department BPJ, the permittee shall provide minimum treatment technology for the Sanford facility that shall consist of treatment equal to or better than 60-micron microscreen filtration of the effluent, wastewater settling/clarification, and removal of solids. Pine Tree Trout shall provide treatment equal to or better than the BPJ minimum treatment technology and shall comply with all effluent limitations, monitoring requirements, and operational requirements established in this permitting action. Additional treatment may be necessary to achieve specific water quality based limitations.

N. AMBIENT MACROINVERTEBRATE BIOMONITORING:

Based on available data, the Department is concerned with the effects of fish hatchery effluent discharges on rivers and streams in Maine. As macroinvertebrate communities provide indications of the overall ecological health of a receiving water, the Department has determined that biomonitoring is needed to better evaluate attainment of river and stream water classification standards and designated uses, resource impacts, and corrective measures when necessary. In order to address this need and to compliment earlier work on Branch Brook, the Department's Division of Environmental Assessment (MEDEP DEA) will conduct macroinvertebrate biomonitoring in the receiving water once during the term of this permitting action to determine attainment of the aquatic life standards. In the event that MEDEP DEA's biomonitoring indicates non-attainment of aquatic life standards in the receiving water, Pine Tree Trout shall be required to conduct ambient macroinvertebrate biomonitoring annually thereafter. Prior to any such monitoring, Pine Tree Trout shall be required to submit a biomonitoring plan for Branch Brook to MEDEP DEA for review and approval, pursuant to Permit Special Condition P. The plan shall be consistent with "*Methods for Biological Sampling and Analysis of Maine's Rivers and Streams*" (DEP #LW0387-B2002, August 2002) and shall include a scope of work and schedule, monitoring locations and maps, methods and materials, and reporting procedures for the biomonitoring program. Biomonitoring shall be conducted according to a Department approved monitoring plan. Results shall be reported to the Department in a biomonitoring report by December 15 each year. If the receiving water is subsequently determined by the Department to be meeting criteria, standards, and designated uses for its assigned water quality class, the Department will reopen the permit pursuant to Permit Special Condition P, to modify or discontinue the biomonitoring requirement.

O. AMBIENT DISSOLVED OXYGEN AND TEMPERATURE MONITORING:

Based on the low effluent dilution provided in the receiving water and the need for additional data on the effects of Pine Tree Trout's effluent on the water quality of its receiving water, this permitting action requires the permittee to seasonally monitor ambient dissolved oxygen and temperature levels in Branch Brook. The permittee shall monitor ambient dissolved oxygen and temperature (Celsius) from June 1 through September 30 each year beginning the effective date of this permit at a frequency of once per week and shall report the time of day the monitoring is

SPECIAL CONDITIONS

O. AMBIENT DISSOLVED OXYGEN AND TEMPERATURE MONITORING (cont'd):

conducted. The permittee shall report all monitoring results to the Department in a supplemental report accompanying the appropriate monthly discharge monitoring report *[21899]*. Monitoring shall be conducted within two hours of sunrise, or as indicated in a Department approved monitoring plan, at two locations: (1) in Branch Brook above the Pine Tree Trout outfall in an area representing free-flowing conditions and (2) in Branch Brook below the Pine Tree Trout outfall in an area representing the dissolved oxygen sag point, unless revised by the Department. **On or before three months following the effective date of this permit**, Pine Tree Trout shall submit a plan for ambient dissolved oxygen and temperature monitoring and instrument calibration/data quality control to the Department's Division of Environmental Assessment for review and approval *[00201]*. The plan shall include a scope of work and schedule, monitoring locations and maps, sampling methods and materials, and reporting procedures for the ambient dissolved oxygen and temperature monitoring program. The plan shall also include procedures for regular instrument calibration to ensure data quality control. Ambient dissolved oxygen and temperature monitoring shall be conducted according to a Department approved monitoring plan.

P. 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, new water quality monitoring data or modeling 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 monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

Q. 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.

ATTACHMENT A

(Total phosphorus and orthophosphate protocols)

Protocol for Total P Sample Collection and Analysis for Waste Water and Receiving Water Monitoring Required by Permits

Approved Analytical Methods: EPA 365.2, SM 4500-P B.5 E

Sample Collection: The Maine DEP is requesting that total phosphorus analysis be conducted on composite effluent samples, unless a facility's Permit specifically designates grab sampling for this parameter. Facilities can use individual collection bottles or a single jug made out of glass or polyethylene. Bottles and/or jugs should be cleaned prior to each use with dilute HCL. This cleaning should be followed by several rinses with distilled water. The sampler hoses should be cleaned, as needed.

Sample Preservation: During compositing the sample must be at 0-4 degrees C. If the sample is being sent to a commercial laboratory or analysis cannot be performed the day of collection then the sample must be preserved by the addition of 2 mls of concentrated H_2SO_4 per liter and refrigerated at 0-4 degrees C. The holding time for a preserved sample is 28 days.

Note: Ideally, Total P samples are preserved as described above. However, if a facility is using a commercial laboratory then that laboratory may choose to add acid to the sample once it arrives at the laboratory. The Maine DEP will accept results that use either of these preservation methods.

QA/QC: Run a distilled water blank and at least 2 standards with each series of samples. If standards do not agree within 2% of the true value then prepare a new calibration curve.

Every month run a blank on the composite jug and sample line. Automatically, draw distilled water into the sample jug using the sample collection line. Let this water set in the jug for 24 hours and then analyze for total phosphorus. Preserve this sample as described above.

Finalized May 2006

Protocol for Orthophosphate Sample Collection and Analysis for Waste Water and Receiving Water Monitoring Required by Permits

Approved Analytical Methods: EPA 365.2, SM 4500-P.E

Sample Collection: The Maine DEP is requesting that orthophosphate analysis be conducted on composite effluent samples unless a facility's Permit specifically indicates grab sampling for this parameter. Facilities can use individual collection bottles or a single jug made out of glass or polyethylene. Bottles and/or jugs should be cleaned prior to each use with dilute HCL. This cleaning should be followed by several rinses with distilled water. The sampler hoses should be cleaned, as needed.

Sample Preservation: During compositing the sample must be at 0-4 degrees C. The sample must be filtered immediately (within 15 minutes) after collection using a pre-washed 0.45-um membrane filter. Be sure to follow one of the pre-washing procedures described in the approved methods. Also, be aware that you will likely want to use a designated suction hose and collection container for the orthophosphate filtering process. If the sample is being sent to a commercial laboratory or analysis cannot be performed within 2 hours after collection then the sample must be kept at 0-4 degrees C. There is a 48-hour holding time for this sample although analysis should be done sooner, if possible.

QA/QC: Run a distilled water blank and at least 2 standards with each series of samples. If standards do not agree within 2% of the true value then prepare a new calibration curve.

Every month run a blank on the composite jug and sample line. Automatically, draw distilled water into the sample jug using the sample collection line. Let this water set in the jug for 24 hours and then analyze for total phosphorus. Preserve this sample as described above.

Finalized May 2006

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: November 8, 2006
Revised: December 8, 2006

MEPDES PERMIT NUMBER: # ME0110493
WASTE DISCHARGE LICENSE: # W-008245-5Q-A-N

NAME AND ADDRESS OF APPLICANT:

PINE TREE TROUT FISH HATCHERY
2190 Main St.
Sanford, Maine 04073

COUNTY: YORK

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

PINE TREE TROUT FISH HATCHERY
2190 Main St.
Sanford, Maine 04073

RECEIVING WATER / CLASSIFICATION: Branch Brook, Class A

COGNIZANT OFFICIAL AND TELEPHONE NUMBER:

Mr. Robert Marsh, (207) 324-9664

1. APPLICATION SUMMARY

The applicant has applied for a Maine Pollutant Discharge Elimination System (MEPDES) Permit and Maine Waste Discharge License (WDL) for the discharge of a monthly average of 0.072 million gallons per day (MGD) of fish hatchery wastewater to Branch Brook, Class A, from a commercial rainbow trout hatchery and rearing facility in Sanford, Maine. The facility has been assigned MEPDES Permit number #ME0110493 and Maine WDL number #W-008245-5Q-A-N.

2. PERMIT SUMMARY

a. Regulatory - 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, USEPA extended Maine's NPDES program delegation to all but tribally owned lands. The extent of Maine's delegated authority is under appeal at the time of this permitting action. From this point forward, the program will be referred to as the MEPDES program and permit #ME0110493 will be utilized as the primary reference number for the Sanford facility.

b. Terms and conditions – This permitting action establishes the following:

1. a monthly average discharge flow limit of 0.072 MGD;
2. BOD and TSS monthly average and daily maximum mass and concentration limits with a provision for the Department to establish new limits in the future based on technology performance analyses of the industry as a whole;
3. seasonal total phosphorus monthly average and daily maximum mass and concentration monitoring and reporting requirements with implementation of monthly average water quality based mass and concentration limits in three years;
4. seasonal orthophosphate monthly average and daily maximum monitoring and reporting requirements for one year;
5. monthly average and daily maximum reporting requirements for mass of fish on hand;
6. seasonal monthly average and daily maximum concentration monitoring and reporting requirements and a daily minimum concentration limit for effluent dissolved oxygen;
7. a pH limit of 6.0-8.5 standard units.
8. minimum monitoring frequency and sample type requirements based on Department best professional judgement (BPJ);
9. a requirement for a current facility Operation and Maintenance Plan;
10. requiring submittal of an Alternative Discharge Study report six months prior to permit expiration;
11. requirements for settling pond cleaning;
12. a requirement for compliance with existing state salmonid fish health rules;
13. requirements related to proper use and record keeping of therapeutic agents;
14. record keeping requirements for disinfecting/sanitizing agents;
15. Department BPJ derived minimum treatment technology requirements for the Sanford facility,
16. requirements for ambient macroinvertebrate biomonitoring if MEDEP monitoring indicates non-attainment conditions and;
17. requirements for ambient dissolved oxygen and temperature monitoring studies.

c. History: The most recent licensing/permitting actions include the following:

August 31, 2006 – The Department issued a letter informing Pine Tree Trout that wastewater discharges from the facility require a Maine WDL/MEPDES Permit. The Department established a deadline and conditions for application pursuant to 38 MRSA, Section 464.12.

