



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER QUALITY
P.O. BOX 420
MAIL CODE: 401-02B
TRENTON, NEW JERSEY 08625
FAX: (609) 984-7938

CHRIS CHRISTIE
Governor

BOB MARTIN
Commissioner

KIM GUADAGNO
Lt. Governor

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

To: Distribution List

Re: Draft Surface Water Master General Permit
Category: PGP - Pesticide Application Discharge
NJPDES Permit No. NJ0178217
NJPDES MASTER GENERAL PERMIT PROGRAM INTEREST
Trenton City, Mercer County

Dear Permittee:

This letter serves to provide notice that the draft New Jersey Pollutant Discharge Elimination System (NJPDES) discharge to surface water master general permit action for the Statewide General Pesticide Application Discharge Permit has been issued in accordance with N.J.A.C. 7:14A. This proposed permit authorizes the applications of biological and chemical pesticides in water when such applications are made in, over, or near surface waters of the State. This general permit will regulate the following pesticide applications: nuisance insect control (i.e. mosquito and fly control), aquatic pest control (i.e. weeds, algae), aquatic nuisance animal control, aerial treatment of forest canopy, and treatment for aquatic agricultural activities.

There will be an annual fee for an authorization under this general permit. However, the general permit was not completed in time for the fee to be determined under the Department's 2011 Fee report. Thus, no fee will be charged for this authorization for this calendar year (2011).

Notice of this draft permit action will appear in the January 12, 2011 DEP Bulletin as well as in the following newspapers:

Table with 2 columns: Newspaper and County. Rows include Press of Atlantic City (Atlantic and Cape May), The Record (Bergen), Burlington County Times (Burlington), Courier Post (Camden), Daily Journal (Cumberland), Star Ledger (Essex), Gloucester County Times (Gloucester and Salem), Jersey Journal (Hudson), The Times (Mercer), Home News and Tribune (Ocean, Middlesex, and Monmouth), Asbury Park Press (Ocean, Middlesex, and Monmouth), and Daily Record (Morris).

Ocean County Observer	Ocean, Middlesex, and Monmouth
North Jersey Herald News	Passaic and Bergen
The Express	Warren
Today's Sunbeam	Gloucester and Salem
Courier News	Somerset and Union
New Jersey Herald	Sussex

The *DEP Bulletin* is available on the internet at <http://www.state.nj.us/dep/bulletin> or by contacting the DEP Document Distribution Center at (609) 777-4398. A copy of the draft permit is available in the Division of Water Quality website at [http://www.nj.gov/dep/dwq/gp\\_surfacewater.htm](http://www.nj.gov/dep/dwq/gp_surfacewater.htm) under Surface Water General Permits.

As detailed in the *DEP Bulletin* and aforementioned newspaper written comments on the draft document must be submitted in writing to Pilar Patterson, Chief, Bureau of Surface Water Permitting, P.O. Box 420, Trenton, NJ 08625 by the close of the public comment period. All persons who believe that any condition of this draft document is inappropriate or that the Department's tentative decision to issue this draft document is inappropriate, must raise all reasonable arguments and factual grounds supporting their position, including all supporting materials, during the public comment period.

In accordance with N.J.A.C. 7:14A-15.12, a non-adversarial public hearing has been scheduled on January 28, 2011 from 1:00 pm to 4:00 pm in the NJDEP Public Hearing Room to afford the public an opportunity to be heard on this proposed action. The hearing shall be held before a Hearing Officer designated by the NJDEP. All interested parties will have the opportunity to present and submit information on the proposed action. In accordance with N.J.A.C. 7:14A-15.10(c)2, any person may submit written comments during the comment period, which will close on February 3, 2011 or thirty (30) days after the last newspaper publication, whichever occurs later.

The NJDEP will respond to all significant and timely comments upon issuance of the final document. The permittee and each person who has submitted written comments will receive notice of the NJDEP's final decision to issue, revoke, or redraft the document.

If you have questions or comments regarding the draft action, please contact the Pesticide Team at (609) 292-4860.

Sincerely,

A handwritten signature in black ink, appearing to read "Pilar Patterson", with a long horizontal flourish extending to the right.

