MASTER

STATE OF MAINE

Department of Environmental Protection

Paul R. LePage
GOVERNOR

Patricia W. Aho
COMMISSIONER

Mr. Michael Brown
Director of Fisheries and Hatcheries
Maine Department of Inland Fisheries and Wildlife
284 State Street, SHS 41
Augusta, ME 04330

July 8, 2013

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #MEG180005
Maine Waste Discharge License #W009104-5Y-A-N
Abbotts Pond - Final Permit

Dear Mr. Brown:

Enclosed please find a copy of your **final** MEPDES permit/WDL approving coverage under the Department of Environmental Protection's General Permit for the Application of Piscicides for the Control of Invasive Fishes. Please read the permit 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 287- 7693.

Sincerely,

Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality

Enc.
cc: James Crowley, DEP/CMRO
Sandy Mojica, USEPA

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

DEPARTMENT ORDER

IN THE MATTER OF

ME. DEPT INLAND FISHERIES & WILDLIFE	)	APPLICATION OF PISCICIDES FOR THE
ABBOTTS POND	)	CONTROL OF INVASIVE FISHES
SUMNER	)	GRANTING OF COVERAGE
MEG180005	)	#MEG180000
W009104-5Y-A-N **APPROVAL**	)	**GENERAL PERMIT**

The Department of Environmental Protection (Department) has considered the Notice of Intent submitted by the MAINE DEPARTMENT OF INLAND FISHERIES AND WILDLIFE (MDIFW), with supportive data, agency review comments and other related materials on file for coverage under the Application of Piscicides for the Control of Invasive Fishes General Permit, #MEG180000, Maine Waste Discharge License #W-009045-5Y-A-N, (copy attached) issued by the Department on September 9, 2009 for a five-year term, and FINDS THE FOLLOWING FACTS:

The applicant proposes to eradicate rainbow smelt *(Osmerus mordax)*, golden shiners *(Notemigonus crysoleucas)* and brown bullhead *(Amerius nebolosus),* introduced fish species in Abbotts Pond, Class GPA, in Sumner, Maine, through treatments with liquid and powder formulations of the approved piscicide rotenone. The applicant has stated that the invasive fish species have significantly disrupted the aquatic habitat of the 24-acre pond to the extent that brook trout (*Salvelinus fontinalis*) are nearly extirpated. The treatment program is part of MDIFW's Brook Trout Species Plan, Objective 4: Improve fishing quality in lakes and ponds of the Revised Strategic Management Plan for Fisheries 2001 -2016.

The applicant has indicated the Abbotts Pond aquatic piscicide treatment program complies with the provisions of General Permit #MEG180000 for control of invasive fishes utilizing an approved aquatic piscicide and appropriate treatment methods. Further, the applicant has indicated it will comply with requirements for biological monitoring, piscicide monitoring, water quality monitoring, physical monitoring, computer modeling, reporting, and all other terms and conditions of the General Permit for the Application of Piscicides for the Control of Invasive Fishes.

Administered in accordance with the General Permit, the discharges identified by the applicant will not have a significant adverse effect on water quality or cause or contribute to the violation of the water quality standards of the receiving water.

THEREFORE, the Department GRANTS coverage for MDIFW under the Application of Piscicides for the Control of Invasive Fishes General Permit, #MEG180000/ #W009045-5Y-A-N (copy attached) subject to the terms and conditions therein. The General Permit is valid until September 9, 2014, unless reissued by the Department. The applicant's coverage under the General Permit is valid for one year from the effective date below, unless renewed by the Department pursuant to the provisions of the General Permit, Part 1, Special Condition H, Continuing Coverage and Termination.

DONE AND DATED AT AUGUSTA, MAINE THIS 9th DAY OF July, 2013.

DEPARTMENT OF ENVIRONMENTAL PROTECTION.

BY: Michael Kuhns
For Patricia W. Aho, Commissioner

Public notice of the Notice of Intent was published on or about: January 10, 2013

A Notice of Intent was received by the Department on: May 21, 2013
A Notice of Intent was accepted by the Department on: June 12, 2013

Date filed with Board of Environmental Protection _____.

This Order prepared by Gregg Wood, BUREAU OF LAND & WATER QUALITY

MEG180005 2013 7/8/13

Filed
JUL 10 2013
State of Maine
Board of Environmental Protection

STATE OF MAINE

DEPARTMENT OF ENVIRONMENTAL PROTECTION

General Permit
Application of Piscicides for the Control of Invasive Fishes

Maine Pollutant Discharge Elimination System
Maine Waste Discharge License Program

Bureau of Land and Water Quality — September 1 2009
Maine Pollutant Discharge Elimination System (MEPDES) Permit — #MEG180000
Maine Waste Discharge License (WDL) — #W-009045-5Y-A-N

Note: Blue, underlined text within this document signifies hyperlinks to additional informational sources relative to the indicated text. Printed copies of these materials will be maintained by MDIFW.

TABLE OF CONTENTS

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

DEPARTMENT ORDER

IN THE MATTER OF

GENERAL PERMIT		) MAINE POLLUTANT DISCHARGE
PISCICIDES FOR THE CONTROL		) ELIMINATION SYSTEM PERMIT
OF INVASIVE FISHES		)
STATE OF MAINE		) AND
#W-009045-5Y-A-N		) WASTE DISCHARGE LICENSE
#MEG180000	**NEW**	) **APPROVAL**

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. §414-A et seq., and applicable regulations, the Department of Environmental Protection (Department, MEDEP) has considered the issuance of a Maine Pollutant Discharge Elimination System (MEPDES) Permit / Maine Waste Discharge License (WDL) for the **APPLICATION OF PISCICIDES FOR THE CONTROL OF INVASIVE FISHES** (GENERAL PERMIT), with its supportive data, agency review comments, and other related materials on file, and FINDS THE FOLLOWING FACTS:

PERMIT SUMMARY

Pursuant to applicable laws and rules of the State's Maine Pollutant Discharge Elimination System (MEPDES) / Maine Waste Discharge License (WDL) Program, the Department's Bureau of Land and Water Quality, Division of Water Quality Management has developed a general permit for the application (discharge) of piscicides for the control of invasive fishes. This general permit authorizes the Maine Department of Inland Fisheries & Wildlife (MDIFW) and its qualifying agents to directly discharge authorized aquatic piscicides to Class GPA, AA, A, B and C waters of the State, tributaries to Class GPA waters, and those waters having drainage areas of less than ten square miles, that contain populations of invasive fishes.

CONCLUSIONS

Based on the findings in the attached Fact Sheet dated July 21, 2009 and revised September 1, 2009, and subject to the conditions listed in Part I and Part II of this general permit, the Department makes the following conclusions:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.

2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.

3. The provisions of the State's antidegradation policy, 38 M.R.S.A. §464(4)(F), will be met, in that:

   (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;

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

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

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

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

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

5. The discharge of authorized aquatic piscicides in accordance with the terms and conditions of this general permit will provide adequate protection of non-target species.

6. The discharge of authorized aquatic piscicides in accordance with the terms and conditions of this general permit will not have a significant adverse effect on receiving water quality or violate the standards of the receiving water's classification.

ACTION

Based on the findings and conclusions as stated above, the Department APPROVES this Maine Pollutant Discharge Elimination System Permit / Maine Waste Discharge License General Permit for the APPLICATION OF PISCICIDES FOR THE CONTROL INVASIVE FISHES to Class GPA, Class AA, A, B, and C waters, tributaries to Class GPA waters, and those waters having drainage areas of less than ten square miles, that contain populations of invasive fishes, SUBJECT TO THE ATTACHED CONDITIONS, 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 included as Part I of this general permit.

3. The attached Standard Conditions included as Part II of this general permit.

The expiration date of this general permit is five (5) years from the date of signature below.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT AUGUSTA, MAINE THIS 9TH DAY OF SEPTEMBER, 2009

DEPARTMENT OF ENVIRONMENTAL PROTECTION.

This Order prepared by Robert D. Stratton, BUREAU OF LAND & WATER QUALITY

PART I – SPECIAL CONDITIONS

A. AUTHORITY

A permit is required for the direct or indirect discharge of pollutants to waters of the State pursuant to Maine law, 38 M.R.S.A. §413. The Maine Department of Environmental Protection (Department, MEDEP) may issue a general permit authorizing the discharge of certain pollutants pursuant to Chapter 529 of Department rules. The similarity of discharges for the application of authorized aquatic piscicides for the control of invasive fishes has prompted the Department to issue this general permit for those receiving waters not otherwise prohibited by Maine law and which contain populations of invasive fishes as determined by MDIFW pursuant to 38 MRSA §466, sub-§8-A. A violation of a condition or requirement of a general permit constitutes a violation of the State's water quality laws, and subjects the discharger to penalties under Maine law, 38 M.R.S.A. §349. Nothing in this general permit is intended to limit the Department's authority under the waste discharge and water classification statutes or rules. This general permit does not affect requirements under other applicable Maine statutes and Department rules.

B. SPECIALIZED DEFINITIONS

In addition to the definitions found in Department rule Chapter 520 and in the waste discharge and water classification laws, the following terms have the following meanings when used in this general permit.