September 26, 2006 – The Department received a Maine WDL/MEPDES Permit application from Pine Tree Trout for the discharge of a monthly average of 0.072 MGD of fish hatchery wastewater to Branch Brook in Sanford. The application was accepted for processing on October 4, 2006 and assigned WDL #W-008245-5Q-A-N and MEPDES Permit #ME0110493.

d. Source Description/ Facility Operation:

The Pine Tree Trout fish hatchery and rearing facility has been licensed by the Maine Department of Inland Fisheries and Wildlife to cultivate and sell commercially grown or imported fish since January 1985 and raises rainbow trout for commercial sale. Pine Tree Trout consists of three buildings that house hatchery and rearing functions and two earthen wastewater settling ponds. Facility site plans are included as Fact Sheet Attachment B.

Influent Water: Pine Tree Trout receives its source water from a 250-foot deep drilled well on-site. Fish transport water is obtained from three shallow driven well points. Pine Tree Trout seasonally warms its influent water for fish rearing by routing it through approximately 200-feet of 2-inch diameter black plastic piping placed on the surface of an adjacent excavated pond that is otherwise not used in facility processes. Water is routed to the hatchery and rearing structures through plastic PVC piping. Aeration of rearing tank water is provided by one main and one backup air pump.

Pine Tree Trout is a flow-through facility with flows through its hatchery and rearing facilities routed to wastewater settling ponds and discharged through a 24-inch diameter corrugated pipe to the side of Branch Brook (Class A, less than 10 square mile watershed). Branch Brook joins with a number of other streams along its approximately 10-mile route to the Atlantic Ocean on the Kennebunk and Wells town line.

Hatchery Facilities: Pine Tree Trout obtains "eyed" rainbow trout eggs in December to early January of each year from a facility in Tennessee that reportedly also provides eggs to the Maine Department of Inland Fisheries and Wildlife's facilities. Eggs are incubated in two 16-foot long by 15-inch wide by 6-inch deep (75-gallons) egg troughs that are located in the main rearing building. Water flows through the egg troughs at a rate of 3-5 gallons per minute (gpm). Eggs hatch to sac fry approximately 3-4 days after being received on-site, in early January. Newly hatched fish begin being fed in approximately early March. As the fry grow and additional rearing space is needed for their proper development, fish are relocated to rearing tanks described below. Egg trays are cleaned as needed after they have been emptied of all fish. Flow through and cleaning wastewater is discharged to the facility settling ponds described below. Each egg tray is equipped with one effluent screen to contain the fry.

Rearing Facilities: Pine Tree Trout's rearing facilities consist of 13 tanks located in three separate buildings. Tanks 1-9 are located in the main rearing building, while tanks 10-11 and 12-13 are located in two additional rearing buildings. Tank sizes are as follows, arranged by buildings:

Tank	Diameter	Depth	Volume	Volume
1	8 feet	1.5 feet	75.4 cu.ft.	564 gallons
2	8 feet	2 feet	100.5 cu.ft.	752 gallons
3	15 feet	2 feet	353.4 cu.ft.	2,644 gallons
4	15 feet	2 feet	353.4 cu.ft.	2,644 gallons
5	8 feet	2 feet	100.5 cu.ft.	752 gallons
6	8 feet	2 feet	100.5 cu.ft.	752 gallons
7	8 feet	2 feet	100.5 cu.ft.	752 gallons
8	8 feet	2 feet	100.5 cu.ft.	752 gallons
9	8 feet	2 feet	100.5 cu.ft.	752 gallons
10	15 feet	2 feet	353.4 cu.ft.	2,644 gallons
11	15 feet	2 feet	353.4 cu.ft.	2,644 gallons
12	12 feet	2 feet	226.2 cu.ft.	1,692 gallons
13	12 feet	2 feet	226.2 cu.ft.	1,692 gallons

Pine Tree Trout supplies water to groups of the rearing tanks in series by introducing new water to one tank, routing that tank's cleaning wastewater to the facility settling ponds, while routing its flow-through water to the next rearing tank in the series. Pine Tree Trout groups tanks 1 and 2; 3 and 4; 5, 6, 7, 8 and 9; 10 and 11; and 12 and 13 in this manner, as shown in Fact Sheet Attachment B. Water flow through the fish tanks varies with the number of fish in each tank, but falls within a range of 5-15 gpm. As the fish grow and additional rearing space is needed for their proper development, fish are relocated to other rearing tanks. Currently, tanks 12 and 13 are unused. Rearing tanks are cleaned and wastewater discharged as indicated below. Effluent screens are located in each fish tank and in the flow routing / settling box described below, also serving to contain the fish.

Feed / Fish: Pine Tree Trout indicates that the maximum quantity of fish kept on station consists of approximately 6,000 fry weighing 10-pounds, 5,500 first year trout weighing 900-pounds, and 40 second year (broodstock) trout weighing 60-pounds in April of each year prior to selling and stocking. Pine Tree Trout indicates that it uses an average of approximately 5 pounds and a maximum of approximately 8 pounds of food per day with maximum feeding occurring during March, April, and May.

e. Wastewater Treatment:

As described above, hatchery facility egg trays are cleaned as needed after they have been emptied of all fish. Egg tray cleaning is conducted with only water. Flow through and cleaning wastewater is discharged to the facility settling ponds. Rearing tanks are operated partially in series. Regular cleaning activities consist of removing a standpipe in a small flow routing/settling box located mid-series at a frequency of two to three times per week to enable wastes accumulated near the center drain of a rearing tank to be suctioned to the facility settling ponds. Flow-through wastewaters are routed to the next rearing tank(s) in series as described above and are ultimately discharged to the facility settling ponds. Rearing facility tanks are cleaned after they have been emptied of all fish, as needed. Rearing tank cleaning is conducted with only water.

Pine Tree Trout's settling ponds consist of two earthen ponds arranged in series, approximately 0.02-acres and 0.18-acres in size respectively. The first pond is approximately 80-feet long by 12-feet wide by 3-feet deep (approximately 21,500-gallons). The second pond is approximately 130-feet long by 60-feet wide by 3-feet deep (approximately 175,000-gallons) Flow moves from the first to the second settling pond at their north ends, with facility wastewater discharged from the south end of settling pond #2 to Branch Brook. Pine Tree Trout does not typically remove accumulated materials from the settling ponds. Instead, Pine Tree Trout utilizes a commercially available blend of specialized bacteria to aid in decomposition of accumulated waste materials.

No other therapeutants, disinfectants, or sanitizing agents are used on eggs, fish, or structures at Pine Tree Trout such that they enter the facility waste-stream or receiving water.

3. CONDITIONS OF PERMITS

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., Section 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., Section 468.9.B(1) classifies Branch Brook at the point of discharge as a Class A water. Maine law, 38 M.R.S.A., Section 465.2, describes the standards for Class A waters. The Department has further determined that Branch Brook, at the point of discharge, has a watershed of approximately 3.3 square miles.

Maine law, 38 M.R.S.A., Section 464.4.A(1) states, "*...the department may not issue a water discharge license for...*(the) *direct discharge of pollutants to waters having a drainage area of less than 10 square miles, except that discharges into these waters that were licensed prior to January 1, 1986, are allowed to continue only until practical alternatives exist*". Similarly, Maine law, 38 M.R.S.A., Section 465.2.C states that discharges into Class A waters *"licensed prior to January 1, 1986, are allowed to continue only until practical alternatives exist"*. Direct "*discharges to ...* (Class A) *waters licensed after January 1, 1986 are permitted only if...the discharged effluent will be equal to or better than the existing water quality of the receiving waters."* Further, the applicant must objectively demonstrate *"that the discharge is necessary and that there are no other reasonable alternatives available"*.

Pine Tree Trout's wastewater discharge has not been licensed prior to this permitting action. However, Maine Law, 38 M.R.S.A., Section 464.12 states, "*An unlicensed discharge from a fish hatchery is considered, and continues to be considered after it is licensed...the same as a discharge licensed prior to January 1, 1986...if...:*

A. The discharge was in existence prior to January 1, 1986;
B. The fish hatchery is licensed to cultivate fish by the Department of Inland Fisheries and Wildlife on the effective date of this subsection (August 11, 2000)*; and*
C. An application from the hatchery for a waste discharge license is accepted as complete for processing by the Department of Environmental Protection within 90 days of notification that a waste discharge license if required...".