Pilar Patterson, Chief  
Bureau of Surface Water Permitting

Enclosures

c: Permit Distribution List

## Table of Contents

**This permit package contains the items checked below:**

Included

- 1. Cover Letter
- 2. Facility Submittals (Final permits only)
- 3. Adjudicatory Hearing Request Checklist and Tracking Form For Individual NJPDES Permits (If Appropriate, Final Permits Only)
- 4. Stay Request and Tracking Form (If Appropriate, Final Permits Only)
- 5. Table of Contents
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- 7. Response to Comments (If Appropriate, Final Permits Only)
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- 10. Fact Sheet / Statement of Basis (Draft permits only)
- 10. Part I – General Requirements: NJPDES
- 11. Part II – General Requirements: Discharge Categories
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- 14. Appendix A – Definitions
- 15. Appendix B – Surface Water Quality Criteria

New Jersey Department of Environmental Protection  
Division of Water Quality  
Bureau of Surface Water Permitting

**PUBLIC NOTICE**

Notice is hereby given that the New Jersey Department of Environmental Protection (NJDEP) proposes to issue the New Jersey Pollutant Discharge Elimination System (NJPDES) Discharge to Surface Water (DSW) Master General Permit, NJ0178217, in accordance with N.J.A.C. 7:14A-1 et seq., and by authority of the Water Pollution Control Act at N.J.S.A. 58:10A-1 et seq., to authorize the applications of biological and chemical pesticides in water when such applications are made in, over, or near surface waters of the State. This general permit will regulate the following pesticide applications: nuisance insect control (i.e. mosquito and fly control), aquatic pest control (i.e. weeds, algae), aquatic nuisance animal control, aerial treatment of forest canopy, and treatment for aquatic agricultural activities.

For the past 30 years, the United States Environmental Protection Agency (“US EPA”) has regulated the application of pesticides through the Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”). FIFRA allows delegation of this regulation to the individual states and tribes. In New Jersey, this delegation is authorized to the NJDEP Pesticide Control Program. However, effective April 9, 2011, based on a ruling by the 6<sup>th</sup> Circuit Court of Appeals made on January 7, 2009 in National Cotton Council, et al v. EPA, all applications of biological and chemical pesticide applications that leave a residue in water when such applications are made in, over, and near surface waters of the State will require a NJPDES permit. This requirement is in addition to the Pesticide Control Program (PCP) permits and requirements. The NJPDES permit does not supersede and/or replace the PCP permits.

The NJDEP has determined that it is appropriate to focus on the largest applications of pesticides to waters of the State. This is consistent with the approach taken by USEPA in their 2010 NPDES Draft Pesticides General Permit (PGP). When determining the appropriate threshold values for submission of an application, the NJDEP gave weight to the volume of discharges and the estimated number of discharges to be covered by the permit, in accordance with N.J.A.C. 7:14A-6.13(d)7, and has relied on and is proposing to adopt the same threshold categories and values proposed by the USEPA in its 2010 draft PGP. Should USEPA revise the threshold categories and/or values in their final PGP, the NJDEP may modify this master general permit upon issuance of the final action to be consistent with the USEPA PGP.

A draft NJPDES Pesticide General Permit (PGP) has been prepared for this facility based on the administrative record filed at the NJDEP, 401 East State Street, Trenton, New Jersey 08625. Copies of the draft document are obtainable, for a nominal charge, and the administrative record is available for inspection by appointment only, Monday through Friday. If you are interested in scheduling an appointment or requesting specific information regarding the draft document, contact the Pesticide Team of the Bureau of Surface Water Permitting at (609) 292-4860. You can also find the draft PGP on the Department’s website at [http://www.nj.gov/dep/dwq/gp\\_surfacewater.htm](http://www.nj.gov/dep/dwq/gp_surfacewater.htm) under Surface Water General Permits.

Written comments on the draft document must be submitted to Pilar Patterson, Chief, or Attention: Comments on Public Notice NJ0178217, Bureau of Surface Water Permitting, P.O. Box 420, Mail Code 401 – 02B, Trenton, NJ 08625 by the close of the public comment period, which closes thirty calendar days after publication of this notice in the newspaper. All persons who believe that any condition of this draft document is inappropriate or that the Department's decision to issue this draft document is inappropriate, must raise all reasonable arguments and factual grounds supporting their position, including all supporting materials, during the public comment period.

The NJDEP will respond to all significant and timely comments upon issuance of the final document. Each person who has submitted written comments will receive notice of the Department’s permit decision.

