STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

January 15, 2015

Mr. Todd Langevin
Division of Fisheries and Wildlife
State of Maine
State House Station #41
Augusta, ME 04333

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0001091
Maine Waste Discharge License (WDL) Application #W002034-6F-E-R
Proposed Draft Permit

Dear Mr. Langevin:

Enclosed is a **proposed draft** MEPDES permit and Maine WDL (permit hereinafter) which the Department proposes to issue as a final document after opportunity for your review and comment. **Beginning on January 15, 2015**, you are provided with an opportunity to comment on the proposed draft permit and its conditions (special conditions specific to this permit are enclosed; standard conditions applicable to all permits are available upon request). If it contains errors or does not accurately reflect present or proposed conditions, please respond to this Department so that changes can be considered.

By copy of this letter, the Department is requesting comments on the proposed draft permit from various state and federal agencies, as required by our new regulations, and from any other parties who have notified the Department of their interest in this matter.

All comments must be received in the Department of Environmental Protection office on or before the close of business **Tuesday, February 17, 2015.** Failure to submit comments in a timely fashion will result in the final document being issued as drafted. Comments in writing should be submitted to my attention at the following address:

Maine Department of Environmental Protection
Bureau of Land & Water Quality
Division of Water Quality Management
17 State House Station
Augusta, ME 04333

If you have any questions regarding the matter, please feel free to call me at 207-485-2281.

Sincerely,

Bill Hinkel
Division of Water Quality Management
Bureau of Land and Water Quality
bill.hinkel@maine.gov
ph: 207.485.2281

Enc.

ec: Jim Crowley, DEP
Pam Parker, DEP
Barry Mower, DEP
Lori Mitchell, DEP
Dave Webster, USEPA
Dave Pincumbe, USEPA
Alex Rosenberg, USEPA
Olga Vergara, USEPA
Marelyn Vega, USEPA
Environmental Coordinator, MDIFW
Laury Zicari, USFWS
Ivy Frignoca, CLF

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

IN THE MATTER OF

ME. DEPT. OF INLAND FISHERIES & WILDLIFE)	MAINE POLLUTANT DISCHARGE
GOVERNOR HILL FISH HATCHERY)	ELIMINATION SYSTEM PERMIT
AUGUSTA, KENNEBEC COUNTY, MAINE)	AND
#ME0001091)	WASTE DISCHARGE LICENSE
#W002034-6F-E-R **APPROVAL**)	**RENEWAL**

In compliance with the applicable provisions of *Pollution Control*, 38 M.R.S.A. §§ 411 – 424-B, *Water Classification Program*, 38 M.R.S.A. §§ 464 – 470 and *Federal Water Pollution Control Act*, Title 33 U.S.C. § 1251, and applicable rules of the Department of Environmental Protection (Department), the Department has considered the application of the MAINE DEPARTMENT OF INLAND FISHERIES AND WILDLIFE (DIFW), with its supportive data, agency review comments, and other related materials on file, and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

On June 30, 2011, the Department accepted as complete for processing, a renewal application from DIFW for Waste Discharge License (WDL) #W002034-5Q-B-R / Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0001091, which was issued on July 5, 2006 for a five-year term. The 7/5/06 MEPDES permit authorized DIFW to discharge a monthly average of 1.2 million gallons per day (MGD) of fish hatchery wastewater from the DIFW Governor Hill Hatchery to Spring Brook, Class B, in Augusta, Maine.

The Department issued a minor revision to amend the formalin limits on October 10, 2008, and a minor revision to adjust the monitoring frequencies for biochemical oxygen demand (BOD_5) and total suspended solids (TSS) on April 23, 2009. A Consent Agreement (CA) between the Department and DIFW in regards to eight DIFW hatcheries was finalized on June 2, 2010. This CA resolved violations at the Governor Hill hatchery.

PERMIT SUMMARY

This permitting action is carrying forward all the terms and conditions of the previous permitting actions except that it (please see Fact Sheet for more information on these summary items):

1. Eliminates reporting requirements and limits for potassium permanganate as it is no longer in use at the facility;

2. Eliminates the requirements as imposed in Special Condition O. *Ambient Dissolved Oxygen and Temperature Monitoring* of the 2006 permit;

3. Eliminates the Schedule of Compliance as established in Special Condition G of the 2006 permit;

4. Eliminates the BOD_5 and pH limitations and monitoring requirements;

5. Amends language in the "Footnotes" section of Special Condition A;

6. Establishes additional requirements to be included in the facility Operations and Monitoring Plan;

7. Eliminates the Special Condition I *Settling Basin Cleaning* as contained in the 2006 permit;

8. Establishes Conditions G. *Use of Drugs for Disease Control* and H. *Spills;*

9. Replaces Special Condition P. *Salmon Genetic Testing and Escape Prevention* in the 2006 permit with Special Condition I. *Protection of Atlantic Salmon*;

10. Revises the monitoring frequency for formalin from 1/2weeks to once per occurrence (01/OC), to clarify that formalin is to be reported at each use;

11. Revises the total phosphorus concentration limit to report only;

12. Establishes Special Condition H. *Pesticides and Other Compounds* to replace Special Conditions K. *Therapeutic Agents* and L. *Disinfecting/Sanitizing Agents* from the 2006 permit;

13. Revises the monitoring frequency for total phosphorus to allow for increased monitoring flexibility;

14. Eliminates the reporting requirement for monthly average Fish on Hand and revises the monitoring frequency 2/month to 1/month, to allow for increased monitoring flexibility; and,

15. Eliminates the formalin concentration limit and establishes a mass-based limit to allow for increased facility flexibility and management.

CONCLUSIONS

Based on the findings summarized in the attached **PROPOSED DRAFT** Fact Sheet dated January 15, 2015, and subject to the special and standard conditions that follow, 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, *Classification of Maine waters,* 38 M.R.S.A. § 464(4)(F), will be met, in that:
   (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;

   (b) Where high quality waters of the State constitute an outstanding natural resource, that water quality will be maintained and protected;

   (c) Where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;

   (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification that higher water quality will be maintained and protected; and

   (e) Where a discharge will result in lowering the existing water quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.

4. The discharges will be subject to effluent limitations that require application of best practicable treatment as defined in *Conditions of license,* 38 M.R.S.A. § 414-A(1)(D).

5. The applicant has objectively demonstrated to the Department's satisfaction that the discharge is necessary and that there are no other reasonable alternatives available, as required by *Standards for classification of fresh surface waters,* 38 M.R.S.A. § 464(4)(A)(1)(a) for the direct discharge of pollutants to waters having a drainage area of less than 10 square miles.

ACTION

Based on the findings and conclusions as stated above, the Department APPROVES the above noted application of the MAINE DEPARTMENT OF INLAND FISHERIES & WILDLIFE to discharge a monthly average of 1.2 MGD of fish hatchery wastewater via Outfall #005A to Spring Brook, Class B, in Augusta, Maine, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

1. *Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits*, revised July 1, 2002, copy attached.

2. The attached Special Conditions, including any effluent limitations and monitoring requirements.

3. This permit and the authorization to discharge become effective upon the date of signature below and expire at midnight five (5) years from the effective date. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of this permit, the authorization to discharge and the terms and conditions of this permit and all modifications and minor revisions thereto remain in effect until a final Department decision on the renewal application becomes effective. [*Maine Administrative Procedure Act*, 5 M.R.S.A. § 10002 and *Rules Concerning the Processing of Applications and Other Administrative Matters*, 06-096 CMR 2(21)(A) (amended August 25, 2013)]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT AUGUSTA, MAINE, THIS _____ DAY OF _____ 2015.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
PATRICIA W. AHO, Commissioner

Date filed with Board of Environmental Protection _____

Date of initial receipt of application: June 28, 2011
Date of application acceptance: June 30, 2011

This Order prepared by Bill Hinkel, BUREAU OF LAND & WATER QUALITY

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge **fish hatchery wastewater from Outfall #005A (fish hatchery and rearing station)** to Spring Brook. Such discharges are limited and must be monitored by the permittee as specified below[(1)]:

Effluent Characteristic	Discharge Limitations					Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Daily Minimum	Measurement Frequency	Sample Type
Flow *[50050]*	1.2 MGD *[03]*	---	---	---	---	Daily *[01/01]*	Measured *[MS]*
TSS *[00530]*	17 lbs./day *[26]*	100 lbs./day *[26]*	6 mg/L *[19]*	10 mg/L *[19]*	---	1/Month *[01/30]*	Composite[(2)] *[CP]*
Total Phosphorus[(3)] *[00665]* **June 1 – Sept 30**	0.24 lbs./day *[26]*	Report lbs./day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	---	2/Month *[02/30]*	Composite[(2)] *[CP]*
Fish on Hand *[45604]*	---	Report lbs./day *[26]*	---	---	---	1/Month *[01/30]*	Calculate *[CA]*
Formalin[(4)] *[51064]*	Report lbs./day *[26]*	95 lbs./day *[26]*	---	---	---	1/Occurrence *[01/OC]*	Calculate *[CA]*
Dissolved Oxygen *[00300]* **June 1 – Sept 30**	---	---	Report mg/L *[19]*	Report mg/L *[19]*	7.5 mg/L *[19]*	1/Week *[01/07]*	Measured *[MS]*

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

FOOTNOTES: See Pages 6 through 7 of this permit for applicable footnotes.