1. Authorized Aquatic Piscicide. "Authorized aquatic piscicide" means granular, solid, powder, liquid, or other formulations of piscicides whose sole active ingredients are registered with both the United States Environmental Protection Agency (USEPA) and Maine Board of Pesticides Control (BPC) and are applied in accordance with USEPA approved label use by a licensed applicator to control invasive fishes. Specifically, the formulations that may be used under this permit are those below, or successor formulations with substantially the same constituents. From time to time, formulations may be re-registered or minor modifications, including product names, may be made subject to EPA and Maine BPC registration. If new formulations replace these listed below, the Notice of Intent (NOI) will include those formulations proposed for use, their specifications, and information sufficient to allow the Department to conclude that conditions and safeguards in this permit will be met.
    a. PRENTOX Prenfish Toxicant Liquid E.C. (EPA Reg No. 655-422) (5% rotenone).
    b. PRENTOX Rotenone Fish Toxicant Powder (EPA Reg No. 655-691) (7.4% rotenone).
    c. PRENTOX CFT Legumine™ Fish Toxicant (EPA Reg No. 75338-2). (5% rotenone) (upon registration with Maine BPC)
2. Booster Treatment. "Booster treatment" means one or more piscicide applications which are planned and executed as part of a comprehensive treatment program following an initial application within the same season.
3. Department. "Department" and 'MEDEP" mean the Maine Department of Environmental Protection.

B. SPECIALIZED DEFINITIONS (cont'd)

4. Invasive Fishes. "Invasive fishes" means a fish species considered invasive as determined by MDIFW pursuant to 38 MRSA §466, sub-§8-A. A species may be determined to be invasive for all waters or for specific waters.
5. Licensed Applicator. "Licensed applicator" means a person licensed by the State of Maine Department of Agriculture Board of Pesticides Control to apply aquatic piscicides.
6. MDIFW. "MDIFW" means the Maine Department of Inland Fisheries and Wildlife.
7. Notice of Intent ("NOI"). "Notice of Intent" or "NOI" means a notification of intent to seek coverage under this general permit, submitted by MDIFW to the Department on a form provided by the Department.
8. Notice of Termination ("NOT"). "Notice of Termination" or "NOT" means a notification of intent to end coverage of a piscicide treatment program for a waterbody licensed under this general permit, submitted by MDIFW on a form provided by the Department.
9. Public Water Supplier. "Public water supplier" means water systems which regularly serve 25 or more people per day or which have at least 15 service connections as defined in Chapter 22 M.R.S.A.§ 2601 and 10-144 CMR 231 Section 2 in the State of Maine Rules Relating to Drinking Water.
10. Treatment Area. "Treatment Area" means a defined waterbody containing identified invasive fishes with boundaries extending to identifiable physical obstructions beyond which unaided reestablishment of the invasive fishes is not anticipated by MDIFW. A treatment area typically includes an additional defined secondary effects zone downstream determined through modeling, in which decreasing concentrations of rotenone may be detected but which also provides opportunities for escape, refuge, and/or other means of non-target species protection.
11. Treatment Program. "Treatment Program" means an initial piscicide application and any booster applications within the same season and/or follow-up applications which are planned for subsequent years at rates and intervals specified in an NOI. It may also include the use of other non-chemical methods which will be used in combination with piscicide applications to enhance its efficacy.
12. Waters of the State. "Waters of the State" means any and all surface and subsurface waters that are contained within, flow through, or under or border upon this state or any portion of the state except such waters as are confined and retained completely upon the property of one person and do not drain into or connect with any other waters of the state, as defined at 38 M.R.S.A., §361-A.7.

C. APPLICABILITY AND COVERAGE

Coverage under this general permit is limited to those receiving waters that conform to the Area of Coverage described below and that have had a completed NOI accepted by the Department. Applicability of this general permit is limited to activities described in the NOI that are in conformance with the terms and conditions of this general permit.

C. APPLICABILITY AND COVERAGE (cont'd)

1. **Area of Coverage.** The geographic area covered by this general permit is the entire State of Maine. This general permit covers application of authorized aquatic piscicides by a licensed applicator to fresh waters of the State classified by Maine's water classification laws as Class GPA, Class AA, Class A, Class B, Class C, tributaries to Class GPA waters, and those waters having drainage areas of less than ten square miles, that contain populations of invasive fishes. No waterbody that serves as a Public Water Supply is eligible for coverage under this General Permit.

2 **General Restrictions.** Authorized piscicides may only be used where the hydrology of the receiving waterbody proposed for treatment allows for sufficient contact to prove effective against the target species. Aerial spraying of aquatic piscicides from fixed wing or rotary wing aircraft is not authorized under this general permit. **The Department may deny applications when the Department determines that proposed aquatic piscicide treatments are duplicative or ineffective in controlling the target species or that the methods and materials proposed do not adequately ensure protection of non-target resources or organisms.**

3. **Applicant.** MDIFW shall be the only approved general permit licensee. However, MDIFW may use qualified agents under its direct supervision and control in conducting activities approved by this general permit.

4. **Concentrations and Application Rates.** Maximum application rates and water concentrations shall comply with amounts specified on USEPA registered product labels and as specified in this permit. MDIFW will calculate actual dosages based upon the particular species pursuant to the tables of target concentrations in the Environmental Assessment, target species, site conditions, and other appropriate factors, and shall supply this information with the NOI. MDIFW shall comply with all applicable state laws.

5. **Treatment Plan.** Prior to piscicide application, MDIFW shall develop a treatment plan specifying the treatment program for the infested water body as directed in MDIFW's Rapid Response Plan for Invasive Aquatic Plants, Fish, and Other Fauna, Part 2: Fish and other Fauna Protocol and will retain the treatment plan at the MDIFW office in Augusta, available for inspection.

6. **Application Methods.** MDIFW shall use methods and rates optimal for successful treatment while limiting impacts to non-target resources and organisms. Specific application methods are described in the Fact Sheet. An application will consist of either a whole lake treatment, where the objective is to remove all fish species throughout a defined treatment area, or a spot or area treatment, where the objective is to remove specific populations of fish when concentrated in a limited area of the treatment area.

   MDIFW shall provide details of the proposed treatment program demonstrating accommodations incorporated to ensure protection of non-target resources and organisms such as indicated below. If aquatic piscicide toxicity is anticipated to extend beyond the defined treatment area based on modeling or other predictive tools, MDIFW shall provide a clear demonstration of the significant need to conduct the program as designed as well as measures taken to ensure protection of non-target resources and organisms.

C. APPLICABILITY AND COVERAGE (cont'd)

Table 1. Application Methods for Protecting Non-target Resources and Organisms

Description (provide details for each with NOI)	Indicate
Well defined treatment area with no toxic discharge beyond physical obstructions.	
Well defined treatment area & minimized secondary effects zone with provisions for non-target protection.	
Summer treatment program with provisions for non-target protection..	
Fall/winter treatment program with provisions for non-target protection..	
Physical drawdown of treatment area planned.	
Provisions to treat/recycle/retain treated discharges until nontoxic.	
Limited spot/area treatments based on life histories of target species.	
Protection ensured for non-target resources and organisms by other means.	

D. DISCHARGE CONCENTRATION LIMITS

In conducting an approved invasive fish treatment program, average piscicide concentrations within the treatment area and secondary effects zone shall at no time exceed USEPA approved label rates. Further, to achieve greater protection of non-target resources and organisms while still achieving treatment efficacy, the treatment program shall be designed so that average concentrations of piscicides after dilution and dispersion shall not exceed the following concentrations which are all at or below label rates, as described in the Fact Sheet.

Fish designated by the MDIFW as invasives pursuant to 38 MRSA §466, sub-§8-A may be treated with an authorized piscicide provided that all conditions of this General Permit are met including that at no time shall the average concentration within the treatment area and secondary effects zone exceed the highest specified for the applicable piscicides in Table 2.

Table 2. Maximum permitted piscicide application rates authorized in this general permit.

	PRENTOX Prenfish Toxicant Liquid E.C.	PRENTOX CFT Legumine Fish Toxicant	PRENTOX Rotenone Fish Toxicant Powder
Maximum Permitted Concentration	2.0 mg/L	2.0 mg/L	2.0 mg/L

E. MONITORING

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. Routine water quality 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 (DHHS). Monitoring requirements are described in summary below and in further detail in the Fact Sheet and constitute minimum monitoring requirements. **Additional monitoring will be based on waterbody specific and treatment specific conditions and properties and will be**

E. MONITORING (cont'd)

specified in the NOI as needed. MDIFW's monitoring plans shall also consider information received from consultation with the MDIFW Non-game Program, MDIFW Regional Wildlife Biologist, MDOC Natural Areas Program, MDMR Bureau of Sea-Run Fisheries and Habitats, US Fish and Wildlife Service, and US NOAA Fisheries.

To determine the effectiveness of the piscicide treatment program, the need for booster piscicide treatments, and effects on non-target resources and organisms, monitoring efforts shall consist of biological, piscicide, chemical, and physical monitoring and computer modeling for the treatment area and downstream. The following tables provide the types of monitoring in each of these categories, to be indicated by the permittee in the NOI and reviewed and approved by the Department.

Table 3. Proposed monitoring activities within treatment area associated with rotenone treatment of freshwater lake. The permittee shall provide justification for proposed monitoring choices with the NOI.