Notice is further given that, in accordance with N.J.A.C. 7:14A-15.12, a non-adversarial public hearing has been scheduled on January 28, 2011 from 1:00 pm to 4:00 pm in the NJDEP Public Hearing Room to afford the public

an opportunity to be heard on this proposed action. The hearing shall be held before a Hearing Officer designated by the NJDEP. Interested parties will have the opportunity to present and submit information on the proposed action. In accordance with N.J.A.C. 7:14A-15.10(c)2, any person may submit written comments during the comment period, which will close on February 3, 2011 or thirty (30) days after the last newspaper publication, whichever ever occurs later.



# NEW JERSEY POLLUTANT DISCHARGE ELIMINATION SYSTEM

The New Jersey Department of Environmental Protection hereby grants you a NJPDES permit for the facility/activity named in this document. This permit is the regulatory mechanism used by the Department to help ensure your discharge will not harm the environment. By complying with the terms and conditions specified, you are assuming an important role in protecting New Jersey's valuable water resources. Your acceptance of this permit is an agreement to conform with all of its provisions when constructing, installing, modifying, or operating any facility for the collection, treatment, or discharge of pollutants to waters of the state. If you have any questions about this document, please feel free to contact the Department representative listed in the permit cover letter. Your cooperation in helping us protect and safeguard our state's environment is appreciated.

**Permit Number: NJ0178217**

**Draft: Surface Water Master General Permit New**

**Permittee:**

NJPDES Master General Permit Program Interest  
 Category PGP  
 Per Individual Notice of Authorization  
 Division of Water Quality  
 P.O. Box 420, 401 East State Street  
 Trenton, NJ 08625

**Co-Permittee:**

**Property Owner:**

NJPDES Master General Permit Program Interest  
 Category PGP  
 Per Individual Notice of Authorization  
 Division of Water Quality  
 P.O. Box 420, 401 East State Street  
 Trenton, NJ 08625

**Location Of Activity:**

NJPDES Master General Permit Program Interest  
 Category PGP  
 Per Individual Notice of Authorization  
 Division of Water Quality  
 P.O. Box 420, 401 East State Street  
 Trenton, NJ 08625

Authorization(s) Covered Under This Approval	Issuance Date	Effective Date	Expiration Date
PGP -Pesticide Application Discharges			

**By Authority of:  
 Commissioner's Office**

**DEP AUTHORIZATION  
 Pilar Patterson, Chief  
 Bureau of Surface Water Permitting  
 Division of Water Quality**

(Terms, conditions and provisions attached hereto)

Division of Water Quality



# NEW JERSEY POLLUTANT DISCHARGE ELIMINATION SYSTEM

The New Jersey Department of Environmental Protection hereby grants you a NJPDES permit for the facility/activity named in this document. This permit is the regulatory mechanism used by the Department to help ensure your discharge will not harm the environment. By complying with the terms and conditions specified, you are assuming an important role in protecting New Jersey's valuable water resources. Your acceptance of this permit is an agreement to conform with all of its provisions when constructing, installing, modifying, or operating any facility for the collection, treatment, or discharge of pollutants to waters of the state. If you have any questions about this document, please feel free to contact the Department representative listed in the permit cover letter. Your cooperation in helping us protect and safeguard our state's environment is appreciated.

**Permit Number: NJ0 \_\_\_\_\_**

## Individual Authorization

**Permittee:**

Name of Permittee  
Mailing Street of Permittee  
Mailing Address of Permittee

**Co-Permittee:**

**Property Owner:**

Name of Owner  
Mailing Street of Owner  
Mailing Address of Owner

**Location Of Activity:**

Name of Location of Activity  
Mailing Street of Activity Location  
Mailing Address of Activity Location

Authorization(s) Covered Under This Approval	Issuance Date	Effective Date	Expiration Date
PGP -Pesticide Application Discharges			

**By Authority of:  
Commissioner's Office**

\_\_\_\_\_  
**DEP AUTHORIZATION  
Pilar Patterson, Chief  
Bureau of Surface Water Permitting  
Division of Water Quality**

(Terms, conditions and provisions attached hereto)

**Division of Water Quality**

New Jersey Department of Environmental Protection  
Division of Water Quality  
Bureau of Surface Water Permitting

## FACT SHEET

Masterfile #:

PI #:

This fact sheet sets forth the principle facts and the significant factual, legal, and policy considerations examined during preparation of the draft master general permit. This action has been prepared in accordance with the New Jersey Water Pollution Control Act and its implementing regulations at N.J.A.C. 7:14A-1 *et. seq.* – The New Jersey Pollutant Discharge Elimination System (NJPDES).