SPECIAL CONDITIONS

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

FOOTNOTES

1. **Sampling** – All effluent monitoring must be conducted at a location following the last treatment unit in the treatment process, as to be representative of end-of-pipe effluent characteristics. Any change in sampling location must be approved by the Department in writing. The permittee must conduct sampling and analysis 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 must be analyzed by a laboratory certified by the State of Maine's Department of Health and Human Services for wastewater. Samples that are sent to a publicly owned treatment works (POTW) licensed pursuant to *Waste discharge licenses*, 38 M.R.S.A. § 413 are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*, 10-144 CMR 263 (effective date April 1, 2010). If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report (DMR).

2. **Composite Samples** – Samples must consist of 24-hour composites collected with an automatic composite sampler. Alternatively, when weather conditions and/or equipment prevents automatic compositing and upon Department approval, the permittee may manually composite a minimum of four grab samples collected at two-hour intervals during the working day at the facility. The permittee must indicate the type of sample collected on the DMR.

3. **Total Phosphorus –** Phosphorus mass monitoring requirements and limits as well as concentration monitoring and reporting requirements are seasonal, and are only in effect from June 1 through September 30 of each year. See **Attachment A** of this permit for sample protocols.

4. **Formalin –** Formalin monitoring must be conducted when in use at the facility and must consist of a calculated effluent mass value. Therefore, the following calculation must be applied to assess the total mass of formalin discharged per occurrence (lbs./day or lbs./hr.):

   Formalin applied (gallons) x 9.03[1] (lbs./gallon) = Total formalin in effluent

   The permittee must provide this information and calculations to the Department in a document accompanying the monthly DMR. The formalin limit corresponds to two types of treatments:
   1. One hour per day treatment typical of hatchery and rearing facility discharges; and
   2. Maximum of up to 24 hours of treatment and discharge for addressing emergency conditions at the facility.

   Formalin treatments greater than 1-hour in duration must be conducted no more frequently than once every four days. The permittee must provide a list of dates on which treatments greater than 1-hour were performed, and the length of time of each such treatment, with each monthly DMR.

[1] Per Material Safety Data Sheet, Parasite-S has a specific gravity of 1.0775-1.0865 giving it an average density of 9.03 lbs./gallon.

SPECIAL CONDITIONS

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

FOOTNOTES (cont'd)

For instances when a permittee has not used formalin for an entire reporting period, the permittee must report "NODI-9" for this parameter on the monthly DMR or "N9" if the submittal is an electronic DMR.

B. NARRATIVE EFFLUENT LIMITATIONS

1. The permittee must not discharge effluent that contains a visible oil sheen, foam or floating solids at any time which would impair the usages designated for the classification of the receiving waters.

2. The permittee must not discharge effluent that contains materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the usages designated for the classification of the receiving waters.

3. The permittee must not discharge effluent that causes visible discoloration or turbidity in the receiving waters that causes those waters to be unsuitable for the designated uses and characteristics ascribed to their class.

4. The permittee must not discharge effluent that lowers the quality of any classified body of water below such classification, or lowers the existing quality of any body of water if the existing quality is higher than the classification.

C. AUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with: 1) the permittee's General Application for Waste Discharge Permit, accepted for processing on June 30, 2011; 2) the terms and conditions of this permit; and 3) only from Outfall #005A. Discharges of wastewater from any other point source(s) are not authorized under this permit, and must be reported in accordance with Standard Condition B(5), *Bypasses*, of this permit.

D. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee must 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 must include information on:

   a. The quality or quantity of wastewater introduced to the wastewater 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 must be summarized for each month and reported on separate DMR forms provided by the Department and **postmarked on or before the thirteenth (13th) day of the month or hand-delivered to the Department's Regional Office such that the DMRs are received by the Department on or before the fifteenth (15th) day of the month** following the completed reporting period. A signed copy of the DMR and all other reports required herein must be submitted to the Department assigned inspector (unless otherwise specified by the Department) at the following address:

Department of Environmental Protection
Bureau of Land and Water Quality
Division of Water Quality Management
17 State House Station
Augusta, Maine 04333

Alternatively, if the permittee submits an electronic DMR (eDMR), the completed eDMR must be electronically submitted to the Department by a facility authorized DMR Signatory not later than close of business on the **15th day of the month** following the completed reporting period. Hard copy documentation submitted in support of the eDMR must be postmarked on or before the **thirteenth (13th) day of the month or hand-delivered** to the Department's Regional Office such that it is received by the Department on or before the fifteenth (15th) day of the month following the completed reporting period. Electronic documentation in support of the eDMR must be submitted not later than close of business on the 15th day of the month following the completed reporting period.

F. OPERATIONS AND MAINTENANCE (O&M) PLAN

The permittee must have a current written Operation & Maintenance (O&M) Plan for the facility. The plan must provide a systematic approach by which the permittee must 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.
An acceptable O&M plan must ensure the following items are adequately addressed:

1. Solids Control

   a. Methods and practices to ensure efficient feed management and feeding strategies that limit feed input to the minimum amount reasonably necessary to achieve production goals and sustain targeted rates of aquatic animal growth in order to minimize potential discharges to waters of the State.

   b. In order to minimize the discharge of accumulated solids from the settling basin, settling tanks, and production systems, identify and implement procedures for routine cleaning of rearing units and settling tanks, and procedures to minimize any discharge of accumulated solids during the inventorying, grading, and harvesting of aquatic animals in the production system.

   c. Procedure for removal and disposal of mortalities to prevent discharge to waters of the State.

SPECIAL CONDITIONS

F. OPERATIONS AND MAINTENANCE (O&M) PLAN (cont'd)

2. Materials Storage

   a. Ensure proper storage of drugs[1], pesticides[2], feed, and any petroleum and/or hazardous waste products in a manner designed to prevent spills that may result in the discharge of drugs, pesticides, or feed to waters of the State.

   b. Implement procedures for properly containing, cleaning, and disposing of any spilled material that has the potential to enter waters of the State.

3. Structural Maintenance

   a. Inspect the production system and the wastewater treatment system on a routine basis in order to identify and promptly repair any damage.

   b. Conduct regular maintenance of the production system and the wastewater treatment system in order to ensure that they are properly functioning.

4. Recordkeeping

   a. Maintain records for fish rearing units documenting the feed amounts and estimates of the numbers and weight of fish.
   b. Maintain records that document the frequency of cleaning, inspections, repairs and maintenance.

5. Training

   a. In order to ensure the proper clean-up and disposal of spilled material adequately, train all relevant personnel in spill prevention and how to respond in the event of a spill.

   b. Train staff on the proper operation and cleaning of production and wastewater treatment systems including training in feeding procedures and proper use of equipment to prevent unauthorized discharges.

[1] **Drug.** "Drug" means any substance defined as a drug in section 201(g)(1) of the *Federal Food, Drug and Cosmetic Act* [21 U.S.C. § 321].

[2] **Pesticide.** "Pesticide" means any substance defined as a "pesticide" in section 2(u) of the *Federal Insecticide, Fungicide, and Rodenticide Act* [7 U.S.C. § 136 (u)].

SPECIAL CONDITIONS

F. OPERATIONS AND MAINTENANCE (O&M) PLAN (cont'd)

By December 31 of each year, **or within 90 days of any process changes or minor equipment upgrades,** the permittee must 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 must be kept on-site at all times and made available to Department and USEPA personnel upon request.

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

G. USE OF DRUGS FOR DISEASE CONTROL

1. **General requirements.** All drugs used for disease prevention or control must be approved or authorized by the U.S. Food and Drug Administration (FDA), and all applications must comply with applicable FDA requirements.

2. **FDA-approved drugs.** Drugs approved by the FDA for fish culture purposes may be used in accordance with label instructions.

   a) Preventative treatments. The discharge of any approved drug administered as a preventative measure is not authorized by this permit, unless the following conditions are met: the drug must be approved by FDA, and the treatment and route of administration must be consistent with the drug's intended use. Discharges may occur through direct application of a drug or indirectly through feed, injection, ingestion, or immersion at the facility.

   b) Drugs identified in the permittee's application. The following drugs were identified in the permittee's application as currently being in use:

Name	Freq. of Use	Concentration	Qty. Used/Year
Parasite-S (formalin)	As needed	1:500 / 1:600	150 gal.
Tricaine-S	1-2/month	15 to 330 ppm	<20 grams

   c) Drugs not identified in the permittee's application. When the need to treat or control diseases requires the use of a FDA-approved drug not identified in an application, the permittee must notify the Department orally or by electronic mail prior to initial use of the drug.

      1) The notification must include a description of the drug, its intended purpose, the method of application, the amount, the concentration, the duration of the use, and information on aquatic toxicity.

      2) ***Within seven (7) days of*** the initial notification the permittee must submit a written report that includes all of the information outlined in Section G.2.c)1) above.

      3) The Department may require submission of an application for permit modification, including public notice requirements, if the drug is to be used for more than a 30 consecutive day period.