Monitoring Within the Treatment Area			
Description	Before Treatment	During Treatment	After Treatment
Biological Monitoring -Conduct all surveys indicated unless extenuating circumstances and justification provided			
Treatment area fish survey	X	---	X
Treatment area visual invertebrate survey	X	---	X
Area non-game, threatened or endangered species survey.	X	---	---
PEARL species research	X	---	---
Piscicide Monitoring			
Sentinel fish cages in treatment area (standard, other options must be justified)	---	---	X
Sentinel fish tested offsite with water samples from treatment area using *S. fontinalis* or other MEDEP approved species.	---	---	
Indirect rotenone levels using *C. dubia* or other MEDEP approved species.	---	---	
Direct rotenone levels (not currently available in Maine)	---	---	
Water Quality Monitoring - Conduct all monitoring indicated unless extenuating circumstances and justification provided			
Dissolved oxygen profiles	X	---	X
Water temperature profiles (degrees C)	X	---	X
Secchi Disk transparency	X	---	X
pH	X	---	X
Alkalinity	X	---	X
Phosphorus	X	---	X
Conductivity	X	---	X
Physical Monitoring -drawdown and intermittent outlet conditions only			
Water level	X	X	X
Outlet flow	X	X	X
Computer Modeling of Rotenone Degradation and Dispersal -conduct and provide both models unless extenuating circumstances and justification provided.			
Computer modeling of treatment area	X	---	---
Computer modeling of outlet	X	---	---

E. MONITORING (cont'd)

Table 4. Proposed monitoring activities downstream of treatment area associated with rotenone treatment of freshwater lake. The permittee shall provide justification for proposed monitoring choices with the NOI.

Monitoring Within the Secondary Effects Zone and Downstream of Treatment Area			
Description	Before Treatment	During Treatment	After Treatment
Biological Monitoring -Conduct all surveys indicated unless extenuating circumstances and justification provided			
Secondary effects zone and downstream fish composition using IFW Stream Survey Protocol Level 1, Level 2 or Level 3	X	---	X
Secondary effects zone and downstream habitat composition		---	
Secondary effects zone and downstream visual invertebrate survey	X	---	X
Area non-game, threatened or endangered species survey.	X	---	---
PEARL species research	X	---	---
Piscicide Monitoring			
Sentinel fish cages in secondary effects zone and downstream area(s) (standard, other options must be justified)	---	---	X
Sentinel fish tested offsite with water samples from downstream area using *S. fontinalis* or other MEDEP approved species.	---	---	
Indirect rotenone levels using *C. dubia* or other MEDEP approved species.	---	---	
Direct rotenone levels (not currently available in Maine)	---	---	
Water Quality Monitoring -Conduct all monitoring indicated unless extenuating circumstances and justification provided			
Dissolved oxygen profiles	X	---	X
Water temperature profiles (degrees C)	X	---	X
Secchi Disk transparency	X	---	X
pH	X	---	X
Alkalinity	X	---	X
Phosphorus	X	---	X
Conductivity	X	---	X
Physical Monitoring -drawdown and intermittent outlet conditions only			
Water level	X	X	X
Outlet flow	X	X	X
Computer Modeling for Rotenone Degradation and Dispersal -conduct and provide both models unless extenuating circumstances and justification provided.			
Computer modeling of treatment area	X	---	---
Computer modeling of secondary effects zone and downstream areas.	X	---	---

E. MONITORING (cont'd)

1. **Biological Monitoring.** Aquatic community monitoring shall be conducted as follows:

   a. **Treatment Area**. MDIFW will monitor the fish populations within the treatment area at least once before each initial annual treatment and within one year after the treatment program ends to evaluate treatment efficacy and effects on non-target fish species.

   b. **Downstream Areas**. For treatment with outflow during the period when the piscicide is active within the treatment area, MDIFW shall monitor fish populations in one representative area within the secondary effects zone and one representative area further downstream below the outlet once before treatment and within one year after the treatment program ends.

      Treatment area and downstream fish monitoring shall be conducted during the field season and at a time chosen to be representative of normal conditions. Monitoring methods shall consist of visual shoreline surveys followed by one or more of the following: angler surveys, seine, gillnet, minnow trap, electrofishing, or other appropriate methods. MDIFW shall record fishes found by scientific name and report any evidence of negative effects of the treatment program on those fishes to the Department.

   c. **Non-Target Fauna.** MDIFW will consult with HMAP and the MDIFW Reptile, Amphibian, and Invertebrate Group Leader before filing a general permit NOI to determine the presence, composition, and relative abundance of any known non-target fauna in the treatment area and outlet areas. MDIFW will also conduct visual observations in the treatment area, secondary effects zone, and further downstream throughout the treatment program for treatment-related effects on macroinvertebrates, fish, and other aquatic organisms. MDIFW shall report the occurrence and significance of any adverse findings within 24-hours. MDIFW and the Department shall evaluate the occurrence and determine an appropriate course of action. MDIFW shall also report observations on recovery of non-target faunal communities after treatment.

2. **Piscicide Concentration Monitoring.** Unless otherwise designated and adequately justified in the NOI, piscicide sampling will be conducted through sentinel fish testing. The permittee shall conduct monitoring within the treatment area once within 30-hours of each initial annual treatment to determine the concentration (mg/L) of rotenone at the time of treatment, at the time of testing, and the necessity of additional (booster) treatments. A minimum of three grab samples shall be collected for water column profile analysis from the surface to the bottom. Analyses shall be conducted using bioassay methods described in Demong (1992) using a minimum of three 3-6-inch long live brook trout per profile depth, with trout responses used to calculate rotenone concentrations. Results shall be reported to the Department in writing pursuant to Permit Special Condition F. Under unusual conditions and Department approval, sentinel cages may be proposed to be replaced with collection of treated water and laboratory sentinel fish (*Salvelinus fontinalis*) testing or testing on

E. MONITORING (cont'd)

Ceriodaphnia dubia according to standard toxicity testing methods, proper sample handling requirements, etc. The monitoring location shall be specified on a map submitted with the NOI. When ambient conditions do not favor brook trout health and survival, MDIFW may propose indigenous sentinel species instead. MDIFW computer models of rotenone dilution and decomposition can be used to predict treatment times and detoxification rates, subject to Department approval. Sentinel cage testing must be used to determine the toxicity of discharge water and effects on non-target resources and organisms.

a. Summer treatments: During summer treatments, rotenone degradation in surface waters occurs more rapidly, typically less than seven days at 70 degrees F. MDIFW will monitor rotenone levels in a treatment area with sentinel cages. **Summer treatments are preferred by the Department when feasible based on the developmental stage of target species, because of more rapid rotenone decomposition and a greater ability to protect non-target resources and organisms**.

b. Fall/winter treatments: During fall and winter treatments, rotenone degradation occurs more slowly, typically between three and twelve weeks depending on water conditions such as temperature, depth, organic matter and light intensity. MDIFW anticipates detoxification during the spring snow melt and turnover at the latest. Sentinel cages will be used to determine when the lake is safe to restock. **Fall and winter treatments will only be considered when there are no other practical alternatives and when it can be clearly demonstrated and verified by sentinel cage testing and other available methods that non-target resources and organisms will be protected to the extend possible and not unreasonably adversely impacted.**

c. Downstream Monitoring. Secondary effects zone and downstream monitoring is required when a whole lake treatment is performed and there is anticipated to be outflow during the time of effective piscicide concentrations within the treatment area. The permittee shall conduct residual rotenone toxicity testing within the secondary effects zone and in proximity to the downstream boundary of the secondary effects zone immediately upon occurrence of post-treatment outlet flow. This analysis shall utilize 48-hour toxicity tests on five live brook trout placed in sentinel cages and timed so that completion of the test shall occur no less than 48-hours before outlet flow. When ambient conditions do not favor brook trout health and survival, MDIFW may propose indigenous sentinel species instead. Analyses shall be repeated at one-week intervals until tests indicate 100% survival of the sentinel fish, regardless of the status of outlet flow. Results shall be reported to the Department in writing pursuant to Permit Special Condition F. The sampling location will be designated on a map submitted with the NOI and will be representative of downstream conditions. Additional downstream sentinel locations may be required to demonstrate protection of sensitive non-target resources and organisms.

E. MONITORING (cont'd)

Requirements for secondary effects zone and downstream monitoring for spot or area treatment shall be based on the dilution within the receiving water and whether the discharge is anticipated to result in the release of detectable piscicide concentrations downstream. This determination shall be made by the Department based on the extent of spot or area treatments proposed.

d. Duration of Piscicide Monitoring. MDIFW will monitor piscicide levels in the treatment area to determine when the water is sufficiently nontoxic to restock with fishes and will monitor piscicide levels within the secondary effects zone and further downstream to demonstrate that non-target resources and organisms within are protected. Monitoring will be conducted until it is clearly demonstrated that the discharge is non-toxic to non-target resources and organisms.

3. Water Quality Monitoring. MDIFW will sample lake water quality at least twice per field season, separated by approximately 60-days (i.e. spring/summer and fall) timed to entail pre and post-treatment during years in which treatment occurs, for the following parameters: dissolved oxygen profiles (mg/L), temperature profiles (degrees C), Secchi disk transparency (m/ft), pH (s.u., at surface and within 1-meter of bottom), alkalinity (mg/L $CaCO_3$, at surface and within 1-meter of bottom), total phosphorous (mg/L), and conductivity (umhos/cm). Monitoring shall conform to the Department's Standard Field Methods for Lake Water Quality Monitoring and shall be reported to the Department in writing pursuant to Permit Special Condition F.

4. Physical Monitoring. For treatment programs involving a drawdown and for those with intermittent outlet conditions, MDIFW will propose a frequency for, and conduct, physical monitoring based on site specific hydrologic factors, with a minimum frequency consisting of once per month during the active period for the piscicide.