**This permit shall not be considered as a waiver of any applicable federal, state, local laws and regulations that pertain to your application of pesticides, including but not limited to the following: Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), Pinelands Commission Certificate of Filing, N.J.A.C. 7:30-9.3 (Aquatic Pesticide Permits), N.J.A.C. 7:30-9.2 (Mosquito/Fly Control Permit), and Reporting to the National Response Center. For example, this permit does not negate the requirements under FIFRA and its implementing regulations to use registered pesticides consistent with the product’s labeling, including contacting the local fish and wildlife service if required.**

**PERMIT ACTION:** Pesticide Application Discharge for Category PGP

### I. BACKGROUND INFORMATION:

For the past 30 years that the United States Environmental Protection Agency (US EPA) has administered the Clean Water Act (CWA), the Agency has never issued a National Pollutant Discharge Elimination System (NPDES) permit for the application of a pesticide to target a pest that is present in or over, including near, the water where such application results in a discharge to waters of the United States. Instead, the US EPA has been regulating these types of applications through the Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”).

In accordance with this practice, on November 27, 2006, US EPA issued a final rule (hereinafter called the “2006 NPDES Pesticides Rule”) clarifying two specific circumstances in which a National Pollutant Discharge Elimination System (NPDES) permit was not required to apply pesticides to or around water. They were: 1) the application of pesticides directly to water to control pests; and 2) the application of pesticides to control pests that are present over, including near, water where a portion of the pesticides will unavoidably be deposited to the water to target the pests, in both instances provided that the application is consistent with relevant Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) requirements. The rule became effective on January 26, 2007.

On January 19, 2007, US EPA received petitions for review of the 2006 NPDES Pesticides Rule from environmental and industry groups. Petitions were filed in eleven circuit courts and the case, *National Cotton Council, et al, v. US EPA*, was assigned to the Sixth Circuit Court of Appeals.

On January 9, 2009, the Sixth Circuit vacated US EPA’s 2006 NPDES Pesticides Rule under a plain language reading of the CWA. *National Cotton Council of America v. US EPA*, 553 F.3d 927 (6<sup>th</sup> Cir., 2009). The Court held that the CWA unambiguously includes “biological pesticides” and

“chemical pesticides” with residuals within its definition of “pollutant.” Specifically, an application of chemical pesticides that leaves no excess portion is not a discharge of a pollutant, and the applicator need not obtain an NPDES permit. However, chemical pesticide residuals are pollutants as applied if they are discharged from a point source for which NPDES permits are required. Biological pesticides on the other hand are always considered a pollutant under the CWA regardless of whether the application results in residuals or not and require a NPDES permit for all discharges from a point source. Therefore, as of this January 9<sup>th</sup> 2009 ruling, NPDES permits are required for such discharges and it is no longer sufficient to regulate these applications solely under FIFRA.

On April 9, 2009, in response to this decision, , US EPA requested a two-year stay of the mandate to provide the Agency time to develop general permits, to assist NPDES-authorized states to develop their NPDES permits, and to provide outreach and education to the regulated community. On June 8, 2009, the Sixth Circuit granted US EPA the two-year stay of the mandate, extending the deadline to April 9, 2011.

As a result of the Court’s decision to vacate the 2006 NPDES Pesticides Rule, beginning April 9, 2011, New Jersey Pollutant Discharge Elimination System (NJPDES) permits will be required for discharges to surface waters of the State of biological pesticides and chemical pesticides that leave a residue. In response to the Court’s decision, the New Jersey Department of Environmental Protection (NJDEP) has issued this draft Master NJPDES Pesticide General Permit to authorize the applications of biological and chemical pesticides in water when such applications are made in, over, or near surface waters of the State.

## **II. NJPDES PERMITS- General Information**

The NJPDES program relies on two types of permits: individual and general. An individual permit is a permit issued to an individual discharger. Upon receiving the appropriate permit application(s), the NJDEP develops a draft permit for public comment for that particular discharger based on the information contained in the permit application (e.g., type of activity, nature of discharge, receiving water quality). Following consideration of public comments, a final permit is then issued to the discharger for a specific time period (not to exceed 5 years) with a provision for reapplying for further permit coverage prior to the expiration date. The processing time for an individual permit is approximately six (6) months.