SPECIAL CONDITIONS

G. USE OF DRUGS FOR DISEASE CONTROL (cont'd)

4) 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 use of the drug.

3. **Extralabel drug use.** Extralabel drug use is not authorized by this permit, unless in accordance with a specific prescription written for that use by a licensed veterinarian.

a) Notification. The permittee must notify the Department orally or by e-mail prior to initial extralabel use of a drug.

1) The notification must include a description of the drug, its intended purpose, the method of application, the amount, concentration, and duration of the use, information on aquatic toxicity, and a description of how and why the use qualifies as an extralabel drug use under FDA requirements.

2) ***Within seven (7) days of*** the initial notification the permittee must submit a written report that includes all of the information outlined in Section G.3.a) 1) above. Notice must include documentation that a veterinarian has prescribed the drug for the proposed use. A copy of the veterinarian's prescription must be maintained on-site during treatment for Department review.

3) If, upon review of information regarding the extralabel use of a drug pursuant to this section, the Department determines that significant adverse effects are likely to occur, it may deny, restrict or limit use of the drug.

4. **Investigational New Animal Drug (INAD).** The discharge of drugs authorized by the FDA for use during studies conducted under the INAD program is not authorized by this permit, unless in accordance with specific prior consent given in writing by the Department.

a) Initial report. The permittee must provide a written report to the Department for the proposed use of an INAD ***within seven (7) days*** of agreeing or signing up to participate in an INAD study. The written report must identify the INAD to be used, method of use, dosage, and disease or condition the INAD is intended to treat.

b) Evaluation and monitoring. ***At least ninety (90) days prior to initial use*** of an INAD at a facility, the permittee must submit for Department review and approval a study plan for the use of the drug that:

1) Indicates the date the facility agreed or signed up to participate in the INAD study.

2) Demonstrates that the minimum amount of drug necessary to evaluate its safety, efficacy, and possible environmental impacts will be used.

SPECIAL CONDITIONS

G. USE OF DRUGS FOR DISEASE CONTROL (cont'd)

3) Includes 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. Currently available data or literature that adequately characterize the environmental fate of the INAD and its metabolite(s) may be proposed for consideration in determinations of environmental monitoring and evaluation programs required by the Department pursuant to this section.

c) Notification. The permittee must notify the Department orally or by electronic mail ***no more than forty-eight (48) hours after*** beginning the first use of the INAD under the approved plan.

d) The following INAD was identified by the permittee and is authorized to be used in accordance with the INAD program:

Name	Freq. of Use	Concentration	Qty. Used/Year
Aqui-S® 20E	As needed	25 to 40 mg/L	2 gallons

H. PESTICIDES AND OTHER COMPOUNDS

1. **General requirements.** All pesticides used at the facility must be applied in compliance with federal labeling restrictions and in compliance with applicable statute, Board of Pesticides Control rules and best management practices (BMPs). Chemicals or compounds not registered as pesticides and proposed for use at the facility must be identified in the permittee's application and may only be discharged to waters of the State with express approval in this permitting action. In accordance with Standard Condition D, and Special Condition D of this permit, the permittee must notify the Department of any substantial change in the volume or character of pollutants being introduced into the wastewater collection and treatment system.

a) Pesticides identified in the permittee's application. The following pesticides were identified in the permittee's application as currently being in use:

Name	Freq. of Use	Concentration	Qty. Used/Year
Virkon Aquatic	Daily	1:64 (2 oz.: 1 gal. water)	4 gallons

b) Other compounds identified in the permittee's application. The following compounds were identified in the permittee's application as currently being in use. The permittee is authorized to discharge the following compounds. It is the Department's Best Professional Judgment (BPJ) that the incidental discharge of these chemicals will not cause or contribute to non-attainment of applicable water quality standards.

Name	Freq. of Use	Concentration	Qty. Used/Year
Ovadine Iodine	12 times/Year	80 mL : 1 gal. water	3 gallons
Ovadine Iodine	4x/year	40 mL : 1 gal. water	1 gallons

SPECIAL CONDITIONS

I. SPILLS

In the event of a spill of drugs, pesticides, feed, petroleum and/or hazardous waste products that results in a discharge to waters of the State of Maine, the permittee must provide an oral report of the spill to the Department within 24 hours of its occurrence and a written report within 5 days to the Department. The report must include the identity and quantity of the material spilled.

J. PROTECTION OF ATLANTIC SALMON

The permittee is required to employ a fully functional Containment Management System (CMS) designed, constructed, operated, and audited so as to prevent the accidental or consequential escape of fish from the facility.

Each CMS plan must include:

1. a site plan or schematic;
2. site plan description;
3. procedures for inventory control, predator control, escape response; unusual event management, and severe weather;
4. provisions for employee training, auditing methods, and record keeping requirements; and
5. the CMS must identify critical control points where escapes could potentially occur, specific control mechanisms for each of these points, and monitoring procedures to verify the effectiveness of controls.

The CMS site specific plan must also describe the use of effective containment barriers appropriate to the life history of the fish. The facility must have in place both a three-barrier system for fish up to 5 grams in size and a two-barrier system for fish 5 grams in size or larger. The three-barrier system must include one barrier at the individual rearing unit, one barrier at the effluent from the hatch house/fry building and a third barrier placed in line with the entire effluent from the facility. Each barrier must be appropriate to the size of fish being contained. The two-barrier system must include one barrier at the individual rearing unit drain and one barrier in line with the total effluent from the facility. Each barrier must be appropriate to the size of fish being contained. Barriers installed in the system must be of the screened type or some other similarly effective device used to contain fish of a specific size in a designated area. Barriers installed in the system for compliance with these requirements must be monitored daily.

Facility personnel responsible for routine operation shall be properly trained and qualified to implement the CMS. Prior to any containment system assessment associated with this permit, the permittee must provide to the Department documentation of the employee's or contractor's demonstrated capabilities to conduct such work. ***[ICIS code 21599]***

The permittee must submit the CMS plan to the Department for review and approval **on or before six months following the effective date of this permit** ***[ICIS code 53799]*** and must maintain a current copy of the plan at the facility.

SPECIAL CONDITIONS

J. PROTECTION OF ATLANTIC SALMON (cont'd)

The CMS must be audited at least once per year and within 30 days of a reportable escape (more than 50 fish) by a party other than the facility operator or owner qualified to conduct such audits and approved by the Department ***[ICIS code 63899]***. A written report of these audits must be provided to the facility and the Department for review and approval within 30 days of the audit being conducted ***[ICIS code 43699]***. Any time that a CMS audit identifies deficiencies, the written report must contain a corrective action plan, including a timetable for implementation and provisions for re-auditing, unless waived by the Department, to verify completion of all corrective actions.

Additional third party audits to verify correction of deficiencies must be conducted in accordance with the corrective action plan or upon request of the Department. The facility must notify the Department upon completion of corrective actions.

The permittee must maintain for a period of at least five (5) years complete records, logs, reports of internal and third party audits and documents related to the CMS for each facility.

Escape reporting. The permittee must notify by electronic mail (e-mail) the Escape Reporting Contact List (provided in this subsection) of any known or suspected escape of more than 50 fish within 24 hours of becoming aware of the known or suspected loss to the following persons listed under "Escape Reporting Contact List."

The permittee must include in its e-mail notification the following information: 1) site location (town and waterbody); 2) date of event (or window of possible dates if exact date is unknown); 3) time of event (if known or specify "unknown"); 4) species (including strain); 5) estimated average weight; 6) age of escaped fish; 7) number of escaped fish (or if exact number is not possible, an estimate); 8) medication profile; 9) details of the escape; 10) corrective action(s) taken or planned; 11) and a contact person (including phone number) for the facility which is subject of the known or suspected escape.

Escape Reporting Contact List:

The agency contacts on this list may be revised by the state and/or federal agencies by provision of written notification to the permittee and the other agencies. Upon notice of any such change the permittee must notify all persons on the revised list in the same manner as provided in this protocol.

SPECIAL CONDITIONS

J. PROTECTION OF ATLANTIC SALMON (cont'd)

Army Corps of Engineers
Maine Project Office; Jay Clement; Jay.L.Clement@usace.army.mil

Maine Department of Environmental Protection
Commissioner, Patricia Aho, Patricia.aho@maine.gov , or current Commissioner

Maine Department Marine Resources
Policy Development Specialist; Chris Vonderweidt; Chris.vonderweidt@maine.gov
Secretary to the Commissioner; Jessica McKay; Jessica.mckay@maine.gov
Sea-Run Fisheries and Habitat Division Director; Oliver Cox; Oliver.n.cox@maine.gov

Maine Department of Inland Fisheries and Wildlife
Commissioner, Chandler Woodcock, Chandler.Woodcock@maine.gov , or current Commissioner

National Marine Fisheries Service
Maine Field Station; David Bean; David.bean@noaa.gov

United States Fish & Wildlife Service
Maine Field Office; Wende Mahaney; Wende_mahaney@fws.gov

K. REOPENING OF PERMIT FOR MODIFICATION

In accordance with 38 M.R.S.A. § 414-A(5) and upon evaluation of the tests results or monitoring requirements specified in Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at any time and with notice to the Permittee, modify this permit to: 1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded, (2) require additional monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

L. SEVERABILITY

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

ATTACHMENT A

Attachment A

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

Approved Analytical Methods: EPA 200.7 (Rev. 44), 365.1 (Rev. 2.0), (Lachat), 365.3, 365.4; SM 3120 B, 4500-P B.5, 4500-P E, 4500-P F, 4500-P G, 4500-P H; ASTM D515-88(A), D515-88(B); USGS I-4471-97, I-4600-85, I-4610-91; OMAAOAC 973.55, 973.56

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. Commercially purchased, pre-cleaned sample containers are an acceptable alternative. The sampler hoses should be cleaned, as needed.