5. Computer Modeling. MDIFW will conduct and provide results of computer modeling predictions of rotenone degradation and dispersal in treatment areas and downstream areas.

F. REPORTING

MDIFW shall conduct monitoring programs as described in Part I- Special Conditions. MDIFW shall report monitoring results to the Department as follows:

Piscicide concentration monitoring results shall be reported on a quarterly basis, with the results of monitoring conducted from January through June each year (2 quarters) reported to the Department on or before July 15; the results of monitoring conducted from July through September each year reported on or before October 15; and the results of monitoring conducted from October through December reported on or before January 15.

Biological, water quality, and physical monitoring results for each calendar year in which treatments occur shall be reported on an annual basis in a report to the Department submitted on or before January 15 of the following year.

F. REPORTING (cont'd)

Computer modeling results shall be provided with the NOI and immediately upon discovery that modeling predictions have changed from previously submitted model results.

A signed copy of all reports required herein shall be submitted to the Department's assigned compliance inspector (unless otherwise specified) at the appropriate DEP regional office (Portland, Augusta, Bangor, Presque Isle), to be assigned upon approval of the NOI, based on the location of the treatment program.

G. NOTIFICATION AND ACCEPTANCE

1. **NOI Required.** MDIFW shall submit a completed **Notice of Intent (NOI)** with the appropriate initial permit fee to the Department for review and approval. NOI forms may be obtained from, and completed forms must be sent or hand delivered to:

   Department of Environmental Protection
   Bureau of Land and Water Quality
   Division of Water Quality Management, Permitting Section
   17 State House Station, Augusta, ME 04333-0017

   The Department reserves the right to request additional information from MDIFW as necessary to determine if the application of authorized aquatic piscicides is warranted and justified.

2. **Required NOI Information.** A complete NOI must contain the following information for each individual piscicide treatment program the applicant proposes to conduct.

   a. The legal name, mailing address and telephone number (e-mail address optional) and signature of MDIFW staff member responsible for the invasive fishes control project.

   b. The legal name, mailing address, telephone number (e-mail address optional) and affiliation of any agents assisting, in full or in part, with the application of piscicides acting as agents of the MDIFW.

   c. The legal name, mailing address, telephone number and Maine Board of Pesticides Control license number (e-mail address optional) of the licensed applicator to perform the aquatic piscicide treatment.

   d. A statement demonstrating a significant need to control the invasive species and why application of the authorized aquatic piscicides is the most effective means of fish control. The statement must provide reasonable justification for the proposed treatment. Significant need to control the target species includes, but is not limited to:

      1. demonstration that a target population of aquatic fishes cannot be controlled by non-chemical means;

      2. the potential for the invasive fish populations to spread rapidly;

      3. any significant disruption of aquatic habitat caused by the invasive species;

G. NOTIFICATION AND ACCEPTANCE (cont'd)

4. if treatment is required to enable a broader scale fish control project under an aquatic fish management plan;
5. if treatment is needed to restore habitat and/or that failure to rapidly control the invasive species threatens to result in significant environmental harm to this or other natural resources.

e. Justification for the project discussing why piscicide use is proposed over other treatment options which were considered, attempted, or are being used secondarily. Include a statement as to whether the proposed waterbody has been treated with aquatic piscicides in the past, and if so, dates, amounts, and identification of the aquatic piscicide(s) applied.

f. A statement whether the proposed aquatic piscicide application(s) will be performed:
   1. as a rapid response project requiring immediate action to contain a newly identified invasive fish population, and why the response is necessary;
   2. in conjunction with a specific written management plan for the receiving water and including a reference to that plan; or
   3. pursuant to other resource management tools or objectives, details provided.

g. A detailed project timeline describing proposed before, during, and after treatment data collection and monitoring.

h. A topographic or similar type map, or copy thereof, extending approximately one mile beyond the proposed treatment site and specific detailed written directions to the proposed treatment site. The extent of the defined treatment area and secondary effects zone shall be indicated.

i. A map of the waterbody to be treated showing monitoring location(s) and the area(s) to be treated if spot treatments are proposed. The extent of the defined treatment area and secondary effects zone shall be indicated.

j. A description of each area to be treated, including, but not limited to, range of depths, average depth, substrate character (sand, gravel, mud/organic, etc), identification of any intermittent or permanent inlets to or outlets from the waterbody, presence or absence and characterization of non-target fish species within the waterbody, and any physical aspects of the site(s) to be treated that affect operations. The estimated size of the area(s) to be treated reported in square meters or acres. The estimated volume(s) to be treated reported in cubic meters or acre-feet.

k. The USEPA registration number, formulation, concentration, maximum application rate, and frequency of application for all authorized aquatic piscicides proposed for use.

l. Project modifications for protection of non-target resources and organisms. The treatment area must be defined in terms of the presence of identified invasive fishes, with the boundaries extending to identifiable physical obstructions beyond which unaided reestablishment of the invasive fishes is not anticipated. The piscicide treatment program shall be designed to limit toxic piscicide discharges

G. NOTIFICATION AND ACCEPTANCE (cont'd)

to within the defined treatment area or shall adequately demonstrate to the Department's satisfaction, project modifications that otherwise ensure protection of non-target resources and organisms. MDIFW shall provide information on the extent of any secondary effects zone and opportunities for escape, refuge, etc.

m. Selection of the appropriate biological monitoring regime for the effects of the piscicide(s) on aquatic communities, including non-target species, pursuant to Part I – Special Conditions of this general permit. Monitoring shall be sufficient to evaluate the community of fishes as to species present and relative abundances before and after the treatment program. Any deviations from these standard protocols will be detailed and a justification for deviation supplied with the NOI.

n. Selection of the appropriate piscicide monitoring regime for the piscicide used and type of treatment pursuant to Part I – Special Conditions of this general permit. Any deviations from these standard protocols will be detailed and a justification for deviation supplied with the NOI.

o. Selection of the appropriate water quality monitoring regime pursuant to Part I – Special Conditions of this general permit. Any deviations from these standard protocols will be detailed and a justification for deviation supplied with the NOI.

p. Selection of the appropriate physical monitoring regime pursuant to Part I – Special Conditions of this general permit. Any deviations from these standard protocols will be detailed and a justification for deviation supplied with the NOI.

q. Selection of the appropriate computer modeling regime pursuant to Part I – Special Conditions of this general permit. Any deviations from these standard protocols will be detailed and a justification for deviation supplied with the NOI.

r. Submit a statement that the MDIFW Non-Game Program, MDIFW Regional Wildlife Biologist, Maine Department of Conservation-Natural Areas Program, Maine Department of Marine Resource-Bureau of Sea-Run Fisheries and Habitats, USFWS, and US NOAA Fisheries (for projects affecting estuarine or marine habitats) have received notice of the proposed treatment and have responded that no elements of special concern for rare, threatened, or endangered species or natural communities are known in the affected area or that the treatment as proposed is considered to not significantly threaten the species or natural communities in question.

s. A statement demonstrating notification of abutting landowners to all affected resources (efforts to notify when unsuccessful), lake associations / watershed associations, and the municipality, counties and/ or LURC Regional Offices.

t. A copy of the press release or advertisement publication, date, and name of newspaper with general circulation in the area of the proposed treatment program.

u. Signatures of the MDIFW Division Contact and Managing Agent certifying that the NOI were prepared with direct supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Failure to submit all required NOI information may result in finding the NOI incomplete for processing and may delay processing or result in denial of the NOI.

G. NOTIFICATION AND ACCEPTANCE (cont'd)

3. **Public Informational Meeting, Filing of a NOI, Public Notice Required.** Prior to submitting a NOI for an invasive fish control project under this General Permit, MDIFW must hold a public informational meeting in the vicinity of the treatment area or, if the treatment area is extremely remote, in a location convenient to most abutting landowners to all affected resources. The purpose of the meeting is for MDIFW to inform the public of the project and its anticipated environmental impacts, and to educate the public about the opportunities for public comment to the Department during the application process. At least 10 days prior to the public informational meeting, notice of the meeting must be mailed to abutting landowners to all affected resources, the civil jurisdiction (for example, municipal office or in LURC jurisdiction, the LURC regional office and County Commissioners' office) in which the treatment will be located, and any affected lake associations / watershed associations. Notice of the meeting must also be published once in a newspaper of general circulation in the project area. MDIFW shall compile a record of all attendees, comments received, and resulting actions.

   A copy of the NOI must be filed with each civil jurisdiction in which the treatment will be located, and with the MDIFW Non-Game Program, MDIFW Regional Wildlife Biologist, MDOC Natural Areas Program, MDMR Bureau of Sea-Run Fisheries and Habitats, USFWS, US NOAA Fisheries (for projects affecting estuarine or marine habitats), and lake associations / watershed associations in proximity to the treatment area, at the time it is submitted to the Department. Further, notice that MDIFW is applying to conduct the proposed project must be provided to abutting landowners to all affected resources. A press release must be issued or an advertisement must be published in a newspaper having general circulation in the area of the treatment program within the 30-day period prior to submittal of the NOI to the Department. Information to be provided in the press release or advertisement will include treatment purpose, treatment methods and materials, treatment location, date, and duration, how to get more information, and any applicable cautionary notes regarding human water consumption, water contact, livestock use, and irrigation. Note, **no waterbody that serves as a public water supply is eligible for coverage under this general permit**.