In contrast, a general permit covers multiple facilities/sites/activities within a specific category for a specific period of time (not to exceed 5 years). For general permits, NJDEP develops and issues the permit in advance (called a “master general permit”), with dischargers then generally obtaining coverage under the permit through submission of a Request for Authorization (RFA). Upon submission of a administratively and technically complete RFA, the permittee will be issued an individual authorization under the master general permit. The individual permit authorization expires no later than the expiration date of the master general permit. The RFA is an application form, which will be made available subsequent to the issuance of the final master general permit. A master general permit is also subject to public comment prior to issuance.

In accordance with N.J.A.C. 7:14A-6.13, the NJDEP may issue a general permit for categories of discharges that have common elements, such as facilities that involve the same or substantially similar types of operations, that discharge the same types of wastes, or that require the same or similar effluent limitations, operating conditions, or monitoring. Given the vast number of pesticide

applicators requiring NJPDES permit coverage, the NJDEP, in accordance with the US EPA guidance, decided that the most efficient way to regulate these types of discharges is to issue a general permit. The general permit approach maximizes NJDEP's resources by regulating all the applicators through a single permit action rather than multiple permit action. In addition, the issuance of a general permit will enable the NJDEP to address the public's comments and concerns in a single forum.

### III. COVERAGE UNDER THIS PERMIT

This general permit authorizes applications of pesticides made directly to surface waters of the State in order to control pests, as well as applications in, over, or near waters of the State.

#### A. Use Patterns Covered Under This Permit

The general permit is structured by five pesticide use patterns. These use patterns were developed to include discharges that are similar in type and nature and therefore represent the type of discharges and expected nature of the discharges covered under this permit. Also, the NJDEP has determined that the following five use patterns encompass the majority of pesticide applications that result in point source discharges to surface waters of the State. However, any pesticide application activities that do not fall within the five use patterns covered by this permit will require coverage under some other NJPDES permit if those activities result in point source discharges to waters of the State. The general permit covers the following five use patterns:

**1. Mosquito and Other Flying Insect Pest Control:** This use pattern includes the application, by any means, of chemical and biological insecticides and larvicides into or over water to control insects that breed or live in, over, or near water. Applications of this nature usually involve the use of low volume or ultra low volume sprays or granular larvicides discharged over large swaths of mosquito breeding habitat and may occur several times per year.

**2. Aquatic Weed and Algae Control:** This use pattern includes the application, by any means, of contact or systemic herbicides to control vegetation or algae in water and at water's edge, including irrigation ditches and/or irrigation canals. Applications of this nature may be single spot treatments of infestations or staged large scale treatments intended to clear several acres or more of waterway. Treatments may be singular or occur several times per year.

**3. Aquatic Nuisance Animal Control:** This use pattern includes the application, by any means, of chemicals into waters to control a range of animals for purposes such as fisheries management, invasive species eradication or equipment maintenance. Applications of this nature are usually made over an entire waterbody as the target pests are mobile. Treatments are generally made several years apart.

**4. Forest Canopy Pest Control:** This use pattern includes aerial pest control projects, in and over forest canopies where there are surface waters of the State below the canopy. Applications of this nature usually occur over large tracts of land, and are typically made in response to specific outbreaks. NJDEP assumes that for this use pattern pesticides will be unavoidably discharged into waters in the course of controlling for pests that are present near or over waters as a result of the aerial spraying (i.e., a point source discharge from a nozzle) over a forest canopy. These pests are not necessarily aquatic (e.g., airborne non-aquatic insects) but are

detrimental to industry, the environment, and public health. Note: Mosquito adulticides may be applied to forest canopies, in which case the application would be covered under the “Mosquito and Other Flying Insect Pest Control” use pattern.

**5. Agricultural Activities In Waters of the State (Aquatic Agricultural Activities):**

Although the USEPA did not include this use pattern in the 2010 NPDES PGP, the NJDEP has determined that it is appropriate to include this use pattern in this general permit. This use pattern includes the application of pesticides, usually chemicals, to waters of the State used in agricultural operations. Applications of this nature usually occur during specific times of the year.