Sample Preservation: During compositing the sample must be at 0-6 degrees C (without freezing). 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 using H_2SO_4 to obtain a sample pH of <2 su and refrigerated at 0-6 degrees C (without freezing). 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.

Laboratory QA/QC: Laboratories must follow the appropriate QA/QC procedures that are described in each of the approved methods.

Sampling QA/QC: If a composite sample is being collected using an automated sampler, then once per month run a blank on the composite sampler. 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.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
MAINE WASTE DISCHARGE LICENSE

PROPOSED DRAFT
FACT SHEET

DATE: **JANUARY 15, 2015**

PERMIT NUMBER: **#ME0001091**

WASTE DISCHARGE LICENSE: **#W002034-6F-E-R**

NAME AND ADDRESS OF APPLICANT:

MAINE DEPARTMENT OF INLAND FISHERIES & WILDLIFE
GOVERNOR HILL FISH HATCHERY
284 STATE STREET, 41 STATE HOUSE STATION
AUGUSTA, MAINE 04333

COUNTY: **KENNEBEC**

NAME AND ADDRESS WHERE DISCHARGE(S) OCCUR(S):

MAINE DEPARTMENT OF INLAND FISHERIES & WILDLIFE
GOVERNOR HILL HATCHERY
82 HATCHERY ROAD
AUGUSTA, MAINE 04330

RECEIVING WATER CLASSIFICATION: **SPRING BROOK/CLASS B**

COGNIZANT OFFICIAL CONTACT INFORMATION:

MR. TOM MCLAUGHLIN, FACILITY MANAGER
(207) 287-5228
Tom.mclaughlin@maine.gov

1. APPLICATION SUMMARY

Application: On June 30, 2011, the Maine Department of Environmental Protection (Department) accepted as complete for processing, a renewal application from the Department of Inland Fisheries and Wildlife (DIFW) for Waste Discharge License (WDL) #W002034-5Q-B-R / Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0001091, which was issued on July 5, 2006 for a five-year term. The 7/5/06 MEPDES permit authorized DIFW to discharge a monthly average of 1.2 million gallons per day (MGD) of fish hatchery wastewater from the DIFW Governor Hill Hatchery to Spring Brook, Class B, in Augusta, Maine.

1. APPLICATION SUMMARY (cont'd)

The Department issued a minor revision to amend the formalin limits on October 10, 2008; and a minor revision to adjust the monitoring frequencies for biochemical oxygen demand (BOD_5) and total suspended solids (TSS) on April 23, 2009. A Consent Agreement (CA) between the Department and DIFW in regards to eight DIFW hatcheries was ratified June 2, 2010. This CA resolved violations at the Governor Hill hatchery.

2. PERMIT SUMMARY

a. Terms and Conditions: This permitting action is carrying forward all the terms and conditions of the previous permitting actions except:

1. Eliminates reporting requirements and limits for potassium permanganate as it is no longer in use at the facility;

2. Eliminates the requirements as imposed in Special Condition O. *Ambient Dissolved Oxygen and Temperature Monitoring* of the 2006 permit as the Department has sufficient information to characterize the ambient stream conditions;

3. Eliminates the Schedule of Compliance as established in Special Condition G of the 2006 permit;

4. Eliminates the BOD_5 and pH limitations and monitoring requirements;

5. Amends language in the "Footnotes" section of Special Condition A;

6. Establishes additional requirements to be included in the facility Operations and Monitoring Plan;

7. Eliminates the Special Condition I *Settling Basin Cleaning* as contained in the 2006 permit;

8. Establishes Conditions G. *Use of Drugs for Disease Control* and H. *Spills;*

9. Replaces Special Condition P. *Salmon Genetic Testing and Escape Prevention* in the 2006 permit with Special Condition I. *Protection of Atlantic Salmon*;

10. Revises the monitoring frequency for formalin from 1/2weeks to once per occurrence (01/OC), to clarify that formalin is to be reported at each use;

11. Revises the total phosphorus concentration limit to report only;

12. Establishes Special Condition H. *Pesticides and Other Compounds* to replace Special Conditions K. *Therapeutic Agents* and L. *Disinfecting/Sanitizing Agents* from the 2006 permit;

13. Revises the monitoring frequency for total phosphorus to allow for increased monitoring flexibility;

2. PERMIT SUMMARY (cont'd)

14. Eliminates the reporting requirement for monthly average Fish on Hand and revises the monitoring frequency 2/month to 1/month, to allow for increased monitoring flexibility; and,

15. Eliminates the formalin concentration limit and establishes a mass-based limit to allow for increased facility flexibility and management.

b. History: The most current relevant regulatory actions include:

February 20, 1975 – The U.S. Environmental Protection Agency (USEPA) issued National Pollutant Discharge Elimination System (NPDES) Permit #ME0001091 to the Maine Department of Inland Fish and Game for the discharge of an unspecified volume of wastewater from the Governor Hill Fish Hatchery to Spring Brook. The Permit was valid through February 15, 1980.

May 11, 1983 – The Maine Board of Environmental Protection issued WDL #2034 for the discharge of a daily maximum of 1.0 MGD of fish hatchery wastewater from the DIFW Governor Hill Fish Hatchery to Spring Brook, Class B-1. The WDL was a renewal of a previously issued license #2034, although it eliminated parameters for suspended solids and eliminated monitoring requirements for all other parameters. The WDL was issued for a five-year term.

July 21, 2000 – The Department issued # W-002034-5Q-A-R to the DIFW Governor Hill Fish Hatchery for the discharge of a daily maximum of 1.0 MGD of treated fish hatchery wastewater. The WDL was issued for a five-year term.

January 12, 2001 – The Department received authorization from the USEPA to administer the NPDES permitting program in Maine, excluding areas of special interest to Maine Indian Tribes. From this point forward, the program has been referred to as the MEPDES program, and MEPDES permit #ME0101443 has been utilized for this facility. On March 26, 2011, the USEPA authorized the Department to administer the MEPDES program in Indian territories of the Penobscot Nation and Passamaquoddy Tribe.

February 2002 – On behalf of DIFW, Fishpro Inc. submitted an Alternative Discharge Study report for all nine DIFW hatcheries and rearing stations. The study evaluated eliminating effluent discharges through: piping the discharges to larger receiving waters, connecting to municipal wastewater treatment facilities, wastewater storage collection, land application of wastewater, and discharging to existing wetland areas. The study determined that none of the alternatives evaluated were viable options for the DIFW facilities.

September 12, 2002 – The Department submitted a report entitled *Maine Department of Environmental Protection Water Quality Concerns and Effects from State Fish Hatchery Discharges* to the Maine Legislature's Inland Fisheries and Wildlife Subcommittee's Commission to Study the Needs and Opportunities Associated with the Production of Salmonid Sport Fish in Maine and DIFW.

November 2002 – FishPro Inc. submitted to DIFW its *Comprehensive Statewide Fish Hatchery System Engineering Study* addressing recommended upgrades to all DIFW fish hatcheries and rearing facilities.

2. PERMIT SUMMARY (cont'd)

July 11, 2003 – The Department administratively modified WDL # W-002034-5Q-A-R to extend the 3-year schedule of compliance for BOD, TSS, and phosphorus effluent limits established in the WDL through the life of the WDL.

June 27, 2005 - The Department received a timely application from DIFW for renewal of the WDL for the discharge of fish hatchery wastewater from the Augusta facility. The application was assigned WDL # W-002034-5Q-B-R and MEPDES permit #ME0001091.

July 5, 2006 – The Department issued #ME0001091 / #W-002034-5Q-B-R for a five year term.

October 10, 2008 – The Department issued minor revision #ME0001091 / #W-002034-5Q-C-M to amend the formalin limit.

April 23, 2009 – The Department issued minor revision #ME0001091 / #W-002034-5Q-D-M to amend the monitoring frequencies for BOD_5 and TSS.

October 1, 2009 – The Department issued Field Determination #8101 that concluded that the "stream (Spring Brook) starts below the dam which is approximately 550 feet from the end of the runway structure."

June 2, 2010 – The Department ratified a Consent Agreement with DIFW for the violations incurred at several hatchery facilities including the Augusta hatchery.