The Department notified Pine Tree Trout of its need to obtain a WDL by letter dated August 31, 2006. The Department received Pine Tree Trout's WDL application on September 26, 2006 and accepted it for processing on October 4, 2006. The Department finds that Pine Tree Trout has complied with the provisions above and that its discharge may be treated the same as a discharge licensed prior to January 1, 1986, pursuant to 38 M.R.S.A., Section 464.12. See Section 8 of this Fact Sheet for further information on the "practical alternatives" analysis required by 38 M.R.S.A., Sections 464.4.A(1) and 465.2.C.

5. RECEIVING WATER QUALITY CONDITIONS:

The State of Maine 2004 *Integrated Water Quality Monitoring and Assessment Report* (DEPLW0665), prepared pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act contains no information related to Branch Brook. However, the Department has conducted macroinvertebrate biomonitoring upstream of the Pine Tree Trout

facility since 1987, unrelated to this facility. Preliminary data from the most recent monitoring conducted in 2005 indicates that Branch Brook is attaining Class A aquatic life standards upstream of Pine Tree Trout. The Department has also conducted biomonitoring downstream of the facility in Kennebunk. Though downstream monitoring conducted in 2000 also indicated attainment of Class A standards, the monitoring location was too far downstream to determine effects, if any, from the Pine Tree Trout discharge.

All freshwaters in Maine are listed as only partially attaining the designated use of recreational fishing due to a fish consumption advisory (Category 5-C). The advisory was established in response to elevated levels of mercury in some fish caused by atmospheric deposition. The Department has no information that the Sanford facility causes or adversely contributes to the consumption advisory. However, due to ongoing concerns with the effects of fish hatchery discharges on receiving waters, this permitting action is establishing effluent limitations, monitoring and operational requirements accordingly, including requirements for ambient macroinvertebrate biomonitoring (Permit Special Condition N), and ambient monitoring for dissolved oxygen and temperature (Permit Special Condition O).

If it is determined that non-attainment conditions exist in the receiving water and that Pine Tree Trout causes or contributes to those conditions, this permitting action may be reopened pursuant to Permit Special Condition P and effluent limitations, monitoring and operational requirements, and/or wastewater treatment requirements adjusted accordingly.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS:

On June 30, 2004, USEPA finalized the Effluent Limitations Guidelines and New Source Performance Standards for the Concentrated Aquatic Animal Production Point Source Category (National Effluent Guidelines). The earlier September 12, 2002 proposed National Effluent Guidelines (NEGs) and subsequent working draft NEGs established numerical limitations for the discharge of TSS and requirements for facilities to develop and implement best management practices (BMP) plans for control of other pollutants.

In the final NEGs, EPA expressed effluent limitations in the form of narrative standards, rather than as numerical values. The final NEGs require facilities to develop and implement BMPs regarding operation and maintenance of the facility, as does this permitting action. EPA stated that it determined it more appropriate to promulgate limits "*...that could better respond to regional and site-specific conditions and accommodate existing state programs in cases where these appear to be working well.*" The final NEGs reference a section of the federal Clean Water Act inclusive of 40 CFR, Part 125.31(f), which states, "*Nothing in this section shall be construed to impair the right of any State or locality under section 510 of the Act to impose more stringent limitations than those required by Federal law.*" Section 510 states, "*Except as expressly provided in this Act, nothing in this Act shall (1) preclude or deny the right of any State...to adopt or enforce...any standard* o(r) *limitation respecting discharges of pollutants, or...any requirement respecting control or abatement of pollution; except that if an effluent limitation...or standard of performance is in effect under this Act, such State...may not adopt or enforce any effluent limitation...or standard of performance*

which is less stringent than the effluent limitation...or standard of performance under this Act; or (2) be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters...of such States ".

Pursuant to Maine Law (38 M.R.S.A., §414-A.1), the Department shall only authorize discharges to Maine waters when those discharges, either by themselves or in combination with other discharges, "*will not lower the quality of any classified body of water below such classification". Further, "the discharge will be subject to effluent limitations that require application of the best practicable treatment". "Best practicable treatment* (BPT) *means the methods of reduction, treatment, control and handling of pollutants, including process methods, and the application of best conventional pollutant control technology or best available technology economically available, for a category or class of discharge sources that the department determines are best calculated to protect and improve the quality of the receiving water and that are consistent with the requirements of the Federal Water Pollution Control Act" (40 CFR). "If no applicable standards exist for a specific activity or discharge, the department must establish limits on a case-by-case basis using best professional judgement...*" considering "*...the existing state of technology, the effectiveness of the available alternatives for control of the type of discharge and the economic feasibility of such alternatives...*". Pursuant to 38 M.R.S.A, §414-A.1 and §464.4, the Department regulates wastewater discharges through establishment of effluent limitations and monitoring requirements that are protective of Maine waters.

Between calendar years 2000 and 2002, eleven Maine fish hatcheries were evaluated to identify potential options for facility upgrades. All nine Maine Department of Inland Fisheries and Wildlife hatcheries were evaluated by FishPro Inc., while the two USFWS hatcheries were evaluated by the Freshwater Institute. Recommended wastewater treatment upgrades for each of the facilities included microscreen filtration of the effluent. Based on the information provided and Department best professional judgement (BPJ), the Department is specifying that minimum treatment technology for the Sanford facility shall consist of treatment equal to or better than 60-micron microscreen filtration of the effluent, wastewater settling/clarification, and removal of solids (Permit Special Condition M, Fact Sheet Section 13). Pine Tree Trout shall provide treatment equal to or better than the BPJ minimum treatment technology and shall comply with all effluent limitations, monitoring requirements, and operational requirements established in this permitting action. Additional treatment may be necessary to achieve specific water quality based limitations. Further, the Department's interpretation of 38 M.R.S.A., §464.4.A(1) is that water quality in receiving waters with watersheds of less than 10 square miles is sufficiently at risk that facility effluent is to be held to certain standards until such time that practical alternatives are available and the discharge can be eliminated. Therefore, if Pine Tree Trout wishes to increase the number and/or mass of fish on station or undertake other practices that may add or increase the discharge of pollutants, it may need to provide additional wastewater treatment to hold effluent quality constant.

a. Flow: This permitting action establishes a monthly average flow limit of 0.072 MGD, based on information provided by the permittee on facility operations and design capacity and to provide the facility with operational flexibility. This permitting action requires daily measurement of discharge flow, consistent with Department guidelines for wastewater treatment facility discharges.

b. Dilution Factors: Dilution factors associated with wastewater discharges are typically derived in accordance with freshwater protocols established in Department Regulation Chapter 530, Surface Water Toxics Control Program, October 2005 and methods for low flow calculation contained in Estimating Monthly, Annual, and Low 7-day, 10-year Streamflows for Ungaged Rivers in Maine (Scientific Investigations Report 2004-5026, US Department of Interior, US Geological Service). Maine Law, 38 M.R.S.A., Section 464.4.D. specifies using this "7Q10" value for calculating the assimilative capacity of a river or stream. However, the USGS formula for calculating 7Q10 is a statewide general formula that is less accurate in watersheds of less than 10 square miles or that contain large percentages of sand and gravel aquifers. Both of these conditions are present in Pine Tree Trout's watershed. The USGS is currently undertaking a multi-year monitoring effort on streams in southern Maine that will generate more accurate means of determining low stream flow conditions. In the interim, this permitting action is using the August median flow for Branch Brook for chronic evaluations, in accordance with August Median Streamflow on Ungaged Streams in Eastern Coastal Maine, (Lombard, P. J., 2004, SIR2004-5157). Though the formula was developed for another area of Maine, the USGS states that it is better suited to estimate low flow conditions in small watersheds with higher percentages of sand and gravel aquifers. When the USGS data is available, if it is determined to be significantly different from the August median flow, this permitting action may be reopened pursuant to Permit Special Condition P and effluent limitations and monitoring requirements modified as appropriate.

To calculate potential effects from a facility's effluent discharge, the Department utilizes the receiving water's available dilution during low flow conditions. The Pine Tree Trout facility discharges its treated effluent into the side of Branch Brook, approximate one foot above mean low water. Typically, these types of discharges do not achieve rapid and complete mixing with the receiving water since initial dilution is based on mixing resulting from the momentum of a discharge as it exits a discharge pipe (jet effect) as well as the dispersion of the effluent plume as it rises to the surface of the receiving water. Chapter 530.4.B(1) states that analyses using numeric acute criteria for aquatic life must be based on ¼ of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone. The regulation goes on to say that where it can be demonstrated that a discharge achieves rapid and complete mixing with the receiving water by way of an efficient diffuser or other effective method, analyses may use a greater proportion of the stream design, up to including all of it.