**B. Operators Responsible for Coverage Under This Permit**

The NJDEP acknowledges that there may be more than one party implementing the conditions of the permit. However, in accordance with N.J.A.C. 7:14A-1.2, the NJDEP defines operator as any person who alone or along with other persons has primary management and operational decision making authority over any part of the activity. Only the operator(s) is required to obtain permit coverage. Therefore, the operator assumes full responsibility for permit compliance. For example, a mosquito control commission or agency that controls the pest management program in a district would be considered the permittee, even if a hired contractor is the one applying the pesticide. It is the mosquito control commission’s or agency’s responsibility to ensure that the hired contractor complies with the conditions of the permit when pesticides are being applied.

**C. Activities Covered Under This Permit**

Coverage under this permit is available to operators discharging to all surface waters of the State, including waterbodies classified as Outstanding National Resource Waters.

**Basis for Authorization of Discharges to Outstanding National Resource Waters Including Anti-degradation Analysis**

Outstanding National Resource Waters (ONRW) means high quality waters that constitute an outstanding national resource, which are classified in accordance with N.J.A.C. 7:9B-1.4 as FW1 and Pinelands waters.

Pesticides have historically been used to control harmful, destructive, or nuisance forms of insects, plants, and animal life in, over, or near waterbodies that are designated as ONRW. When properly applied, they are an effective tool for the protection of existing water quality and the control of invasive, harmful species that can cause significant adverse ecological impacts and/or create public health concerns. The NJDEP believes that the authorization of existing pesticide applications is consistent with the State anti-degradation policy. Pesticide applications have been occurring in, over, and near ONRW for decades. The continuation of past practices is not expected to change water quality. In fact, the consequence of prohibiting the application of pesticides would be the proliferation of invasive, destructive, or harmful species that could result in the lowering of existing water quality, increase in the quantity or potency of pesticides used in surrounding areas, and/or adverse health impacts resulting in diseases such as West Nile virus, encephalitis, etc.

NJDEP believes that coverage under the general permit for discharges to ONRW is necessary in order to avoid delays in the control of invasive and destructive plants, insects, and animals in

State forests and parklands, areas that contain the majority of ONRW. Additionally, not authorizing discharges to ONRW in this general permit may cause unintended delays in treatment that could potentially result in long term impacts to sensitive natural environments requiring more extensive control measures. Issuance of individual permits would create unnecessary delays, and add to the administrative costs without any added environmental benefit.

#### **D. Activities Not Covered Under This Permit**

Coverage under the permit is only available for discharges to waters that are not impaired for specific pesticides or degradates of that pesticide. For example, application of the pesticide copper sulfate to a waterbody impaired for either copper or sulfates would not be eligible for coverage under this permit, because copper sulfate can degrade into these two substances. In this instance, the operator would have to choose between obtaining coverage under an individual permit for such a discharge or selecting some other means of pest management, e.g., using mechanical means or an alternate pesticide product, which would not contribute to the exceedance of the pollutant level for which the stream is impaired. Please be advised that the processing time for an individual permit is approximately six (6) months. Additionally, the individual permit may include more stringent requirements, such as stream monitoring, more extensive reporting and recordkeeping, etc.

For this general permit, NJDEP has determined that it does not have information warranting a limitation for all impaired waters regardless of the impairment. In fact, in some instances, the application of a pesticide to water actually can improve the quality of the water such as when used to control algae growth that can deplete oxygen levels in water. It is important to note that this permit allows NJDEP, based on additional information, to require an operator to apply for coverage under an individual permit rather than approve coverage under this general permit.

Impaired waters are those that have been identified by the NJDEP pursuant to Section 303(d) of the CWA as not meeting applicable State water quality standards. Impaired waters for the purposes of this permit include both waters with approved or established Total Maximum Daily Loads (TMDLs) and waters for which the NJDEP has not yet approved or established a TMDL.

A list of impaired waters can be found in the Division of Water Quality website at [http://www.nj.gov/dep/dwq/gp\\_surfacewater.htm](http://www.nj.gov/dep/dwq/gp_surfacewater.htm) under Surface Water General Permits.

#### **E. Activities Exempted From Coverage Under This Permit**

Irrigation return flows and agricultural stormwater runoff do not require NJPDES permits, even when they contain pesticides or pesticide residues, as the CWA specifically exempts these categories of discharges from requiring NJPDES permit coverage. Additionally, other stormwater runoff is either: (a) already required to obtain NJPDES permit coverage as established in Section 402(p) of the CWA or (b) classified as a non-point source discharge for which NJPDES permit coverage is not required. Stormwater runoff that may contain pesticides would not be eligible for coverage under this permit, and is not required to obtain NJPDES permit coverage unless it was already required to do so prior to the Sixth Circuit decision or NJDEP designates a source for future stormwater permitting.