June 28, 2011 – DIFW submitted a timely and complete General Application to the Department for renewal of the July 5, 2006 MEPDES permit. The application was accepted for processing on June 30, 2011 and was assigned WDL #W002034-6F-E-R / MEPDES #ME0001091.

c. Source Description: The DIFW Augusta, or Governor Hill State Fish Hatchery, was formerly a private fish hatchery owned by Governor John Hill that was converted to a state aquaculture facility in 1923. The DIFW Governor Hill facility is located on a 180-acre parcel of state owned land. The DIFW Governor Hill facility is a state brook trout, lake trout, and splake hatchery and rearing facility.

Fish are hatched and reared at this and other DIFW facilities to appropriate sizes for stocking in Maine waters as part of DIFW's responsibilities in managing fisheries in Maine.

Governor Hill consists of a hatchery building, concrete raceways for rearing, and a settling pond.

Influent Water: Water is supplied to the DIFW Governor Hill facility from two wells and two springs (Spring Pond #1 and Spring Pond #2) located on site. The wells supply source water to the hatchery and early rearing facility and the springs supply source water to the raceways. Well #1 and Well #2 were installed in 1999 and 2000 respectively, with each capable of yielding approximately 200 gallons per minute (gpm). Each well supplies water to the hatchery building via independent 8-inch diameter pipelines. Half of the well water supply is passed through a liquid oxygenation system prior to use in

2. PERMIT SUMMARY (cont'd)

the hatchery building for early rearing, while half consists of non-enhanced flow. The spring ponds are approximately 2.47 million gallons (upper pond), and 1.2 million gallons, (lower pond) and yield flows of approximately 620 gpm, however flows are reduced during summer months. Spring water temperatures range from 39-50 degrees F (4-10 C) through the year. The ponds are dredged approximately every ten years. Each spring has a covered outlet, which contains a coarse screen to exclude large organic matter. The outlet feeds an 8-inch diameter, 100-foot long pipeline, which runs to the head of the raceways. Other artesian flows are collected from small abandoned raceways on site and routed to the raceways via 6-inch and 8-inch diameter lines. The facility provides no physical or chemical treatment of spring water.

Governor Hill is a flow-through facility with flows through its hatchery and rearing facilities discharged to Spring Brook (Class B, less than 10 square mile watershed), followed by Bond Brook (Classes B and C) and the Kennebec River (Class B).

Broodstock Facilities: Governor Hill maintains brook trout and lake trout broodstock on site in the last two raceway pools. Once brook trout broodstock reach 3 years of age, they are stocked out in various waters. Governor Hill's lake trout brood are generated from on-site brood stock, which are used for approximately ten years, then stocked out in various waters.

Hatchery Facilities: Governor Hill's hatchery facilities consist of thirty-nine, 63-inch diameter fiberglass combi-tanks with influent water supplied exclusively by well water. Eggs are brought into the hatchery facility from October through early December. Each line of tanks is typically dedicated to a particular fish strain.

Each strain starts to feed at different times. Generally, eggs "eye-up" in approximately thirty days from the time they are received at Governor Hill, hatch approximately 15-days after eye-up, and begin to feed approximately 15 days after hatching. Fry are moved to the outside rearing structures as those raceways are cleared of fish through stocking in the spring, usually when they reach an approximate size of 250 fish per pound. As lake trout grow better inside in a dark environment than outside, the lake trout are kept inside the hatchery building until September in three to four tanks before they are moved outside. This means that the hatchery facility contains eggs or fry for all but approximately 6 weeks during the year. When tanks become empty, they are cleaned as described below. Hatchery facility flow-through water and cleaning wastewater flow directly to the facility settling pond.

Rearing Facilities: Governor Hill's rearing facilities consist of two sizes of covered concrete raceway pools. The first six raceway pools are 5-feet x 50-feet x 2-feet deep (operational depth)(3,740-gallons each) and are referred to as the "six block". These raceway pools are arranged in two sets of three adjacent pools and flow into the next pools. The remaining ten raceway pools are 6-feet x 100-feet x 2-feet deep (operational depth) (8,976-gallons each). These raceway pools are arranged in two parallel lines of 5 pools. Generally the "six block" is used to house lake trout "production fish" and any future brood fish. The first set of 100-foot pools are used to house splake, the next six pools are used to house brook trout, and the last set of two pools are used for adult brood fish.

2. PERMIT SUMMARY (cont'd)

Once fish are moved to the outside raceways, they are fed a controlled amount of food per day depending on their body weight and water temperature. Feeding rates are adjusted to either speed up or slow fish growth to address management goals. All fish are hand fed, with auto demand feeders used as a secondary feed. When demand feeders are used, only enough feed is used to meet that day's feed requirement. Brood fish are only fed a maintenance diet. In its 2011 renewal application, Governor Hill indicated using an average of 84.3 pounds of food per day and a maximum of 130.5 lbs./day. The 2011 application also indicated that the months wherein the maximum amount of feeding took place were in March and April.

Governor Hill starts each year with approximately 1.2 million eggs for hatching and rearing. In its 2011 renewal application, Governor Hill indicated a maximum quantity of fish on station of: 420,321 first year fish weighing 19,032 pounds, 5,000 second year fish weighing 6,667 pounds, and 1,400 broodstock weighing 5,688 pounds. A map showing the location of the treatment facility is included as Fact Sheet **Attachment A**.

d. Wastewater Treatment: Governor Hill hatchery and rearing facility flow-through and cleaning wastewater flows are discharged to the facility's 30-foot x 700-foot x 3-foot deep (471,270-gallons) settling pond. The settling pond is cleaned as needed through dredging, with accumulated materials removed and properly disposed of.

Hatchery combi-tank flow-through water is discharged into hatchery facility effluent piping, which leads to the facility's in-stream settling pond. Hatchery combi-tanks are cleaned daily through removal of a center pipe in each tank, which causes deposited waste material to be discharged into the same common effluent piping that carries flow-through water to the in-stream settling pond. At the end of the hatching season, tanks are cleaned using a scrub brush and a solution of iodine and water, rinsed and left to dry. Seasonal cleaning water is discharged in the same manner as flow-through and daily cleaning wastewater flows. Supply water for any seasonally discontinued tanks is routed to the outside raceways.

Raceway flow-through water enters the in-stream settling pond at the end of the facility. To clean the raceways, DIFW staff has historically scrubbed the sides and bottoms from the top end of the raceway pool moving down-flow toward the bottom end. At the bottom of all raceway pools is located a screened 1.5-foot long "quiescent zone" with a covered discharge pipe routed to a common 10-inch diameter underground raceway cleaning wastewater pipe to the facility in-stream settling pond, described below. After the raceway pool and quiescent zone screen are cleaned, the quiescent zone plug is replaced and the cleaners move to the next raceway pool. The raceway pool cleaning schedule varies through the growing season from every day to once per week, as needed.

In accordance with Standard Condition D, as referenced in Special Condition D of this permit, the permittee must notify the Department of any substantial change in the volume or character of pollutants being introduced into the wastewater collection and treatment system. Use of agents for therapeutic and disinfecting/sanitizing purposes are addressed in subsequent Fact Sheet sections titled accordingly. A process flow diagram submitted by the permittee is included as Fact Sheet **Attachment B**.

3. CONDITIONS OF PERMIT

Conditions of licenses, 38 M.R.S.A. § 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with 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, *Certain deposits and discharges prohibited*, 38 M.R.S.A. § 420 and *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective March 21, 2012) require the regulation of toxic substances not to exceed levels set forth in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (effective July 29, 2012), 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

Classification of major river basins, 38 M.R.S.A. § 467(4)(I) classifies the "Kennebec River, minor tributaries – Class B unless otherwise specified," which includes Spring Brook at the point of discharge. *Standards for classification of fresh surface waters*, 38 M.R.S.A. § 465(3) describes the standards for Class B waters.

38 M.R.S.A. § 464 (4)(A) specifies that "Notwithstanding section 414-A, the department may not issue a water discharge license for any of the following discharges: (1) Direct discharge of pollutants to waters having a drainage area of less than 10 square miles, except that: (A) Discharges into these waters that were licensed prior to January 1, 1986 are allowed to continue only until practical alternatives exist…"

Prior to issuing a discharge license, the Department requires the applicant to objectively demonstrate to the Department's satisfaction that the discharge is necessary and that there are no other reasonable alternatives available. An Alternative Discharge Study performed by Fishpro for mulitple DIFW facilities (including Governor Hill) indicates that there are no reasonable alternatives to the current discharge. DIFW (via email correspondence to the Department dated May 5, 2014) confirmed that the 2002 Fishpro conclusions that there are no practical alternatives to the discharge is valid for purposes of this permitting action.

5. RECEIVING WATER QUALITY CONDITIONS

The State of Maine 2012 Integrated Water Quality Monitoring and Assessment Report (Report), prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists Spring Brook "(Augusta) From Gov. Hill fish hatchery to Mt Vernon Rd, Augusta" (ABD Assessment Unit ID ME0103000324_333R_02) as "Category 5-A: Rivers and Streams Impaired by Pollutants Other Than Those Listed in 5-B Through 5-D (TMDL Required). This listing is attributed to past benthic-macroinvertebrate bioassessments and in-stream total phosphorus levels. The most recent bioassessment (completed in the summer of 2013) data indicated that Spring Brook attained its current Class B aquatic life standards, however, Spring Brook continues to be listed on Table 8-13 "Rivers/Streams TMDL Current Project Update" due to historic attainment concerns.