   In addition, the treatment area(s) will be posted at likely access points with information about the treatment including advisories against swimming, drinking, and eating dead fish. **All known public access points to areas affected by the treatment must be closed during the period in which the authorized piscicide is active**.

4. **Review of NOI and Other Information.** Upon review of a NOI for determination of coverage under this general permit, the Department may, at its discretion, require an applicant to apply for an individual permit for any proposed treatment. In making such a determination, the Department may consider factors including, but not limited to, the location of the waterbody and water quality issues particular to that area, expressed comments from state or federal agencies or the general public, consideration of invasive fish control strategies in or surrounding the proposed treatment sites, and potential effects on non-target resources and organisms.

G. NOTIFICATION AND ACCEPTANCE (cont'd)

5. **Effective Date of Coverage.** The Department shall notify an applicant of coverage under this general permit within 30 days of receipt of each complete NOI as to whether or not coverage for the specific discharge is permitted. If the Department does not notify the applicant within 30 days, the NOI is accepted and coverage is granted. In the event coverage is not granted, the Department shall notify the applicant of the reason(s) for not granting coverage. MDIFW may apply for issuance of an individual waste discharge license if the proposed discharge(s) is not acceptable for coverage under this general permit.

   Pursuant to the Department's administrative Rule Concerning the Processing of Applications and other Administrative Matters (06-096, Chapter 2, section 24.B.1), "(w)*ithin 30 days of the filing of a license decision by the Commissioner with the Board* (of Environmental Protection), *an aggrieved person may appeal to the Board for review of the Commissioner's decision*." The Department notes that a permittee has the legal authority to proceed with an approved project upon approval by the Commissioner and subject to any conditions established. However, the Department advises that **if MDIFW proceeds with an approved project prior to the end of the 30-day appeal period, it assumes all risks and responsibilities in the event that the Commissioner's decision is overturned or modified on appeal.**

6. **Changed Conditions.** In the event that MDIFW proposes to make significant changes in the nature or scope of the aquatic piscicide treatment(s) described in a NOI previously submitted and approved, MDIFW shall notify the Department as soon as becoming aware of and before implementing such changes. Based on its evaluation of proposed changes, the Department may require the submission of a new NOI or application for an individual waste discharge license. Significant changes include, but are not limited to, changes in the extent of the waterbody or areas to be treated, changes in the hydrology in and surrounding the treatment area, changes in methods or materials used, changes in facts or information described in the NOI previously submitted and approved, or changes in anticipated impacts to non-target resources or organisms.

7. **Notice of Termination (NOT)**. The permittee holding approval to discharge pursuant to this general permit may submit a Notice of Termination (NOT) on a form provided by the Department at any time to voluntarily terminate coverage. Authorization to discharge under this general permit terminates on the day the signed NOT is received by the Department.

H. CONTINUING COVERAGE AND TERMINATION

1. **Notices By Applicant and Payment of Annual Fees.** The term of this general permit is five years, and coverage for an individual project under this general permit lasts for a period of 12 months from the date the NOI is approved by the Department or though the expiration date of this general permit, which ever period is shorter. MDIFW may continue project coverage under this general permit from one year to the next, contingent upon compliance with the terms and conditions of the general permit, payment of an annual fee pursuant to 38 M.R.S.A. §353-B, demonstration of

H. CONTINUING COVERAGE AND TERMINATION (cont'd)

a continuing significant need to control the target species and provided there are no significant changes in the discharge as described in the NOI. **A statement demonstrating a significant need to control the target species and coordination with a management strategy must accompany MDIFW's annual fee for continuing coverage.** The demonstration of significant need shall also be sent to the MDIFW Non-Game Program, MDIFW Regional Wildlife Biologist, MDOC Natural Areas Program, MDMR Bureau of Sea-Run Fisheries and Habitats, USFWS, US NOAA Fisheries (for projects affecting estuarine or marine habitats), abutting landowners to all affected resources (describe efforts to notify when unsuccessful), and affected lake associations / watershed associations. Failure to pay the annual fee within 30 days of the anniversary date of previous NOI coverage is sufficient grounds for revocation or suspension of coverage. If changes occur or are proposed, MDIFW shall notify the Department as specified in Part I.G.6 of this general permit.

2. Individual Permit Coverage. The Department may require that MDIFW apply for an individual permit to apply aquatic piscicides for the following reasons:

a. The aquatic piscicide application project is not in compliance with the conditions of this general permit.

b. The aquatic piscicide application project is a significant contributor of pollutants. In making this determination, the Department may consider the following factors:

1. the location of the project with respect to waters of the State;

2. the size of the discharge;

3. the quantity and nature of the pollutants discharged to waters of the State; or

c. The project as proposed is determined to present significant adverse impacts on non-target resources and/or organisms.

d. Any other factors the Department determines are relevant, including information pursuant to Part I, §3 and §5, and pursuant to Department Rules, Chapter 529.

3. Exclusion from Coverage. When an individual MEPDES Permit / Maine WDL is issued to MDIFW, the applicability of this general permit to MDIFW for that project is automatically terminated on the effective date of the individual Permit/WDL.

PART II – STANDARD CONDITIONS

The application of authorized aquatic piscicides for invasive fish control under this general permit must, at all times, comply with the State's water quality laws, including, the following restrictions, limitations and conditions.

A. NARRATIVE EFFLUENT LIMITATIONS.

This permit is subject to the following conditions outside of the defined treatment area and a minimized secondary effects zone:

1 The discharge 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 discharge shall not contain materials in concentrations or combinations which pose unacceptable risks to non-target species or resources or which would impair the usages designated by the classification of the receiving waters.
3. The discharge may not impart color, taste, turbidity, radioactivity, settleable materials, floating substances or other properties that cause the receiving water to be unsuitable for the designated uses ascribed to its classification.
4. Notwithstanding specific conditions of this general permit, the discharge 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.

B. MONITORING REQUIREMENT

The Department may require, following approval of a NOI, any monitoring of an individual discharge in addition to the standard protocols contained in this permit as may be reasonably necessary in order to characterize the nature, volume or other attributes of that discharge or its sources.

C. OTHER INFORMATION

When MDIFW becomes aware that it has failed to submit any relevant facts or submitted incorrect information in the NOI or in any other report to the Department, MDIFW shall promptly submit such facts or information.

D. OTHER APPLICABLE CONDITIONS

The conditions applicable to all permits in Department rule Chapter 523 sections 2 and 3 also apply to discharges pursuant to this general permit and are incorporated herein as if fully set forth.

E. ACCESSIBILITY

Employees and agents of the Department may enter any property at reasonable hours in order to determine compliance with water quality laws or this general permit.

F. SEVERABILITY

In the event that any provision or part thereof, of this general 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.

PART III – FACT SHEET

Application of Piscicides for the Control of Invasive Fishes

Maine Pollutant Discharge Elimination System
Maine Waste Discharge License Program

DATE: July 21, 2009
REVISED: September 1, 2009

MEPDES Permit: **#MEG180000**
Maine WDL: **#W-009045-5Y-A-N**

Note: Blue, underlined text within this document signifies hyperlinks to additional informational sources relative to the indicated text. Printed copies of these materials will be maintained by MDIFW.

A. AREA OF COVERAGE AND RECEIVING WATER CLASSIFICATION

The area of coverage under this general permit is the entire state of Maine. This general permit covers the direct discharge of authorized aquatic piscicides, as defined in Part I.B.1. of the general permit, to fresh waters classified by Maine law as Class GPA, AA, A, B, C, tributaries to Class GPA waters, and those waters having drainage areas of less than ten square miles, that contain populations of invasive fishes. No waterbody that serves as a public water supply is eligible for coverage under this general permit.

B. APPLICATION SUMMARY

The Maine Department of Environmental Protection (Department, MEDEP) has issued this general permit authorizing direct discharges of aquatic piscicides by the Maine Department of Inland Fisheries and Wildlife (MDIFW) and its qualifying agents to certain waters of the State. MDIFW shall file a separate Notice of Intent (NOI) for each individual piscicide treatment program. A copy of the NOI must also be sent to the civil jurisdiction in which the treatment program will be located; to the MDIFW Non-Game Program, MDIFW Regional Wildlife Biologist, MDOC Natural Areas Program, MDMR Bureau of Sea-Run Fisheries and Habitats, US Fish and Wildlife Service, US NOAA Fisheries (for projects affecting estuarine or marine habitats), and lake associations /watershed associations in proximity to the treatment area. Further, notice of the proposed project must be provided to abutting landowners to all affected resources. Coverage under this general permit is dependent upon the ability to meet the eligibility, and the special, standard, and general conditions of the general permit. Continuing coverage is contingent upon compliance with the terms and conditions of the general permit, payment of an annual fee, demonstration of a continuing significant need to control the target species, and provided there are no significant changes in the discharge as described in the NOI. Coverage for MDIFW or the waterbody may be terminated in the event of non-compliance with the terms and conditions of the general permit or based on a Department determination that the discharge is having an unreasonable adverse impact on receiving water quality, non-target resources or organisms. MDIFW may apply for an individual Maine Pollutant Discharge Elimination System (MEPDES) Permit / Maine Waste Discharge License (WDL) for waterbodies or activities that are not covered by this general permit.