Based on the methods for deriving dilution factors described above and the monthly average flow limitation of 0.072 MGD, the Department calculates dilution factors for Pine Tree Trout as follows:

Mod. Acute: ¼ 1Q10 = 0.24 cfs $\Rightarrow \frac{(0.24 \text{ cfs})(0.6464) + 0.072 \text{ MGD}}{0.072 \text{ MGD}} = 3.2:1$

Acute: 1Q10 = 0.94 cfs $\Rightarrow \frac{(0.94 \text{ cfs})(0.6464) + 0.072 \text{ MGD}}{0.072 \text{ MGD}} = 9.4:1$

Chronic: 7Q10 = 1.11 cfs $\Rightarrow \frac{(1.11 \text{ cfs})(0.6464) + 0.072 \text{ MGD}}{0.072 \text{ MGD}} = 11.0:1$

Harmonic Mean = 3.33 cfs $\Rightarrow \frac{(3.33 \text{ cfs})(0.6464) + 0.072 \text{ MGD}}{0.072 \text{ MGD}} = 30.9:1$

c. BOD and TSS: In licensing actions for twelve state and commercially owned fish hatcheries in 1999 and 2000, the Department established monthly average concentration limits for BOD and TSS of 2 mg/L based on the Department's best professional judgement of best practicable treatment (BPJ of BPT) limits. The BPT limits were developed based on the Department's analysis of effluent data from licensed fish hatcheries in Maine supplied through Discharge Monitoring Reports (DMRs). Based on this analysis, the Department determined that the concentration limits of 2 mg/L constituted achievable levels of these pollutants in fish hatchery wastewater. The Department also required that the BOD and TSS effluent mass be monitored and reported in pounds per 100 pounds of fish on hand. Through extensive facility inspections in 2002, the Department discovered significant variability in facility effluent sampling procedures, calling into question the validity of submitted DMR data, the previous data analysis, and the Department's previous assumptions and conclusions.

In the 2002 proposed NEGs, EPA recommended national TSS effluent limitations for re-circulating and flow-through hatcheries of various designs and levels of production. The most restrictive recommended limits were based on a secondary level of fish hatchery wastewater treatment and consisted of a monthly average limit of 6 mg/L and a daily maximum limit of 10 mg/L. The 2002 proposed draft NEGs did not propose to regulate BOD as EPA believed it would be managed through best management practices at the hatcheries and treatment for TSS.

According to EPA's final NEGs, effluent from fish hatcheries and rearing facilities can contain "*...high concentrations of suspended solids and nutrients, high BOD and low dissolved oxygen levels. Organic matter is discharged primarily from feces and uneaten feed*". As stated in the 2002 proposed NEGs, "*elevated levels of organic compounds contribute to eutrophication and oxygen depletion.*" This is expressed as BOD "*...because oxygen is consumed when microorganisms decompose organic matter*". "*The greater the BOD, the greater the degree of pollution and the less oxygen available.*" The discharge of high BOD wastewater to small receiving waters with insufficient dilutions can result in formation of oxygen deficient areas known as sag points. Oxygen sag points represent both localized impacts to habitat and aquatic life as well as barriers to migration

throughout the receiving water. Based on this premises and a long standing practice of regulating effluent BOD, the Department considers BOD a significant pollutant and therefore is establishing effluent limitations and monitoring requirements.

In this permitting action the Department is establishing a BPJ of minimum treatment technology for the Pine Tree Trout facility (Permit Special Conditions M, Fact Sheet Section 13). BOD and TSS concentration limits of 6 mg/L for monthly average and 10 mg/L for daily maximum shall be in effect for Outfall #001A. These numbers are based on fish hatchery wastewater secondary treatment projections and the Department's judgement that effluent BOD should also be regulated. The Department has evaluated actual and projected post-facility upgrade effluent quality data for a significant number of fish hatcheries in Maine and determined that facilities incorporating the minimum treatment technology outlined can be expected to consistently meet the BOD and TSS concentration limits established in this permitting action. It is the Department's intent to re-evaluate and potentially revise limits in the future based on statistical evaluations of demonstrated performance of consistently and properly utilized treatment technology for the industry. The Department reserves the right to reopen facility discharge permits to establish these limits pursuant to Special Condition P of this permit. This permitting action also establishes monthly average and daily maximum BOD and TSS mass limits based on the concentration limits, monthly average flow limit, and a conversion factor of 8.34 lbs/gallon.

This permitting action establishes once per two week effluent BOD and TSS monitoring based on the Department's BPJ of monitoring frequencies necessary to more accurately characterize facility effluent conditions.

d. Total Phosphorus and Orthophosphate: Phosphorus is a nutrient that encourages the growth of plants such as planktonic algae and macrophytes in northern waters. Oxygen levels in the water are reduced in the early morning hours due to extended nighttime respiration of algae. The decomposition of excess plant material further reduces the amount of available oxygen in the water through biochemical oxygen demand. Lowering oxygen levels in a receiving water impacts the aquatic life in that water, making it unfit for some forms of life. Further, enrichment from excess nutrients, such as phosphorus, can result in reductions in aquatic macro-invertebrate species diversity, an indicator of the overall health of a receiving water. Excess phosphorus can also result in undesirable aesthetic conditions in a receiving water, impacting that water's ability to meet standards for maintaining recreational use, a designated use by law. Therefore, any increase in the phosphorus content in a receiving water has the potential to cause or contribute to non-attainment of classification standards. Orthophosphate is the portion of total phosphorous that is readily available for uptake by aquatic plants. It is important to be able to characterize the facility effluent in terms of the relationship between orthophosphate and total phosphorus in order to better understand the effects on the receiving water. Maine law (38 MRSA § 464.4.A.4) states that *"...the Department may not issue a water discharge license for...the...discharge of pollutants to waters of the State that...cause those waters to be unsuitable for the designated uses and characteristics ascribed to their class". ".* Further, pursuant to 38 M.R.S.A., § 465.2(C), discharges into Class A waters

"...licensed after January 1, 1986, are permitted only if...the discharged effluent will be equal to or better than the existing water quality in the receiving water.

For river and stream wastewater discharges, the Department typically utilizes a 0.035-mg/L instream phosphorus concentration limit (ambient water quality threshold) and the dilution provided in a receiving water to calculate water quality based effluent limits. Based on Department research, the AWQC of 0.035 mg/L corresponds to the maximum level at which algae blooms will not typically occur in a receiving river or stream under normal circumstances. As phosphorus is typically of concern under chronic discharge conditions, the 7Q10 dilution of 11.0:1 described in Fact Sheet Section 6b, Dilution Factors, is being utilized in calculation of a water quality based effluent concentration limit of 0.39 mg/L. This permitting action is also establishing a monthly average mass limit of 0.23 lbs/day based on the concentration limit, monthly average flow limit of 0.72 MGD, and a conversion factor of 8.34 lbs/gallon. Further, this permitting action is establishing monitoring and reporting requirements for the monthly average and daily maximum phosphorus and orthophosphate masses and concentrations discharged. In free flowing rivers and streams, phosphorus and orthophosphate are typically summer time concerns for water quality. Therefore, this permitting action establishes phosphorous and orthophosphate limits and monitoring requirements from June 1 through September 30. As phosphorous limitations constitute new water quality based limits for the Pine Tree Trout facility, this permitting action provides a schedule of compliance for their effective date (Permit Special Condition G) to provide for infrastructure, operation and maintenance upgrades, as appropriate, to ensure compliance, pursuant to 38 M.R.S.A. §414-A.2. The monthly average phosphorous limits shall be in effect beginning in June 2009. Prior to this date, the permittee shall be subject to monitoring and reporting requirements for this parameter, but not effluent limitations. Orthophosphate monitoring and reporting requirements are being established seasonally during 2007. This permitting action establishes a once per two-week monitoring requirement based on the Department's BPJ of monitoring frequencies necessary to more accurately characterize facility effluent conditions. Based on the results of monitoring, the Department may reopen the permit in the future pursuant to Special Condition P to address facility specific effluent limitations, monitoring and operational requirements.

Reported values shall be expressed in gross end-of-pipe values and phosphorous and orthophosphate analysis shall be conducted on the same sample collected. Laboratory analysis shall consist of a low-level phosphorus analysis with a minimum detection limit of 1 part per billion (1 ug/L). As described in Fact Sheet Section 6b, Dilution Factors, the USGS is undertaking a multi-year monitoring effort on streams in southern Maine. Based on the results of the USGS study, this permitting action may be reopened pursuant to Permit Special Condition P and effluent limitations and monitoring requirements modified as appropriate.

e. Fish on Hand: This permitting action establishes reporting requirements for monthly average and daily maximum mass of fish on hand. This parameter is intended to enable both the Department and the permittee in evaluating management practices at the facility and trends in effluent quality and receiving water impacts. This permitting action establishes once per two-week monitoring on a year-round basis based on the Department's BPJ of monitoring frequencies necessary to more accurately characterize facility effluent conditions.

f. Dissolved Oxygen (effluent): Because of the low dilution of facility effluent provided in the receiving water and to determine effluent effects on the receiving water, this permitting action establishes seasonal monthly average and daily maximum concentration monitoring requirements for effluent dissolved oxygen (D.O.). Further, based on Department modeling and to ensure compliance with Class A D.O. standards, this permitting action establishes a seasonal daily minimum effluent D.O. limit of 7.5 mg/L and once per week monitoring requirements from June 1 through September 30 each year. In addition to requirements established in Permit Special Condition A to report daily minimum, daily maximum, and monthly average concentration results, the permittee shall submit all data from effluent dissolved oxygen monitoring to the Department in a supplemental report accompanying the appropriate monthly discharge monitoring report pursuant to Permit Special Conditions A (footnote 5) and E.

g. pH: This permitting action establishes a daily maximum pH limit of 6.0 – 8.5 standard units, consistent with the pH limit established in discharge licenses for other fish hatcheries, and considered by the Department as a best practicable treatment standard. This permitting action establishes once per two-week effluent pH monitoring on a year round basis based on the Department's BPJ of monitoring frequencies necessary to more accurately characterize facility effluent conditions.