The Report lists all of Maine's fresh waters as, "Category 4-A: Waters Impaired by Atmospheric Deposition of Mercury." Impairment in this context refers to a statewide fish consumption advisory due to elevated levels of mercury in some fish tissues. The Report states, "All freshwaters are listed in Category 4A (TMDL Completed) due to USEPA approval of a Regional Mercury TMDL. Maine has a

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

fish consumption advisory for fish taken from all freshwaters due to mercury. Many waters, and many fish from any given water, do not exceed the action level for mercury. However, because it is impossible for someone consuming a fish to know whether the mercury level exceeds the action level, the Maine Department of Health and Human Services decided to establish a statewide advisory for all freshwater fish that recommends limits on consumption. Maine has already instituted statewide programs for removal and reduction of mercury sources."

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The 7/5/06 permit required in-stream dissolved oxygen (DO) measurements to be taken within 2 hours of sunrise at the representative sag point in Spring Brook pursuant to Special Condition O. *Ambient Dissolved Oxygen and Temperature Monitoring*. For the purpose of laboratory coding and process control, data collected for these parameters under Special Condition O are referred to as "Outfall 005B."

The Department reviewed 12 Discharge Monitoring Reports (DMRs) that were submitted for the period June 2010 – September 2012. A review of data indicates the following:

Outfall 005B Data

Parameter	Minimum	Maximum
Temperature (C)	9.6	11.3
D.O. (mg/L)	6.9	11

The Class B dissolved oxygen standard is:

> The dissolved oxygen content of Class B waters may not be less than 7 parts per million or 75% of saturation, whichever is higher, except that for the period from October 1st to May 14th, in order to ensure spawning and egg incubation of indigenous fish species, the 7-day mean dissolved oxygen concentration may not be less than 9.5 parts per million and the 1-day minimum dissolved oxygen concentration may not be less than 8.0 parts per million in identified fish spawning areas. 38 M.R.S.A. § 465(3)(B)

The ambient data indicate that the minimum DO was below 7 mg/L on 1 occasion. This permitting action requires effluent dissolved oxygen monitoring and establishes a minimum dissolved oxygen limitation of 7.5 mg/L to ensure the discharge does not cause or contribute to non-attainment of Class B dissolved standards. This permitting action is eliminating the monitoring requirements established in Special Condition O of the 7/5/06 permit as the Department has sufficient data to characterize the ambient stream conditions in regards to these parameters.

a. Flow: The 7/5/06 permit established, and this permitting action is carrying forward, a monthly average discharge flow limit of 1.2 MGD based on the design capacity of the treatment facility.

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

The Department reviewed 87 DMRs that were submitted for the period January 2007 – March 2014. A review of data indicates the following:

Flow

Value	Limit (MGD)	Range (MGD)	Mean (MGD)
Monthly Average	1.2	1.2 – 1.2	1.2

b. Dilution Factors: Dilution factors associated with the permitted discharge flow of 1.2 MGD from the facility and a flow of 0 cubic feet per second (cfs) in Spring Brook (which represents the Governor Hill hatchery facility position in the headwaters of Spring Brook) were derived in accordance with 06-096 CMR 530(4)(A). Previous permitting action utilized a chronic dilution of 1.0:1 based on a 7Q10 low flow value of 0 cfs. Accordingly, the Governor Hill discharge constitutes the only flow in that portion of Spring Brook. Based on this information, the Department is carrying forward the acute (1Q10), chronic (7Q10) and harmonic mean dilution factors of 1:1.

c. BOD_5 and TSS: In the 7/5/06 permit, TSS and BOD_5 concentration limits of 6 mg/L and 10 mg/L for monthly average and daily maximum, respectively, were established as best professional judgment (BPJ) of best practicable treatment (BPT) technology.

The Department reviewed 87 DMRs that were submitted for the period January 2007 – March 2014. A review of data indicates the following:

BOD_5 mass

Value	Limit (lbs./day)	Range (lbs./day)	Mean (lbs./day)
Monthly Average	17	1 – 35	12
Daily Maximum	100	2 – 60	13

BOD_5 concentration

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	6	0.10 – 3.50	1.2
Daily Maximum	10	0.20 – 6.00	1.3

TSS mass

Value	Limit (lbs./day)	Range (lbs./day)	Mean (lbs./day)
Monthly Average	17	0 – 90	10
Daily Maximum	100	1 – 90	12

TSS concentration

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	6	0.10 – 9.00	1.0
Daily Maximum	10	0.10 – 9.00	1.2

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

The Department's Division of Environmental Assessment (DEA) reviewed hatchery information in consideration of using TSS as a surrogate for BOD_5. It should be noted that TSS is more closely related to problems most commonly encountered at aquatic animal facilities such as phosphorus enrichment and solids control. After reviewing approximately 6 years of TSS and BOD_5 data, the Department concluded that the results of the two parameters showed a strong correlation. Therefore, the Department concluded that TSS could be relied upon to reflect BOD_5 conditions. Consequently, this permitting action is carrying forward the mass and concentration limits for TSS. This permit is carrying forward with the previously established monitoring frequency of 1/Month for TSS.

BOD can cause depressed DO in the receiving waters and increased carbon levels may create a favorable environment for nuisance bacterial/fungal growth such as *Sphaerotilus natans* that may result in non-attainment of narrative water quality standards. The Department has not observed nuisance bacterial/fungal growth below discharges from the Governor Hill hatchery in quantities that would constitute a violation of narrative water quality standards. Therefore, the Department concludes that Spring Brook does not exhibit BOD-related impacts.

Given that 1) hatchery operations and processes are not likely to change; 2) that the Department has a statistically significant BOD_5 data set from this and multiple similar hatcheries; 3) that neither the USEPA nor Department have promulgated numeric effluent guidelines for BOD_5 for Concentrated Aquatic Animal Production (CAAPs) facilities (including fish hatcheries); 4) that this permitting action contains effluent monitoring for dissolved oxygen; and 5) that in the best professional judgment of the Department's Division of Environmental Assessment effluent limitations for BOD_5 are not necessary to ensure compliance with water quality standards, this permitting action is eliminating the effluent limitations and monitoring requirements for BOD_5 based on this new information that was not available at the time the previous permit was issued.

Section 402(o) of the Clean Water Act contains prohibitions for anti-backsliding. Generally, anti-backsliding prohibits the issuance of a renewed permit with less stringent limitations than were established in the previous permit. The Clean Water Act contains certain exceptions to anti-backsliding at Section 402(o)(2). In the case of DIFW's Governor Hill facility and the concentration and mass limitations for BOD_5, the Department has determined that these limitations would not have been established at the time the previous permit was issued based on the new information that has been obtained since issuance of the 2006 permit. Section 402(o)(2)(B)(i) of the Clean Water Act contains an exception to anti-backsliding for information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance. Therefore, this permitting action is eliminating the limitations for BOD_5. [It is noted that anti-backsliding prohibitions and exceptions are mirrored in Chapter 523 of the Department's rules at 40 CFR 122.44(l)(2)(i)(B)(1).]

d. Dissolved Oxygen: The 7/5/06 permit required effluent DO measurements to be taken at the point of discharge from June through September of each year. The Department reviewed 28 DMRs that were

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

submitted for the period June 2007 – September 2013. A review of data indicates the following:

DO

Minimum (mg/L)	Maximum (mg/L)
8.6	11

As referenced previously, The Class B dissolved oxygen standard is:

> The dissolved oxygen content of Class B waters may not be less than 7 parts per million or 75% of saturation, whichever is higher, except that for the period from October 1st to May 14th, in order to ensure spawning and egg incubation of indigenous fish species, the 7-day mean dissolved oxygen concentration may not be less than 9.5 parts per million and the 1-day minimum dissolved oxygen concentration may not be less than 8.0 parts per million in identified fish spawning areas. 38 M.R.S.A. § 465(3)(B)

Data indicates that the facility DO was consistently within the Class B water quality standards. This permitting action is carrying forward the seasonal reporting requirement and daily minimum effluent concentration for dissolved oxygen to ensure the discharge does not cause or contribute to non-attainment of Class B dissolved standards.

e. Total Phosphorus: Previous permitting action established both mass and concentration limitation for total phosphorus. The monthly average mass limitation of 0.24 lbs./day is a water quality-based limit necessary to ensure compliance with Class B water quality standards and is being carried forward in this permitting action. The monthly average concentration limitation of 0.035 mg/L for total phosphorus was established based on BPJ of BPT for this discharge. The Department is identifying in this permitting action that the concentration limit is not necessary to ensure water quality standards are achieved and that the limitation was established in error. Section 402(o) of the Clean Water Act contains prohibitions for anti-backsliding. Generally, anti-backsliding prohibits the issuance of a renewed permit with less stringent limitations than were established in the previous permit. The Clean Water Act contains certain exceptions to anti-backsliding at Section 402(o)(2). In the case of DIFW's Governor Hill facility and the concentration limitation for phosphorus, the Department has determined that establishing a concentration limitation for phosphorus constitutes a technical mistake in issuing the permit. Section 402(o)(2)(B)(ii) of the Clean Water Act contains an exception to anti-backsliding for this reason. Therefore, this permitting action is eliminating the concentration limitation for total phosphorus but is requiring concentration data to be reported. (It is noted that anti-backsliding prohibitions and exceptions are mirrored in Chapter 523 of the Department's rules.) Monitoring remains limited to June through September, annually.