C. REGULATORY SUMMARY

A permit is required for the discharge of aquatic piscicides pursuant to Maine law,

38 M.R.S.A. §413(1) and Department rule, Chapter 514. A general permit authorizing the discharge of certain pollutants may be issued pursuant to Department rule Chapter 529. The similarity of discharges resulting from the application of authorized aquatic piscicides for the control of invasive fishes prompted the Department to issue this general permit for those receiving waters not otherwise prohibited by Maine law and that contain population(s) of invasive fishes.

A violation of a condition or requirement of a general permit constitutes a violation of the State's water quality laws, and subjects the discharger to penalties under Maine law, 38 M.R.S.A. §349.

C. REGULATORY SUMMARY (cont'd)

Pursuant to Maine law, 22 M.R.S.A. §1471-A, the Maine Board of Pesticides Control within the Maine Department of Agriculture, Food and Rural Resources regulates the sale and application of chemical insecticides, fungicides, piscicides and other chemical pesticides. Maine law, 22 M.R.S.A. §1471-D requires certification of commercial and private applicators for the use of any piscicide within the State.

On January 12, 2001, the MEDEP 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 discharges. That decision was subsequently appealed. On August 8, 2007, a panel of the U.S. 1st Circuit Court of Appeals ruled that Maine's environmental regulatory jurisdiction applies uniformly throughout the State.

On November 27, 2007, the USEPA issued a final rule stating that pesticides applied in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) were exempt from the federal Clean Water Act's NPDES permitting requirements. The USEPA's determination specifically referenced the application of pesticides directly to waters of the United States in order to control pests that are present in those waters. On January 7, 2009, the US 6th Circuit Court of Appeals (*National Cotton Council, et al. v. EPA*) vacated USEPA's 2007 rule. On June 8, 2009, the 6th Circuit granted a two year stay of its mandate that USEPA issue NPDES permits for the pesticide discharges described. USEPA sought the stay to provide time to develop a suitable permit program for state and tribal areas that do not have delegated permit authority.

It is noted that Maine law, 38 MRSA, Section 413, *Waste discharge licenses*, and MEDEP rule 06-096 CMR Chapter 514, Regulations Concerning the Use of Aquatic Pesticides, already provide MEDEP with the authority to regulate such discharges. Therefore, this General Permit is being issued pursuant to the Maine Pollutant Discharge Elimination System (MEPDES) permit and Maine Waste Discharge License (WDL) program and Maine's delegated permit authority.

Nothing in this general permit is intended to limit the Department's authority under the waste discharge and water classification statutes or rules. This general permit does not affect requirements under other applicable Maine statutes and Department rules.

D. PROJECT AUTHORITY AND NEED

MDIFW was established by the Maine Legislature "*to preserve, protect and enhance the inland fisheries and wildlife resources of the State*" and as such to develop policies and programs for the management of Maine's inland fisheries. The State of Maine Action Plan for Managing Invasive Species charges MDIFW as being responsible for coordinating the State's efforts to prevent, limit the spread, and reduce the harmful effects of invasive fish species; and for preventing, controlling, and managing invasive aquatic fish populations. Invasive fishes are determined by

D PROJECT AUTHORITY AND NEED (cont'd)

MDIFW pursuant to 38 MRSA §466, sub-§8-A. A species may be determined to be invasive for all waters or for specific waters. Invasive fish species includes, but is not limited to:

common carp *Cyprinus carpio* Linnaeus, 1758

goldfish *Carassius auratus* Linnaeus, 1758

northern pike *Esox lucius* Linnaeus, 1758

rainbow smelt *Osmerus mordax* Mitchill, 1814

smallmouth bass *Micropterus dolomieu* Lacepède, 1802

white sucker *Catostomus commersonii* Lacepède, 1802

Maine law includes narrative water quality criteria for each of the water classes covered by this general permit. The criteria describe the water quality values, habitat values, and designated uses that must be maintained for each of these water classes. Invasive aquatic species are fishes that threaten the animal or vegetational composition and diversity, habitat structure and suitability, values and uses of Maine waters. This general permit is intended as a tool to facilitate the MDIFW's mandates on invasive species and protection of Maine waters.

The aggressive tendencies and significant adverse effects of certain fishes on Maine's environment have caused those fishes to be classified as invasive fish species. This general permit may be used to control an established population of invasive fish species so that other non-chemical techniques can be used, or used to depopulate a waterbody so that native fish assemblages can be re-established. In 2006 Commissioners of the MEDEP and MDIFW approved a statewide Rapid Response Plan for responding to new infestations of invasive fish species and for dealing with invasive faunal introductions. This general permit addresses only invasive fish species but it is a critical part of the both MDIFW's abilities to carry out their legislative charge and the directives in the Rapid Response Plan.

In recent years the Department has issued two individual Maine Waste Discharge Licenses to MDIFW for invasive fish control projects. In 2006, Maine WDLs were issued for Big Speck Pond in Norway (#W-008231-5U-A-N/#MEU508231) for eradication of introduced chain pickerel and golden shiners and restocking with brook trout and for Nadeau Lake in Fort Fairfield (#W-008235-5U-A-N/#MEU508235) for eradication of introduced smallmouth bass, fathead minnow, and brown bullhead and restocking with brook trout. In both of these waters, the programs involved eradication of introduced fish species, restocking with native brook trout, and in the case of Nadeau Lake it also involved extensive restoration of a resource damaged by years of human alterations. These projects were successful, but required a significantly longer time to license than is desirable under a Rapid Response action. This General Permit will provide for the same level of environmental protection under a more expedited review period.

E. ADMINISTRATIVE REQUIREMENTS

The administrative procedures and requirements associated with this general permit are based on the following Department rules (CMR 06-096): Chapter 2, *Rules Concerning the Processing of Applications and Other Administrative Matters*; Chapter 514, *Regulations Concerning the Use of Aquatic Piscicides*; Chapter 529, *General Permits for Certain Wastewater Discharges*, and applicable Maine laws. In seeking coverage under this general permit, MDIFW must file a Notice of Intent (NOI) containing sufficient information and facts to describe all proposed aquatic piscicide treatments and waterbodies, so as to allow the Department to determine if the proposed activities are anticipated to comply with the general permit terms and conditions. Prior to submittal of a NOI, MDIFW must hold a public informational meeting to inform the public of the project and its anticipated environmental impacts, and to educate the public about the opportunities for public comment to the Department during the application process. Once a completed NOI is received, the Department has a maximum of 30 calendar days in which to act on it. If no other action is taken within that 30-day period, the NOI is considered approved at the close of business (5:00 p.m. Eastern Time Zone) on the thirtieth day following the Department's receipt of the NOI. A copy of the NOI must be also filed with other agencies and public notice provided as detailed in general permit Part 1.G.3.

Pursuant to Chapter 2, section 24.B.1, "(w)*ithin 30 days of the filing of a license decision by the Commissioner with the Board* (of Environmental Protection)*, an aggrieved person may appeal to the Board for review of the Commissioner's decision.*" The Department notes that a permittee has the legal authority to proceed with an approved project upon approval by the Commissioner and subject to any conditions established. However, the Department advises that if MDIFW proceeds with an approved project prior to the end of the 30-day appeal period, it assumes all risks and responsibilities in the event that the Commissioner's decision is overturned or modified on appeal

This general permit is valid for a five-year term, and coverage under an approved NOI lasts for a period of 12 months from the date the NOI is approved by the Department, or through the expiration date of this permit, whichever period is shorter. MDIFW may continue coverage under this general permit from one year to the next, contingent upon compliance with the terms and conditions of the general permit, payment of an annual fee pursuant to 38 M.R.S.A. §353-B, demonstration of a continuing significant need to control the target species, and provided there are no significant changes in the discharge as described in the NOI. In the event that any individual aquatic piscicide application project is not in compliance with this general permit or upon determination by the Department that the discharge is having an unreasonable adverse impact on receiving water quality, non-target resources or organisms, the Department may require that MDIFW apply for an individual MEPDES Permit / Maine WDL or cease discharge. Examples of significant changes in activities include, but are not limited to, changes in the extent of the waterbody or areas to be treated, the hydrology in and surrounding the treatment area, methods or materials used, facts or information previously submitted and approved, or changes in anticipated impacts to non-target resources or organisms.

F. DESCRIPTION OF AUTHORIZED ACTIVITIES

This general permit authorizes the discharge (application) of authorized aquatic piscicides as defined in general permit Part I.B.1 that are registered with both the USEPA and the Maine Board of Pesticides Control and are applied in accordance with USEPA approved label use to control the existence of invasive fishes. This general permit requires the use of an appropriately certified applicator that has been licensed by the Maine Board of Pesticides Control for applications of the authorized aquatic piscicides to waters of the State. Authorized aquatic piscicides should be applied at the lowest appropriate labeled rates whenever possible (for example, when they can be applied during the most sensitive life stages of the target species or in specific areas so as to minimize non-target damage).

This general permit authorizes applications of certain piscicides to those waterbodies specified in Section A of this Fact Sheet to control invasive fishes. This general permit is not intended to control or eradicate any aquatic fish species other than those specifically listed in this permit as invasive fishes or as determined pursuant to 38 MRSA §466, sub-§8-A. It is noted, however, that certain waterbodies may contain several species of non-target fishes susceptible to the effects of the authorized aquatic piscicides. To the greatest extent possible, applications of piscicides under this general permit will be conducted to minimize impacts to non-target species, especially outside of the defined treatment area. This may be done by a number of means, including the use of the most selective formulation allowed by this permit, using the lowest effective dose or duration of exposure of piscicides to achieve efficacy, differentially dosing areas of waterbodies to areally target species of concern, lowering the water level in the treatment area to provide for additional time for piscicide degradation, altering the timing of piscicide use, and other methods including, but not limited to, those described in Permit Special Condition C, Table 1.