7. ANTI-DEGRADATION

Maine's anti-degradation policy is included in 38 M.R.S.A., Section 464(4)(F) and addressed in the *Conclusions* section of this permit. Pursuant to the policy, where a new or increased discharge is proposed, the Department shall determine whether the discharge will result in a significant lowering of existing water quality. Increased discharge means a discharge that would add one or more new pollutants to an existing effluent, increase existing levels of pollutants in an effluent, or cause an effluent to exceed one or more of its current licensed discharge flow or effluent limits, after the application of applicable best practicable treatment technology. In this permitting action, the Department is establishing effluent limitations, monitoring and operational requirements consistent with other permitted fish hatcheries and rearing facilities in Maine and specifically protective of this receiving water. The rationale for these actions is contained in Fact Sheet Sections 6, *Effluent Limitations & Monitoring Requirements* and other applicable sections. Based on the information provided in the referenced sections, the Department considers the anti-degradation policy to be satisfied.

8. ALTERNATIVE DISCHARGE STUDY

Maine Law, 38 M.R.S.A., § 465.2(C), states that discharges into Class A waters *"...licensed prior to January 1, 1986, are allowed to continue only until practical alternatives exist"*. Further, *"...the department shall require the applicant to objectively demonstrate to the department's satisfaction that the discharge is necessary and that there are no other reasonable alternatives available."* Maine law, 38 M.R.S.A., Section 464.4.A(1) states, "...the department may not issue a water discharge license for...direct discharge of pollutants to waters having a drainage area of less than 10 square miles, except that discharges into these waters that were licensed prior to January 1, 1986, are allowed to continue only until practical alternatives exist". Branch Brook is both a Class A water and a water with a drainage area of less than 10 square miles in the vicinity of the Pine Tree Trout discharge. For this permitting action, Pine Tree Trout adequately demonstrated that a practical alternative to the discharge of its treated wastewater to Branch Brook does not exist at this time.

Pursuant to the above citations, as described in Permit Special Condition H, on or before six-months prior to expiration of this permit, Pine Tree Trout is required to submit to the Department for review, an Alternative Discharge Study (ADS) report for the Sanford facility to determine if practical alternatives to the discharge exist.

Alternative Discharge Studies (ADS) typically evaluate the technical feasibility, estimated costs, and potential environmental impact from alternatives that will result in elimination of a discharge to a receiving water. Such alternatives include, but are not limited to, piping the discharge to a less restrictive receiving water, connecting the discharge to a municipal wastewater treatment facility, and constructing storage capacity and land applying effluent. The study shall include a material and cost breakdown of each identified option, additional equipment necessary, any needed real estate purchases or easements, and other issues and expenses. If no practical alternative for elimination of the discharge exists, then the ADS shall also evaluate modifications to existing wastewater treatment infrastructure and practices that will result in improvement of the effluent quality, such as additional or alternative treatment technology or methods, operational changes, seasonal modifications, discharge reduction, etc.

9. SETTLING POND CLEANING:

Discharge of inadequately treated fish hatchery wastewater (excess feed and fish waste) contributes solids, BOD, and nutrients to receiving waters, which can contribute to eutrophication and oxygen depletion. This, in combination with other pollutant specific toxic effects, impacts the aquatic life and habitat value in the receiving water. Typical hatchery wastewater treatment practices include effluent filtration and settling with solids removal.

In this permitting action, the Department is requiring that any settling structures be cleaned when accumulated materials occupy 20% of a basin's capacity, when material deposition in any area of the basins exceeds 50% of the operational depth, or at any time that said materials in or from the basins are contributing to a violation of permit effluent limits.

10. DISEASE AND PATHOGEN CONTROL AND REPORTING:

Maine Department of Inland Fisheries and Wildlife (MDIFW) Rules (Chapter 2.03-A) and Maine Department of Marine Resources (MeDMR) Rules (Chapter 24.21) state that *"the transfer and/or introduction of organisms fall within the jurisdiction of the Department of Marine Resources (12 MRSA, §6071) into coastal waters within the State of Maine and the Department of Inland Fisheries and Wildlife (12 MRSA, §§7011, 7035 and 7201, 7202) into public and/or private waters within the State of Maine. These rules are intended to protect wild and farmed salmonid fish populations and shall be applicable to all individuals involved in the culture and movement of live salmonids and gametes."* Further, both agencies' rules define Diseases of Regulatory Concern as *"...infectious agents that have been demonstrated to cause a significant increase in the risk of mortality among salmonid populations in the State of Maine. Diseases of Regulatory Concern are classified by the Commissioner into three (3) disease categories: exotic, endemic (limited distribution) and endemic based on an annual review and analysis of epidemiological data."* In this permitting action, as a salmonid aquaculture facility, Pine Tree Trout must comply with MDIFW and MeDMR salmonid fish health rules (12 MRSA, §6071; 12 MRSA, §§7011, 7035, 7201, and 7202, or revised rules). The cited rules include requirements for notification to the appropriate agency within 24-hours of pathogen detection. In the event of a catastrophic pathogen occurrence, the permittee shall submit to the Department for review, information on the proposed treatment including materials/chemicals to be used, material/chemical toxicity to aquatic life, the mass and concentrations of materials/chemicals as administered, and the concentrations to be expected in the effluent. The Department will address such occurrences through administrative modifications of the permit.

11. THERAPEUTIC AGENTS:

In the June 30, 2004 final NEGs, EPA requires proper storage of drugs, pesticides and feed and requires facilities to report use of any investigational new animal drug (INAD), extra-label drug use, and spills of drugs, pesticides or feed that results in a discharge to waters of the U.S.

This permitting action requires that all medicated fish feeds, drugs, and other fish health therapeutants shall be registered with USEPA as appropriate, approved by the US Food and Drug Administration (USFDA), and applied according to USFDA accepted guidelines and manufacturer's label instructions. Further, records of all such materials used are to be maintained at the facility for a period of five years.

This permitting action does not authorize routine off-label or extra-label drug use. Such uses shall only be permitted in emergency situations when they are the only feasible treatments available and only under the authority of a veterinarian. The permittee shall notify the Department in writing within 24-hours of such use. This notification must be provided by the veterinarian involved and must include the agent(s) used, the concentration and mass

applied, a description of how the use constitutes off-label or extra-label use, the necessity for the use in terms of the condition to be treated and the inability to utilize accepted drugs or approved methods, the duration of the use, the likely need of repeat treatments, and information on aquatic toxicity. If, upon review of information regarding the use of a drug pursuant to this section, the Department determines that significant adverse effects are likely to occur, it may restrict or limit such use.

This permitting action does not authorize the discharge of drugs authorized by the USFDA pursuant to the Investigational New Animal Drug (INAD) program. As the INAD program typically involves the long-term study of drugs, their benefits and effects, the permittee is anticipated to be able to notify the Department of its intent to conduct, and provide information related to, such study. The permittee is required to provide notification to the Department for review and approval prior to the use and discharge of any drug pursuant to the INAD program. This notification must include information to demonstrate that the minimum amount of drug necessary to evaluate its safety, efficacy, and possible environmental impacts will be used. Notifications must also include an environmental monitoring and evaluation program that at a minimum describes sampling strategies, analytical procedures, evaluation techniques and a timetable for completion of the program. The program must consider the possible effects on the water column, benthic conditions and organisms in or uses of the surrounding waters. Review and approval of INAD related uses and discharges will be addressed through administrative modifications of the permit.

The discharges of any agents or waste products not specifically included in this permitting action are considered unauthorized discharges pursuant to Permit Special Condition C.

12. DISINFECTING/SANITIZING AGENTS:

This permitting action requires Pine Tree Trout to maintain records of all sanitizing agents and/or disinfectants used that have the potential to enter the waste-stream or receiving water, their volumes and concentrations as used and concentrations at the point of discharge, at the facility for a period of five years. This permitting action only authorizes the discharge of those materials applied for, evaluated by the Department, and either regulated or determined to be deminimus in this permitting action or in subsequent Department actions. The discharges of any other agents or waste products not specifically included in this permitting action are considered unauthorized discharges pursuant to Permit Special Condition C.

13. MINIMUM TREATMENT TECHNOLOGY REQUIREMENT:

Between 2000 and 2002, eleven Maine fish hatcheries were evaluated to identify potential options for facility upgrades. All nine Maine Department of Inland Fisheries and Wildlife hatcheries were evaluated by FishPro Inc., while the two USFWS hatcheries were evaluated by the Freshwater Institute. Recommended wastewater treatment upgrades for each of the facilities included microscreen filtration of the effluent. Based on the information provided

and Department BPJ, the Department is specifying that minimum treatment technology for the Sanford facility shall consist of treatment equal to or better than 60-micron microscreen filtration of the effluent, wastewater settling/clarification, removal of solids. Pine Tree Trout shall provide treatment equal to or better than the BPJ minimum treatment technology and shall comply with all effluent limitations, monitoring requirements, and operational requirements established in this permitting action. Additional treatment may be necessary to achieve specific water quality based limitations.