The Department reviewed 28 DMRs that were submitted for the period June 2007 – September 2013.

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

A review of data indicates the following:

Total-P Concentration

Value	Limit (mg/L)	Range (mg/L)	Mean (mg/L)
Monthly Average	0.035	0.03 – 0.06	0.04
Daily Maximum	Report	0.03 – 0.38	0.06

Total-P Mass

Value	Limit (lbs./day)	Range (lbs./day)	Mean (lbs./day)
Monthly Average	0.24	0.3 – 0.62	0.4
Daily Maximum	Report	0.3 – 0.66	0.5

f. Fish on Hand: Previous permitting action established a 2/Month reporting requirement for daily maximum mass. However, after review of the data, the Department believes that a 1/Month daily maximum mass reporting requirement is appropriate. Therefore, this permit is establishing a 1/Month reporting requirement of daily maximum mass for fish on hand.

The Department reviewed 87 DMRs that were submitted for the period January 2007 – March 2014. A review of data indicates the following:

Fish on Hand

Value	Limit (lbs.)	Range (lbs.)	Mean (lbs.)
Monthly Average	Report	1,908 – 23,402	16,741
Daily Maximum	Report	10,906 – 28,087	18,748

g. Formalin: The October 10, 2008 minor revision amended the formalin limits based on the Department's BPJ after reviewing the January 2008 report titled "*Meeting Maine Clean Water Standards during Fish Therapeutic Treatments: Determining the Acute No Effect Concentration (ANOEC) Discharge Concentrations in Hatchery Effluents after Fish Therapeutic Treatments with Formalin, Hydrogen Peroxide, Potassium Permanganate and Sodium Chloride*" by G. Russell Danner and Thora Maltais. Formalin concentration limits were based on the ambient water quality criteria (AWQC) of 25 mg/L and 45 mg/L for a 24-hour application and a 1-hour application, respectively and multiplied by the acute dilution factor of 1.0. However, in 2010, the Governor Hill facility added a 30' x 700' x 6' concrete settling basin through which all facility flows are directed. Based on the revised dilution factors, 24-hour and 1-hour facility flows, and the approximate 126,000 cubic foot settling basin, the concentration limits are calculated as such:

25 mg/L x 1 (effluent dilution) = 25 mg/L 24-hour treatment
45 mg/L x 1 (effluent dilution) = 45 mg/L 1-hour treatment

Mass limits derived from the updated concentration limits, and taking into consideration the settling

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

basin are calculated as such:

Settling basin dimensions: 30' (W) x 700' (L) x 6' (D) = 126,000 cubic feet (cu.^{3})
126,000 cu.^{3} x 7.48 gal/ cu.^{3} = 942,480 gallons (0.94248 MG)

For 1 hr. treatments:
1.2 MGD / 24 = 0.05 MG
0.05 MG + 0.94248 MG = 0.99248 MG

0.99248 MG x 9.03 lbs./gal. x 45 mg/L = 403.29424 lbs./hr. or **403 lbs./hr.**

For 24 hr. treatments:
1.2 MGD + 0.94248 MG = 2.14248 MG

2.14248 MG x 9.03 lbs./gal. x 25 mg/L = 483.66485 lbs./day or **484 lbs./day**

Since the 2006 permit, mass limits have been carried forward based on the following language from the 2008 revision:

> "Effluent mass limits were previously and remain calculated based on the permittee's projected maximum amount of formalin used per day (10.4-gallons) times the weight of formalin (9.13 lbs/gal), resulting in a value of 95 lbs/day."

Based on the above mass calculations, the 24-hour and 1-hour treatment limits of 484 lbs./day and 403 lbs./hour, respectively, are less stringent than the previously established limit of 95 lbs./day. Therefore, based on the Departments BPJ of AWQC, the mass limit established in the 2006 permit (and carried forward since that time) is being carried forward in this permitting action.

The Department is identifying in this permitting action that the concentration limit is not necessary to ensure water quality standards are achieved and that the limitation was established in error. Section 402(o) of the Clean Water Act contains prohibitions for anti-backsliding. Generally, anti-backsliding prohibits the issuance of a renewed permit with less stringent limitations than were established in the previous permit. The Clean Water Act contains certain exceptions to anti-backsliding at Section 402(o)(2). In the case of DIFW's Governor Hill facility and the concentration limitation for formalin, the Department has determined that establishing a concentration limitation for formalin constitutes a technical mistake in issuing the permit. Section 402(o)(2)(B)(ii) of the Clean Water Act contains an exception to anti-backsliding for this reason. Therefore, this permitting action is eliminating the concentration limitation for formalin. (It is noted that anti-backsliding prohibitions and exceptions are mirrored in Chapter 523 of the Department's rules.

Formalin monitoring is revised to 1/Occurrence in this permitting action to better clarify the reporting requirement. The Department reviewed 11 DMRs that were submitted for the period January 2007 –

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

March 2014. A review of data indicates the following:

Formalin mass

Value	Limit (lbs./day)	Range (lbs./day)
Monthly Average	95	2– 37
Daily Maximum	95	2 – 37

Formalin concentration

Value	Limit (mg/L)	Range (mg/L)
Monthly Average	Report	0.6 – 8.5
1-Hour Maximum	45	0.6 – 8.5
24-Hour Maximum	25	8.0 – 8.5

h. pH: The previous permit carried forward the established pH limit of 6.0 – 8.5 standard units (SU), pursuant to 38 M.R.S.A. § 464(4)(A)(5) and consistent with the discharge limits established in other MEPDES permits for fish hatcheries.

The Department reviewed 58 DMRs that were submitted for the period August 2007 – March 2014. A review of data indicates the following:

pH

Value	Limit (SU)	Minimum (SU)	Maximum (SU)
Range	6.0 – 8.5	7.0	7.6

Past performance at Governor Hill hatchery indicates that the pH exhibits consistent results within the required limits and that the discharge does not exhibit a reasonable potential to exceed the pH range limitation established by 38 M.R.S.A. § 464(4)(A)(5). Therefore, this permit is eliminating the pH monitoring requirement based on this new information. This action complies with the anti-backsliding provision at 40 CFR 122.44(l)(2)(i)(B)(1).

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

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

8. PUBLIC COMMENTS

Public notice of this application was made in the *Kennebec Journal* newspaper on or about July 1, 2011. The Department receives public comments on an application until the date a final agency action is taken on the application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to *Application Processing Procedures for Waste Discharge Licenses,* 06-096 CMR 522 (effective January 12, 2001).

9. RESPONSE TO COMMENTS

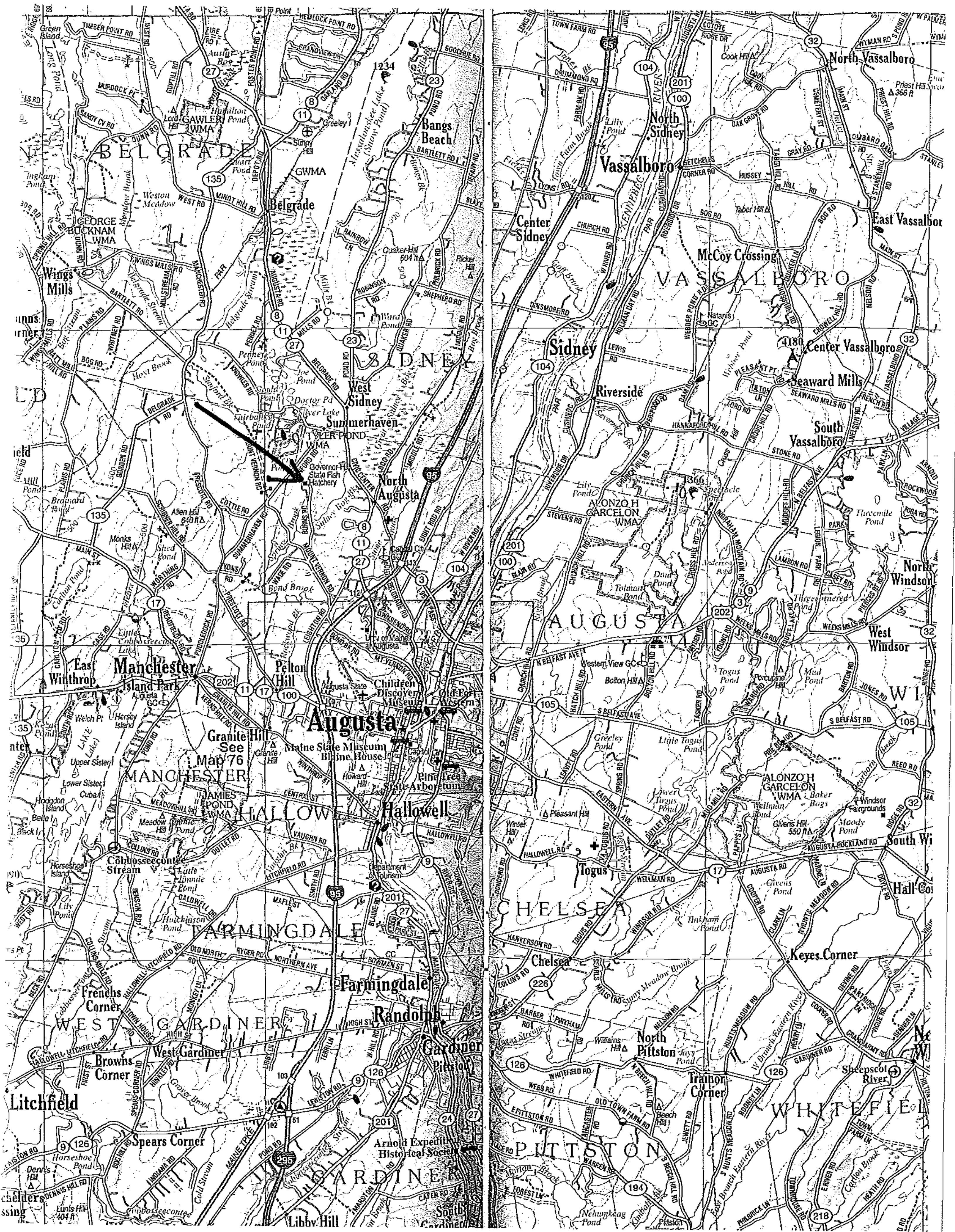
Reserved until the end of the public comment period.