G. CONCENTRATIONS OF AUTHORIZED AQUATIC PISCICIDES

Typical rates of use along with highest rates allowed in this permit are specified below. Typical concentrations were derived from literature on field studies and interviews with fish control experts. Some of this is summarized by species in the Rapid Response Plan (DEP 2006), which was developed after significant review of available information by DEP staff and contractors. In all cases, the permitted rate is at or below the maximum USEPA approved label rate, and in most cases, the treatment concentration will be chosen in consultation with treatment professionals.

Since field conditions, the species involved, time of year, and hydrology, among other factors, will vary between treatments, the maximum permitted rate was chosen to allow some flexibility in specifying individual treatments. In all cases, the minimum effective concentrations and times will be used to minimize damage to non-target populations. However, the actual concentrations chosen need to be adequate to achieve significant control of the target species. Failure to do this may defeat the purpose of the applications and possibly invite environmental damage from more aggressive management that may be needed if the initial infestation is not reduced in a timely manner.

For those species where available information does not allow more defined specification of dosing, the specified maximum permitted rate is used as a default. If new information becomes available from field or lab experience elsewhere, MDIFW will incorporate that information into decisions on reducing rates applied to target species. For those species which are designated in

G. CONCENTRATIONS OF AUTHORIZED AQUATIC PISCICIDES (cont'd)

the future as invasive by the MDIFW, use of the piscicide as permitted herein may be specified, with consideration of the life history, morphology, and similarities to other invasive fishes for which more is known concerning their susceptibility to piscicides.

The following table from the Prenfish product label provides information on the amount of toxicant recommended and active rotenone included for specified types of treatments. Note that the maximum concentration of toxicant approved in this General Permit is 2.0 mg/L.

Table 1 Table 1. Prenfish Label Use Table adapted from Kinney, Edward 1965 Rotenone in Fish Pond Management. USDI Washington, D.C. Leaflet FL-576.

Types of Use	Parts per Million		Number of Acre-Feet/Gallon
	Concentration of Prenfish Toxicant	Concentration of Active Rotenone	
Selective Treatment	0.1 to 0.13	0.005 to 0.007	30 to 24
Normal Pond Use	0.5 to 1.0	0.025 to 0.050	6.0 to 3.0
Remove bullheads or carp	1.0 to 2.0	0.50 to 0.100	3.0 to 1.5
Remove bullheads or carp in rich organic ponds	2.0 to 4.0	0.100 to 0.200	1.5 to 0.75
Preimpoundment treatment above a dam.	3.0 to 5.0	0.200 to 0.250	1.0 to 0.60

Please note that a 2007 USEPA Re-registration Eligibility Decision (RED) recommends revision of the above cited label based on the maximum solubility of rotenone. This general permit limits the use of rotenone to a maximum of 2.0 mg/L (General Permit Part I, Section D) and further requires that it be applied in accordance with the USEPA approved label (General Permit Part I, Section B.1, etc.) In the event that the approved label is changed during the term of this General Permit, the more restrictive of 2.0 mg/L or the newly approved label rate shall apply until this General Permit is revised by the Department.

H. DESCRIPTION OF AUTHORIZED AQUATIC PISCICIDES

This general permit authorizes the application (discharge) of granular, solid, powder, liquid, or other formulations of piscicides as described in the following sections. Specifically, the formulations that may be used under this permit are those below, or successor formulations with substantially the same constituents. From time to time, formulations may be re-registered or minor modifications, including product names, may be made subject to EPA and Maine BPC registration. If new registered formulations replace these listed below, the NOI will include those formulations proposed for use, their specifications, and information sufficient allow the Department to conclude that conditions and safeguards in this permit will be met.

H. DESCRIPTION OF AUTHORIZED AQUATIC PISCICIDES (cont'd)

PRENTOX Prenfish Toxicant Liquid E.C. (EPA Reg No. 655-422) (5% rotenone).

PRENTOX Rotenone Fish Toxicant Powder (EPA Reg No. 655-691) (7.4% rotenone).

PRENTOX CFT Legumine™ Fish Toxicant (EPA Reg No. 75338-2) (5% rotenone) (upon registration with Maine BPC)

Descriptions of the properties and potential effects of each of these approved aquatic piscicides are included as Attachment A

I. MONITORING AND REPORTING REQUIREMENTS

This general permit requires monitoring of biological conditions, piscicide concentrations, water quality, physical conditions, and computer modeling, as described below. The monitoring requirements included herein constitute minimum monitoring requirements. Additional monitoring will be based on waterbody specific and treatment specific conditions and properties and will be specified in the NOI as needed. MDIFW's monitoring plans shall also consider information received from consultation with the MDIFW Non-Game Program, MDIFW Regional Wildlife Biologist, MDOC Natural Areas Program, MDMR Bureau of Sea-Run Fisheries and Habitats, US Fish and Wildlife Service, and US NOAA Fisheries.

1. Biological Monitoring (see General Permit Cond. E.1, Biological Monitoring): Biological monitoring is conducted to establish the extent and variety of the aquatic communities within the defined treatment area, secondary effects zone, and in downstream areas prior to and following piscicide treatment.

Aquatic community monitoring is conducted for two basic reasons: to assess the success of control on the target population(s) and to assess effects of treatment of the fish community as a whole within and beyond the defined treatment area. There are many ways to monitor fish populations, ranging from simple physical examination and field identification of fishes to very labor-intensive quantitative sampling. MDIFW will conduct before and after fish community monitoring according to MDIFW protocols.

As described in the General Permit, downstream biological monitoring must be conducted for treatment programs in which outflow occurs during the period when the piscicide is active within the treatment area. For projects consisting only of spot treatments in a waterbody, the need to conduct biological monitoring in the outlet stream will be based on determinations of the dilution and potential effects. At a minimum, MDIFW will conduct visual observations within the secondary effects zone and further downstream in the outlet stream for dead fishes to ensure that there is no evidence of effect on downstream fishes.

Non-target Fauna Observations: MDIFW will consult with HMAP and the MDIFW Reptile, Amphibian, and Invertebrate Group Leader before filing a rotenone NOI to determine the presence, composition, and relative abundance of any known non-target fauna in the treatment area and outlet areas. MDIFW will also conduct visual observations in the treatment area, secondary effects zone, and further downstream throughout the treatment program for treatment-related effects on macroinvertebrates, fish, and other aquatic organisms. MDIFW shall report the occurrence and significance of any adverse findings within 24-hours. Effects on non-target

I. MONITORING AND REPORTING REQUIREMENTS (cont'd)

fauna will be reported on Maine Amphibian and Reptile Atlasing Project Site Cards (MARAP). MDIFW and the Department shall evaluate the occurrence and determine an appropriate course of action. MARAP cards will be forwarded to the MDIFW Reptile, Amphibian and Invertebrate Group Leader. MDIFW shall also report observations on recovery of non-target faunal communities after treatment.

2. Piscicide Monitoring (see General Permit Cond. E.2, Piscicide Monitoring): Piscicide monitoring is typically done to ensure that permit limits are not exceeded, to assure that target concentrations are met (or maintained in the event that booster treatments are required to maintain residuals over time), to determine when to re-apply (booster treatments), or to assess when concentrations drop below levels that will have an effect on invasive fish populations. Bioassay is the only allowed and currently available method of determining rotenone concentration.

Secondary effects zone and downstream monitoring is required when a whole lake treatment is performed and there is anticipated to be outflow during the time of effective piscicide concentrations within the treatment area. Secondary effects zone and downstream monitoring is conducted to determine and prevent adverse impacts on non-target resources and organisms. Sampling locations will be designated on a map submitted with the NOI based on downstream conditions and pursuant to guidance discussed in General Permit Cond. E.2, Downstream Monitoring.

3. Water Quality Monitoring (see General Permit Cond. E.3, Water Quality Monitoring): Water quality monitoring is conducted in order to evaluate treatment related effects on water quality in the treatment area and downstream resources, including to detect whether there are increases in total phosphorus associated with releases from dying fishes. Also, abnormally low Secchi disk transparencies (algae response to increased nutrients) or low dissolved oxygen beyond conditions typically expected in the waterbody, which may be due to fish decay, may be detected. Data taken as part of the treatment project will be compared to pre-treatment data, if available, to determine evidence for water quality impacts due to the treatment.

Water quality monitoring will be conducted at least twice per field season, separated by approximately 60-days (i.e. spring/summer and fall) timed to entail pre and post-treatment, during years when a lake is treated. Monitoring will include dissolved oxygen profiles, water temperature profiles, Secchi disk transparency, pH, alkalinity, total phosphorous, and conductivity conducted in conformance with the Department's Standard Field Methods for Lake Water Quality Monitoring.

4. Physical Monitoring (see General Permit Cond. E.4, Physical Monitoring): Physical monitoring is conducted in order to provide information necessary in managing the treatment program and minimizing adverse effects on non-target resources and organisms for treatment programs involving a drawdown and for those with intermittent outlet conditions. Monitoring will include the water level in the treatment area, the outlet flow status, and other parameters as necessary. MDIFW will propose a frequency for, and conduct, physical monitoring based on site specific hydrologic factors, with a minimum frequency consisting of once per month during the active period for the piscicide.