It is the Department's intent to evaluate effluent data and potentially revise technology based effluent limits in the future based on statistical evaluations of demonstrated performance of consistently and properly utilized treatment technology. The Department reserves the right to reopen facility discharge permits to establish these limits.

14. AMBIENT MACROINVERTEBRATE BIOMONITORING:

Based on available data, the Department is concerned with the effects of fish hatchery effluent discharges on rivers and streams in Maine. As macroinvertebrate communities provide indications of the overall ecological health of a receiving water, the Department has determined that biomonitoring is needed to better evaluate attainment of river and stream water classification standards and designated uses, resource impacts, and corrective measures when necessary. In order to address this need and to compliment earlier work on Branch Brook, the Department's Division of Environmental Assessment (MEDEP DEA) will conduct macroinvertebrate biomonitoring in the receiving water once during the term of this permitting action to determine attainment of the aquatic life standards. In the event that MEDEP DEA's biomonitoring indicates non-attainment of aquatic life standards in the receiving water, Pine Tree Trout shall be required to conduct ambient macroinvertebrate biomonitoring annually thereafter. Prior to any such monitoring, Pine Tree Trout shall be required to submit a biomonitoring plan for Branch Brook to MEDEP DEA for review and approval, pursuant to Permit Special Condition P. The plan shall be consistent with "*Methods for Biological Sampling and Analysis of Maine's Rivers and Streams*" (DEP #LW0387-B2002, August 2002) and shall include a scope of work and schedule, monitoring locations and maps, methods and materials, and reporting procedures for the biomonitoring program. Biomonitoring shall be conducted according to a Department approved monitoring plan. Results shall be reported to the Department in a biomonitoring report by December 15 each year. If the receiving water is subsequently determined by the Department to be meeting criteria, standards, and designated uses for its assigned water quality class, the Department will reopen the permit pursuant to Permit Special Condition P, to modify or discontinue the biomonitoring requirement.

15. AMBIENT DISSOLVED OXYGEN AND TEMPERATURE MONITORING:

Based on the low effluent dilution provided in the receiving water and the need for additional data on the effects of the Pine Tree Trout's effluent on the water quality of its receiving water, this permitting action requires the permittee to seasonally monitor ambient dissolved oxygen and temperature levels in Branch Brook. The permittee shall monitor ambient dissolved oxygen and temperature (Celsius) from June 1 through September 30 each year beginning the effective date of this permit at a frequency of once per week and shall report the time of day the monitoring is conducted. The permittee shall report all monitoring results to the Department in a supplemental report accompanying the appropriate monthly discharge monitoring report. Monitoring shall be conducted within two hours of sunrise, or as indicated in a Department approved monitoring plan, at two locations: (1) in Branch Brook above the Pine Tree Trout outfall in an area representing free-flowing conditions and (2) in Branch Brook below the Pine Tree Trout outfall in an area representing the dissolved oxygen sag point, unless revised by the Department. On or before three months following the effective date of this permit, Pine Tree Trout shall submit a plan for ambient dissolved oxygen and temperature monitoring and instrument calibration/data quality control to the Department's Division of Environmental Assessment for review and approval. The plan shall include a scope of work and schedule, monitoring locations and maps, sampling methods and materials, and reporting procedures for the ambient dissolved oxygen and temperature monitoring program. The plan shall also include procedures for regular instrument calibration to ensure data quality control. Ambient dissolved oxygen and temperature monitoring shall be conducted according to a Department approved monitoring plan.

16. SALMON GENETIC INTEGRITY AND HATCHERY ESCAPE PREVENTION:

Leading up to the formal listing of the Atlantic salmon as an endangered species on November 17, 2000, and in subsequent draft MEPDES Permit / Maine WDL reviews, the US Fish and Wildlife Service and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) have advocated for genetic testing of Atlantic salmon housed at hatchery and rearing facilities to ensure that they are of North American origin, as well as employment of a fully functional Containment Management System (CMS) at the facility to prevent the escape of raised salmon or other species of concern in order to avoid impacts on native fish populations.

The Pine Tree Trout hatchery is a commercial rainbow trout hatchery and rearing facility that produces fish for private stocking. Pine Tree Trout does not raise Atlantic salmon and thus is not subject to salmon genetic testing requirements. Its rainbow trout egg stock comes from a certified facility reportedly also used by the Maine Department of Inland Fisheries and Wildlife. Pine Tree Trout reports that effluent screens are in place on the hatchery egg/incubation trays, rearing tanks, and flow routing/settling boxes, as described in Fact Sheet Section 2d. All screens are sized according to the size of the fish and are inspected regularly. Pine Tree Trout discharges its effluent to Branch Brook, which joins with a number of other streams along its approximately 10-mile route to the Atlantic Ocean. None of these waters are designated DPS river segments.

As Pine Tree Trout does not discharge effluent to a Gulf of Maine DPS river segment, a CMS plan is not required for the protection of endangered Atlantic salmon. However, NOAA Fisheries generally comments that from an ecosystem perspective, fish containment would certainly help protect native fauna in receiving waters. MDIFW recommends that the facility employ reasonable containment measures in recognition of a native brook trout fishery in Branch Brook. In consideration of this information and as infrastructure in place at the Pine Tree Trout facility provides a level of fish containment management, neither genetic testing nor a CMS is being required in this permitting action. The Department advises Pine Tree Trout that if the facility ever intends to house Atlantic salmon or other species determined by USFWS, NOAA Fisheries, or MDIFW to be of risk to native salmon, other native species, or to aquatic habitats, it should submit plans for initiating genetic testing (salmon only) and/or a CMS for review and approval prior to introducing those species at the facility.

17. 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 Branch Brook to meet standards for Class A classification. In response to concerns with effects of fish hatchery effluent discharges on rivers and streams in Maine and limited available data, as outlined in Permit Special Condition N and Fact Sheet Section 14, Pine Tree Trout may be required to conduct ambient macroinvertebrate biomonitoring during the term of this permit. Pine Tree Trout is also required to conduct ambient monitoring for dissolved oxygen and temperature, as specified in Permit Special Condition O and Fact Sheet Section 15. Data collected will be used to evaluate attainment of water classification standards and designated uses, resource impacts, and corrective measures when necessary.

If monitoring conducted pursuant to this permitting action and/or other monitoring efforts indicate that non-attainment conditions exist in the receiving water(s) and that Pine Tree Trout causes or contributes to those conditions, this permitting action may be reopened pursuant to Permit Special Condition P and effluent limitations, monitoring and operational requirements, and/or wastewater treatment requirements adjusted accordingly.

18. PUBLIC COMMENTS:

Public notice of this application was made in the Journal Tribune newspaper on or about September 16, 2006. The Department receives public comments on an application until the date a final agency action is taken on that 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.

19. DEPARTMENT CONTACTS:

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

Robert D. Stratton
Division of Water Quality Management
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017

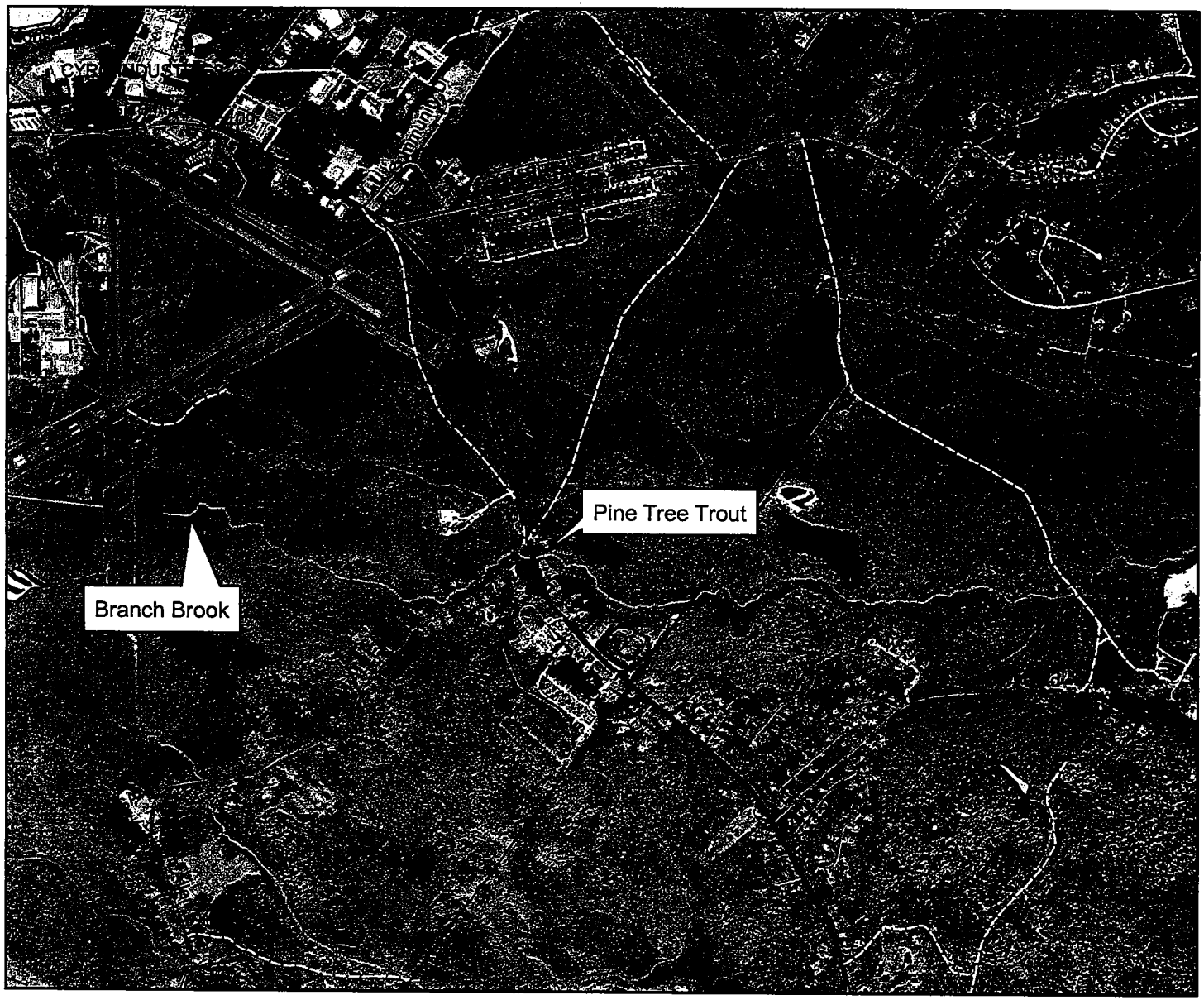
Telephone: (207) 287-6114
Fax: (207) 287-7826
email: Robert.D.Stratton@maine.gov