10. DEPARTMENT CONTACTS

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

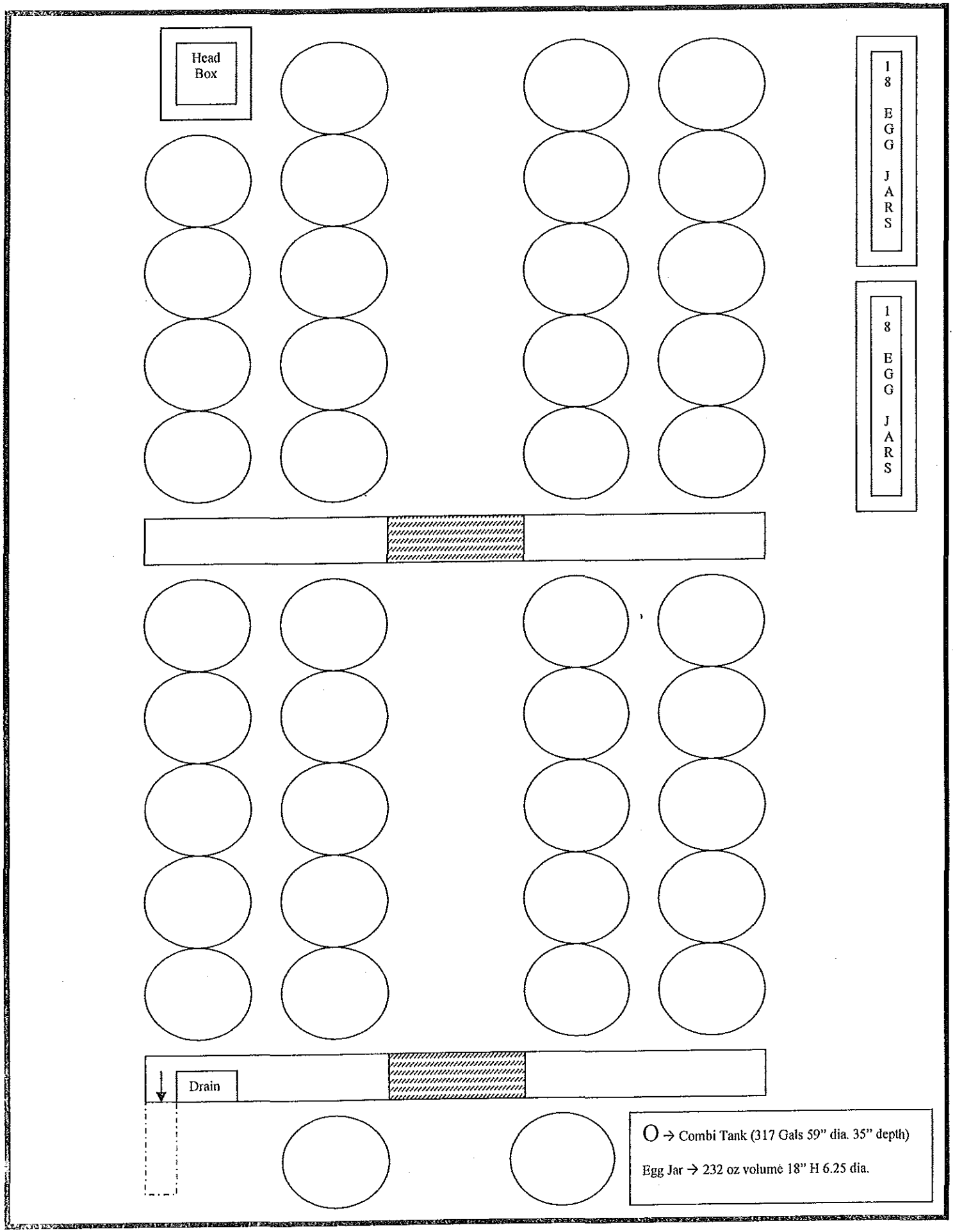
Bill Hinkel
Division of Water Quality Management
Bureau of Land & Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017
Telephone: (207) 485-2281
e-mail: bill.hinkel@maine.gov

ATTACHMENT A

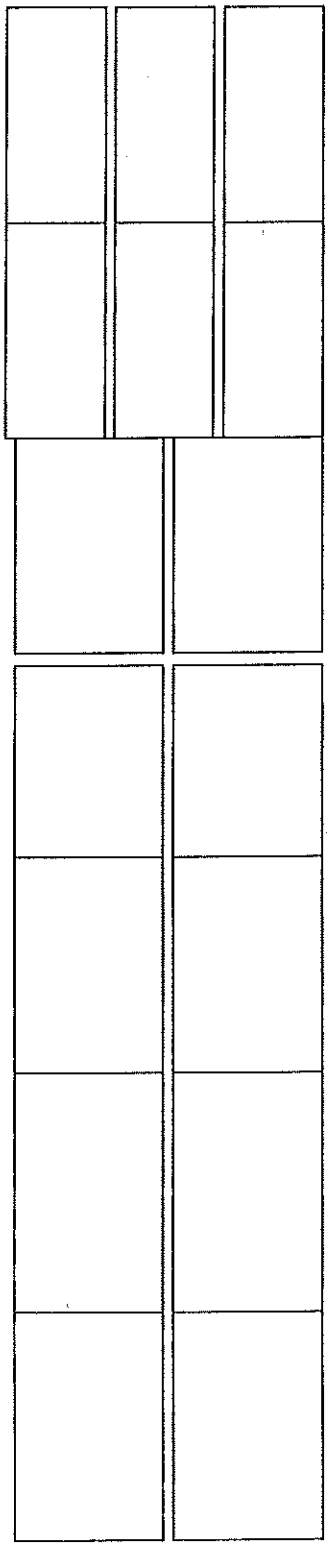


BELGRADE
Belgrade
GAWLER WMA
GEORGE BUCKNAM WMA
Wings Mills
Bangs Beach
GWMA
SIDNEY
West Sidney
Summerhaven
TYLER POND WMA
Governor Hill State Fish Hatchery
North Augusta
Sidney
Center Sidney
North Sidney
Vassalboro
VASSALBORO
North Vassalboro
East Vassalboro
McCoy Crossing
Center Vassalboro
Seaward Mills
South Vassalboro
Riverside
ALONZO H GARCELON WMA
AUGUSTA
Augusta
North Windsor
West Windsor
East Winthrop
Manchester
Island Park
Pelton Hill
Granite Hill
See Map 76
MANCHESTER
Maine State Museum
Blaine House
Pine Tree State Arboretum
Old Fort Western
JAMIES POND WMA
HALLOWELL
Hallowell
Cobbosseecontee Stream
Togus
Department of Tourism
FARMINGDALE
Farmingdale
CHELSEA
Chelsea
Keyes Corner
South Windsor
Frenchs Corner
WEST GARDINER
West Gardiner
Browns Corner
Randolph
Gardiner
Pittston
North Pittston
Trainor Corner
WHITEFIELD
Sheepscot River
Litchfield
Spears Corner
Arnold Expedition Historical Society
GARDINER
PITTSTON
Libby Hill

ATTACHMENT B


Head Box
18 EGG JARS
18 EGG JARS
Drain
O → Combi Tank (317 Gals 59" dia. 35" depth)
Egg Jar → 232 oz volume 18" H 6.25 dia.

Governor Hill Hatchery Pools Diagram



5 x 50 foot race ways Pools 1 thru 6

6 x 100 foot race ways Pools 7 thru 16