### **IV. TYPE OF WASTES OR POLLUTANTS REGULATED BY THIS PERMIT**

#### **A. Chemical Pesticides**

The Sixth Circuit Court determined that if a chemical pesticide leaves any excess or residue after performing its intended purpose, such excess or residue would be considered a pollutant under the CWA. The USEPA assumes that all chemical pesticides will leave a residual once the product has performed its intended purpose as explained below.

1. If the application of a chemical pesticide is made over a surface water of the US to control pests, based on US EPA field studies of pesticide applications, the USEPA expects that some portion of every application of a pesticide made over a surface water will fall directly into the surface water and thus assumes that applications will trigger the requirement for a NPDES permit.
2. If the application of a chemical pesticide is made into a surface water of the US to control pests, once the pesticide no longer provides any pesticidal benefit, any amount of the pesticide that remains in the surface water is a “residual” and would require coverage by a NPDES permit. Based on field studies conducted by US EPA of pesticides applied into water, the USEPA expects that some portion of every application of a pesticide made into a surface water will leave a residual in the surface water and thus assumes every application will trigger the requirement for a NPDES permit.
3. If the application of a chemical pesticide is made near a surface water of the US to control pests, the USEPA expects that a portion of the pesticide will unavoidably be deposited into waters in order to target pests effectively, and thus assumes applications will trigger the requirement for a NPDES permit.

The NJDEP concurs with the USEPA’s findings, therefore, the application of pesticides over, into, or near waters of the State will require a NJPDES permit.

### **Biological Pesticides:**

For purposes of this permit, NJDEP is relying on existing regulatory definitions in 40 CFR 174.3 and 158.2100(a) developed under FIFRA to define the term “biological pesticides.” For purposes of this permit, NJDEP identifies biological pesticides (also called “biopesticides” under FIFRA regulations) to include microbial pesticides and biochemical pesticides and plant-incorporated protectants.

The Sixth Circuit Court determined that the residue and excess quantities of biological pesticides, as well as the biological pesticide itself is considered a pollutant. Therefore, all applications of biological pesticides over, into, or near surface waters of the State require a NJPDES permit.

## **V. AUTHORIZATION TO DISCHARGE UNDER THIS PERMIT**

Authorization to discharge under this permit is granted in two ways. One way to obtain coverage under this permit is through the submission of an RFA. The Department will review the RFA and grant a written approval called the General Permit Authorization (GPA), when appropriate.

The second way to obtain coverage under this permit is through permit by rule. Operators that meet the criteria under permit by rule will be automatically authorized to apply pesticides according to the conditions of this permit on the effective date of this Master General Permit. The operator does not need to submit an RFA and no specific written approval will be provided by the NJDEP. The

Department considered the following factors when making a determination regarding who does not need to submit an RFA (i.e. covered through permit by rule):

- the type of discharge; the expected nature of the discharge
- the potential for toxic and conventional pollutants in the discharge
- the expected volume of discharges
- other means of identifying discharges authorized by the permit and
- the estimated number of discharges authorized by the permit.

Generally, the volume of discharge will vary proportionally with the number of acres and linear miles treated. Therefore, for all use patterns, NJDEP expects that the volume of discharge for a given pesticide application will be lower when fewer acres or linear feet are treated over a calendar year. Moreover, while there may be more operators applying pesticides to small treatment areas when compared to operators applying to large treatment areas, the volume of discharges from operators applying to small treatment areas is believed to be substantially less on a per applicator basis and cumulatively less than the volume of discharges from applications made by operators applying to large treatment areas.

The US EPA has stated in its fact sheet of the 2010 NPDES Pesticide General Permit that the focus of the federal permit will be on the largest applications of pesticides to waters of the U.S. The NJDEP has determined that it is appropriate to use the same approach. When considering the factors in N.J.A.C. 7:14A-6.13(d)7, the NJDEP gave weight to the volume of discharges and the estimated number of discharges to be covered by the permit and has relied on and is proposing to adopt the same threshold categories and values (see table below), as proposed by the US EPA in their 2010 NPDES Draft Pesticides General Permit (PGP). Should USEPA revise the threshold categories and/or values, the NJDEP may modify this master general permit to be consistent with the USEPA PGP.