20. RESPONSE TO COMMENTS:

During the period of November 8, 2006 through December 8, 2006, the Department solicited comments on the proposed draft Maine Pollutant Discharge Elimination System Permit to be issued to the Pine Tree Trout Fish Hatchery for the proposed discharge. The Department did not receive any comments that resulted in significant revisions to the permit. Therefore, no response to comments has been prepared.

ATTACHMENT A

(Facility Location Maps)



Legend

Rivers

- AA
- A
- B
- C

Streams

- AA
- A
- B
- C
- Ponds and Lakes
- Wastewater_Facilities
- Wastewater_Outfalls

Roads

JURISDICTION

- Town Road
- Town Road - Summer
- Town Road - Winter
- State-aided Highway
- State Highway
- Toll Highway
- Private Road
- Reservation Road
- Seasonal Parkway

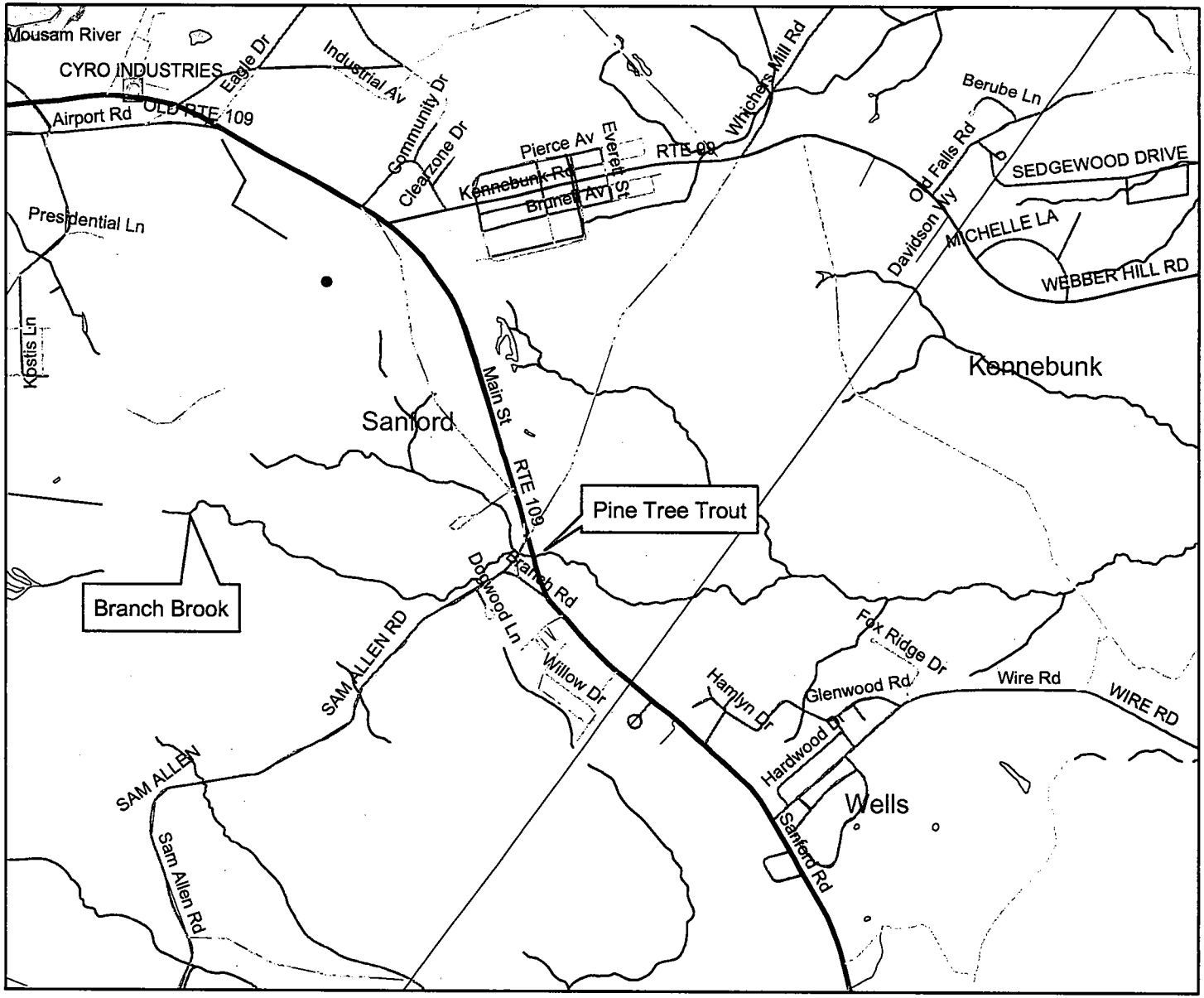
N

0 0.15 0.3 0.6 0.9 1.2 Miles

Pine Tree Trout
Sanford, Maine

Map created by:
Bob Stratton
Division of Water Quality Management
Maine Department of Environmental Protection

DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE OF MAINE



Legend

Rivers

- AA
- A
- B
- C

Streams

- AA
- A
- B
- C
- Ponds and Lakes
- Wastewater_Facilities
- Wastewater_Outfalls

Roads

JURISDICTION

- Town Road
- Town Road - Summer
- Town Road - Winter
- State-aided Highway
- State Highway
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- Private Road
- Reservation Road
- Seasonal Parkway