I. MONITORING AND REPORTING REQUIREMENTS (cont'd)

5. Computer Modeling (see General Permit Cond. E.5, Computer Modeling): Computer modeling will be conducted to predict rotenone degradation and dispersal in treatment areas, secondary effects zones, and downstream areas. MDIFW's computer models for the treatment program shall be provided with the NOI.

6. Reporting: Results of all monitoring and modeling shall be reported to the Department as described in general permit Part I.F.

J. PUBLIC HEALTH CONCERNS AND RISK REDUCTION

Aquatic piscicides covered under this permit have been reviewed by the USEPA during the registration process. USEPA considered studies on human exposure as well as laboratory and field studies of both acute and chronic effects on animals. The labels set limits that are unlikely to pose risk to humans given normal behavior and using very conservative assumptions as to exposure and duration of piscicides in the environment. Aquatic pesticides covered under this permit have been reviewed by other private and public organizations including:

Maine Department of Inland Fisheries and Wildlife, Programmatic Environmental Assessment: for reclamation of various lakes and ponds in the State of Maine under the Brook Trout and Native Fish Restoration and Enhancement Program. Appendix A (below)

Washington Department of Fish and Wildlife, Lake and Stream Rehabilitation: Rotenone Use and Health Risks, Final Supplemental Environmental Impact Statement.

American Fisheries Society, Rotenone Stewardship Program, Rotenone Use in Fisheries Management Manual.

New Zealand, Department of Conservation, Rotenone-a review of its toxicity and use for fisheries management.

The actual limits set in this permit are at or below the maximum allowable under USEPA approved label rates. This is done both to limit human contact and to reduce non-target effects to the maximum extent practicable.

As noted above, a public informational meeting will be held prior to submittal of a NOI to inform the public of the project and its anticipated environmental impacts, and to educate the public about the opportunities for public comment to the Department during the application process. Abutting landowners to all affected resources will then be notified when MDIFW submits a NOI for General Permit coverage. In addition, the treatment area(s) will be posted at likely access points with information about the treatment including advisories against swimming, drinking, and eating dead fish. And, all known public access points to areas affected by the treatment will be closed during the period in which the authorized piscicide is active.

K. CONDITIONS OF LICENSES / PERMITS

Discharges of authorized aquatic piscicides under this general permit are subject to 38 M.R.S.A. §414-A. 1(E), provisions and conditions of Maine's Water Classification Program at 38 M.R.S.A. §§ 464(4), 465, and 465-A and Department rules Chapters 514 (Regulations Concerning the Use of Aquatic Pesticides), 523(2) (Waste Discharge License Conditions Applicable to All Permits), and 529 (General Permits for Certain Wastewater Discharges).

L. REGULATIONS CONCERNING THE USE OF AQUATIC PESTICIDES

Department Rules, Chapter 514, REGULATIONS CONCERNING THE USE OF AQUATIC PESTICIDES. Section 1, Definition. states, "an aquatic pesticide is any substance applied in, on or over the waters of the State or in such a way as to enter those waters for the purpose of inhibiting the growth or controlling the existence of any fish or animal in those waters". In accordance with Chapter 514, Section 2, Criteria for Approving a License to Use Aquatic Pesticides,

Subsection A, "Except as provided in 38 M.R.S.A. Section 362-A, no permit for aquatic pesticide use will be issued for a pesticide which is not registered for the intended use by the United States Environmental Protection Agency and the Maine Department of Agriculture".

Subsection B, "No permit for aquatic pesticide use will be issued unless the applicant or agent for the applicant is certified and licensed in aquatic pest control by the Maine Board of Pesticides Control".

Subsection C, "A permit for aquatic pesticide use will be issued only if the applicant provides adequate protection for non-target species".

Subsection D, "A permit for aquatic pesticide use will be issued only if the applicant can demonstrate a significant need to control the target species and that pesticide control offers the only reasonable and effective means to achieve control of the target species. Demonstration of significant need may include, but not be limited to, health risk, economic hardship, or loss of use."

Subsection E, "In addition to paragraphs (A) through (D), any discharge of aquatic pesticides, alone or in combination with all other discharges, shall meet all other applicable requirements of Maine's waste discharge laws including, but not limited to, the provisions of 38 M.R.S.A. Sections 464 and 465".

In response to the citations above: PRENTOX Prenfish Toxicant Liquid E.C. (EPA Reg No. 655-422), and PRENTOX Rotenone Fish Toxicant Powder (EPA Reg No. 655-691), are registered for the use proposed in this licensing action by the USEPA and the Maine Department of Agriculture. PRENTOX CFT Legumine™ Fish Toxicant (EPA Reg No. 75338-2) is authorized for use pursuant to this General Permit only upon its registration with Maine BPC. The permittee shall utilize a pesticide applicator who is certified and licensed in aquatic pesticide control by the Maine Bureau of Pesticide Control and shall provide proof of certification / licensing to the Department with the NOI. The permittee has disclosed that effects on non-target species are anticipated due to the scope of treatment projects, but that such effects shall be minimized to the extent possible. In submitting a NOI for coverage under this General Permit, the permittee has demonstrated a significant need to control the target species, has explored potential treatment methods, and has designed an effective treatment program that incorporates appropriate methods. The Department anticipates that proposed treatment programs will result in short-term adverse impacts to non-target organisms especially within the defined treatment area, but that such impacts are necessary in order to eliminate invasive fishes, prevent long-term adverse impacts to non-target organisms and resources, and ensure long-term maintenance of receiving water quality and uses in both treated and connected waters. The Department finds that the aquatic piscicide treatment program described herein complies with Chapter 514. Additional details on the aquatic piscicide treatment program water quality and fish community monitoring program and reporting requirements are detailed in this Fact Sheet.

M. RECEIVING WATER QUALITY STANDARDS

This general permit authorizes discharges to Class GPA, AA, A, B and C waters of the State, tributaries to Class GPA waters, and those waters having drainage areas of less than ten square miles. Maine law, 38 M.R.S.A. §465 describes the standards for Class AA, A, B, and C waters, 38 M.R.S.A. §465-A describes the standards for Class GPA waters, and 38 M.R.S.A. §464(4) describes the standards for tributaries to Class GPA waters and those waters having drainage areas of less than ten square miles. This General Permit does not authorize the discharge of piscicides to any Public Water Supply.

N. RECEIVING WATER QUALITY AND HABITAT CONDITIONS

The active ingredients in the aquatic piscicides authorized for use under this general permit are EPA registered and formulated for aquatic use. Further discussion on the basic identification and information about formulations covered under this permit are included in Fact Sheet Attachment A. This general permit does not authorize the use of other compounds; thus concerns with chemical toxicity are limited to the specific authorized aquatic piscicides, for which such information is provided herein.

Lakes and ponds and streams dominated by invasive fishes do not exhibit natural habitat characteristics, suffering reduced habitat suitability for fish and other aquatic life and those species managed for by MDIFW. Invasive fish species disrupt natural systems by crowding out native and managed fishes and altering the physical and biological structure of the aquatic habitat. Eradication of invasive fishes is often feasible, and significant protection for native and managed fish communities can be achieved even by reducing densities of aggressive invasive fishes. This reduces their ability to spread to new habitat within the infested water or to other waterbodies.

Piscicide applications under this permit are designed to eradicate invasive species in an attempt to restore and preserve the natural habitat characteristics of the specific water of the State. As stated in Fact Sheet Section L, the Department anticipates some short-term adverse impacts, but considers such impacts as necessary in order to control invasive species, prevent long-term adverse impacts to non-target organisms and resources, and ensure long-term maintenance of receiving water quality and uses in subject waterbodies and connected waters.

No waterbody that serves as a public water supply is eligible for coverage under this general permit. The Department has not identified other significant geographical areas of concern that should be excluded from coverage under this general permit. Additional diligence is required in applications in any waters known to contain rare, endangered, or threatened aquatic species. The Department anticipates that treatment programs approved under this general permit will result in long-term improvement in receiving water quality, habitat, and designated uses.

O. ANTI-DEGRADATION

The State's antidegradation policy is set forth in Maine law at 38 M.R.S.A. §464(4)(F). The Department has determined that the discharge of the authorized aquatic piscicides in accordance with the terms and conditions of this general permit will not violate the provisions of the anti-degradation policy.

P. PUBLIC COMMENTS

Public notice of this general permit was made in the Bangor Daily, Morning Sentinel, Kennebec Journal, Sun-Journal, Portland Press Herald and The Times Record newspapers on or about June 29, 2009. The Department receives public comments on an application until the date a final agency action is taken on the application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

Q. DEPARTMENT CONTACTS

Additional information concerning this licensing 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) 287-3435; email: Robert.D.Stratton@maine.gov

R. RESPONSE TO COMMENTS

During the period of July 21, 2009 through August 20, 2009, the Department solicited comments on the proposed draft General Permit for the use of Piscicides for the Control of Invasive Fishes. The Department communicated with the Maine Department of Inland Fisheries and Wildlife, the potential General Permit permittee, on several issues and modified the draft General Permit as appropriate. The Department did not receive any other comments that resulted in significant revisions to the permit, but made some minor internal revisions. Therefore, no response to comments has been prepared.

ATTACHMENT A: ENVIRONMENTAL ASSESSEMENT

(Insert MDIFW Environmental Assessment here.)

ATTACHMENT B: NOTICE OF INTENT

(Insert Notice of Intent form here.)