N

0 0.15 0.3 0.6 0.9 1.2 Miles

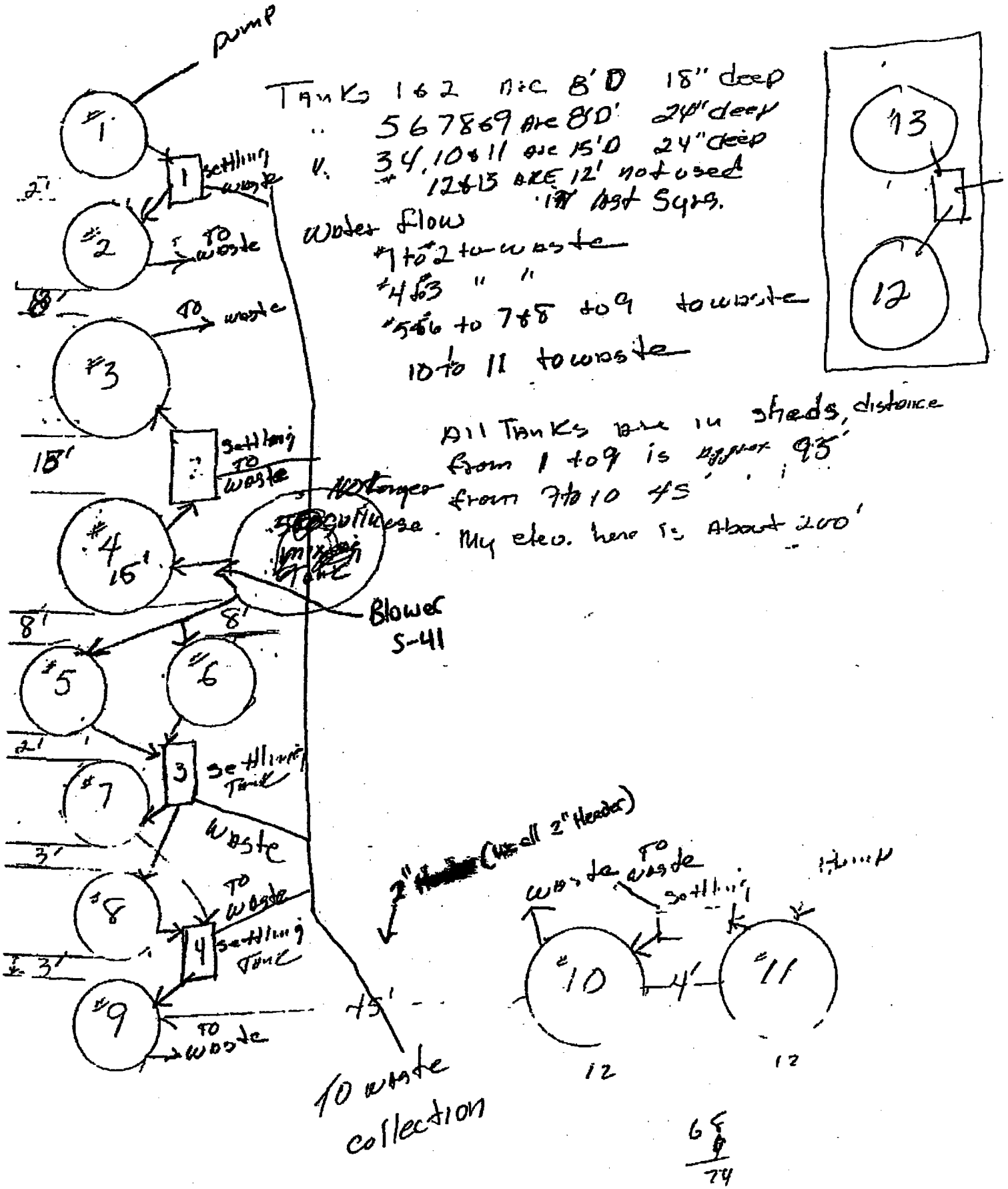
Pine Tree Trout
Sanford, Maine

Map created by:
Bob Stratton
Division of Water Quality Management
Maine Department of Environmental Protection

DEPARTMENT OF ENVIRONMENTAL PROTECTION · STATE OF MAINE ·

ATTACHMENT B

(Facility Site Plans)

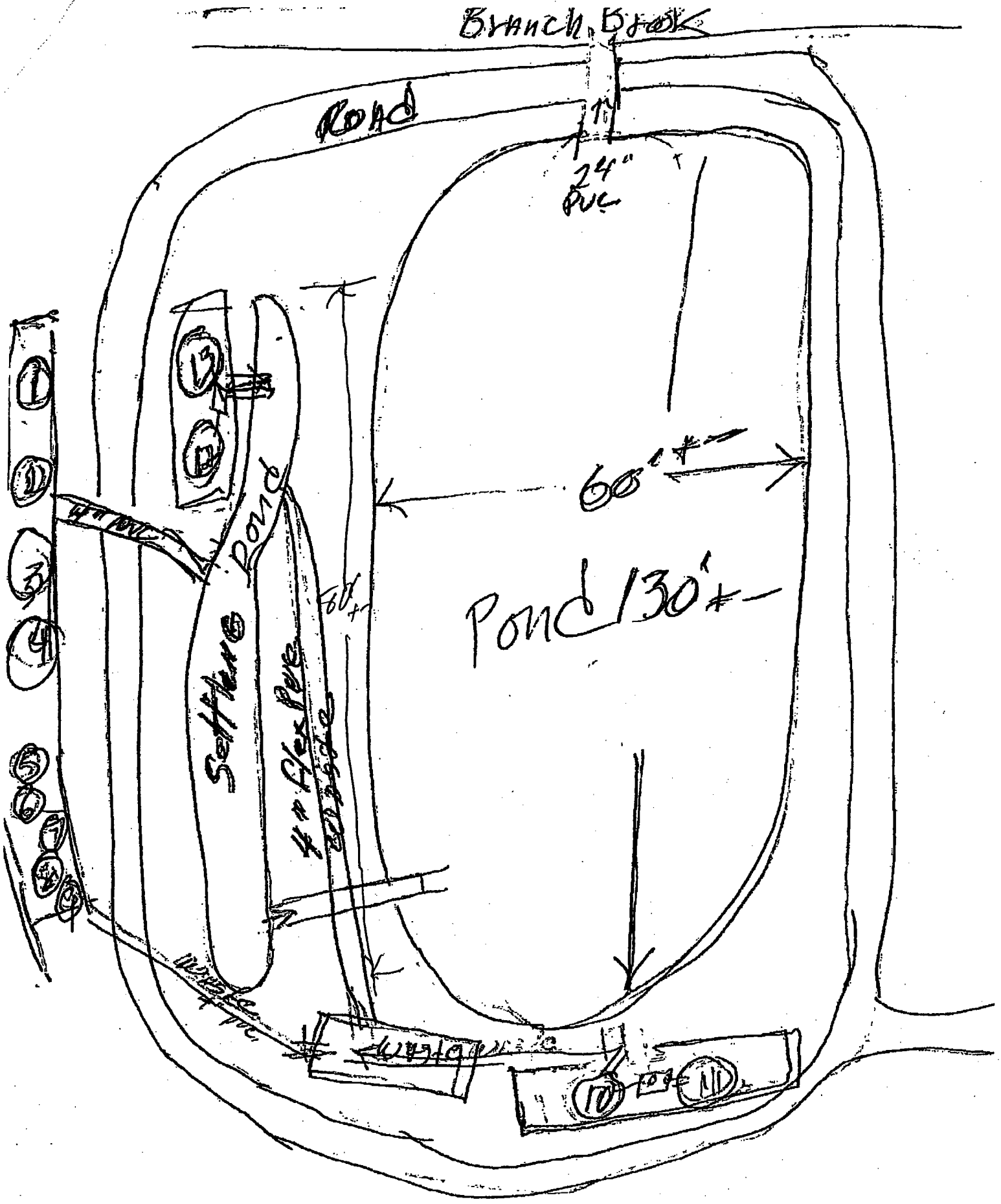


Tanks 1 & 2 are 8'D 18" deep
" 5 6 7 8 9 are 8'D 24" deep
" 3, 4, 10 & 11 are 15'D 24" deep
" 12 & 13 are 12' not used
" last 5 yrs.

Water flow
#1 to #2 to waste
#4 & 3 " "
#5 & 6 to 7 & 8 to 9 to waste
10 to 11 to waste

All Tanks are in sheds, distance from 1 to 9 is approx 95'
from 7 to 10 45'
My elev. here is About 200'

6 5
9
74


Branch Brook
Road
24" RCP
60'+-
Pond 130'+-
4" PVC
Settling Pond
4" Flex Pipe
60'+
Wetland
1
2
3
4
5
6
7
8
9
10
11
12
13

ATTACHMENT C

(Engineer's Facilities Planning Report)

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Land and Water Quality
Division of Water Quality Management

INVESTIGATION PROTOCOL

All reports, plans and specifications shall be submitted by the dates specified in the permit. The documents submitted for formal approval shall include the engineer's report, final plans and specifications.

Procurement of Engineering Services.

This step requires retaining an engineering firm to plan, study, and design the project. The owner then hires one or more separate construction contractors to build the project; construction services, including construction management, are performed by the design firm. Start-up and operator instruction services are performed by the design engineer.

Engineer's Facilities Planning Report (Reports Required Pursuant to Permit Special Condition G).

The purpose of the report is to present in clear, concise form a description of the problem, alternative solutions examined, rejected and recommended, their technical and financial feasibility, and their environmental impact. The report should contain a detailed basis of design covering each component of the treatment process. The engineer's report should provide a description of alternative wastewater treatment processes screened for consideration, as well as factors considered in selecting processes. Such factors should include:

Compatibility with existing facilities
Flexibility for expansion
Ability to meet required permit limits
Suitability to handle probable variations in plant loading
Proven effectiveness
Land area requirements
Labor requirements
Construction costs
Operational costs
Energy requirements
Odor potential

System Alternatives: The engineer must carefully consider all feasible designs for the facility. The initial evaluation should focus on the technical appropriateness of all alternatives. Then, those deemed technically appropriate should receive in-depth technical and economic evaluation. The alternatives that should be evaluated include: source reduction through pollution prevention, storage and release to the receiving water as appropriate to reduce toxic amounts, conveyance of the waste to the POTW, pretreatment, conventional treatment and innovative/alternative treatment.

Conclusions, Recommendations, and Proposed Schedules: The engineer's facility planning report should clearly summarize the detailed evaluations contained in the body of the report. Provide a clear description of what is being proposed and propose an implementation schedule for approval. A typical schedule should reflect various future phases of the project such as required approvals, final design, bidding, contract award, construction and start-up. The facility shall be fully operational within the timeframes established in the permit.

Final Design Contract Drawings and Specifications

Plans should consist of general views, specific plan areas, elevations, sections, and details. Together with the specifications, these provide information for the contract and construction of the project. Complete technical specifications for the work should accompany the plans. Technical specifications should be clear and concise. They should include, but are not limited to, all construction information that the builder needs that is not shown on the plans, such as details of the design requirements, including the quality of materials, lists of required manuals, tools, chemicals, spare parts, and calibration equipment.