In determining the appropriate threshold values for submission of an application, the US EPA's Office of Pesticides, Pollution, and Toxic Substances, and Regional Offices engaged in discussions with the United States Department of Agriculture (USDA), the states as co-regulators, and industry representatives, including pesticide registrants, applicators, and land managers. Based on these discussions and best professional judgment, the US EPA developed the following annual treatment area thresholds that differentiate between applications to smaller areas of land and those to larger areas of land. Treatments to larger areas of land are believed to have greater potential for impacting waters of the State.

<b>Pesticide Use</b>	<b>Annual Threshold</b>
<b>Mosquitoes and Other Flying Insect Pests</b>	640 acres of treatment area <sup>1</sup>
<b>In Water:</b> Aquatic Weeds and Algae	20 acres of treatment area <sup>1</sup>
<b>At Waters Edge:</b> Aquatic Weeds and Algae	20 linear miles of treatment area at water's edge <sup>2</sup>
<b>In Water:</b> Aquatic Nuisance Animals	20 acres of treatment area
<b>At Waters Edge:</b> Aquatic Nuisance Animals	20 linear miles of treatment area at water's edge <sup>2</sup>
<b>Forest Canopy</b>	640 acres of forest canopy <sup>1</sup>

<b>Aquatic Agricultural Activities</b>	100 acres of treatment area <sup>1</sup>
<p><sup>1</sup> Calculations shall include the area of the applications made to: (1) waters of the State and (2) conveyances with a hydrologic surface connection to waters of the State at the time of pesticide application. For calculating annual treatment area totals, count each pesticide application activity as a separate activity. For example, applying pesticides twice a year to a ten acre site shall be counted as twenty acres of treatment area.</p> <p><sup>2</sup> Calculations shall include the area of the application made at water's edge adjacent to: (1) waters of the State and (2) conveyances with a hydrologic surface connection to waters of the State at the time of pesticide application. For calculating annual treatment totals, count each pesticide application activity as a separate activity. For example, treating both sides of a ten mile ditch is equal to twenty miles of water treatment area.</p>	

Any operator that has reason to believe it will exceed one or more of the annual treatment area thresholds in any calendar year of the permit cycle shall submit an RFA to the NJDEP and obtain coverage. To determine whether operators are required to submit an RFA, the operator shall compare the threshold values to the total area where pesticide applications are made multiplied by the number of times those areas are treated per year.

The exemption from submission of an RFA does not apply to operators that discharge to waters designated as Pinelands or FW1. Therefore, all discharges to, near, or over Pinelands or FW1 waters of the State shall submit an RFA.

US EPA's rationale, which NJDEP is utilizing in this permit, for the annual treatment area threshold for each use pattern is as follows:

**Mosquitoes and Other Flying Insect Pests:** For mosquitoes and other flying insect pests, the annual treatment area threshold has been set at 640 acres. US EPA determined that the vast majority of mosquito control and abatement districts in the U.S. manage areas significantly larger than this threshold and may reasonably expect to exceed it during any given year. For instance, information from the state of Florida on 49 independent mosquito control districts shows that 48 of the 49 districts annually apply to more than 640 acres, which indicates that applications exceeding this area are quite typical. Similarly, data provided in US EPA's draft *Economic Achievability Analysis of the Pesticide General Permit (PGP) for Point Source Discharges from the Application of Pesticides* and included in the administrative record for this permit show similar findings as for Florida. Furthermore, the effective control of other aquatic breeding, flying insects, such as the blackfly, necessitates an application approaching or exceeding this threshold. Therefore, US EPA believes the threshold appropriately captures most operators engaging in this use pattern.

**Aquatic Weeds and Algae:** For aquatic weeds and algae, the annual treatment area threshold has been set at 20 acres or 20 linear miles of treatment on canals and irrigation system conveyances. This threshold has been set to capture operators treating relatively large portions of surface waters and watersheds, such as water management districts, wildlife and game departments, and some homeowner and lake associations. For example, Florida's South Florida Water Management District usually performs treatments of generally 60 acres at a time hundreds of times per year for various invasive plants on Florida's Lake Okeechobee. After reviewing the operations of major irrigation and flood control systems, US EPA expects that generally, relatively large entities such as South Florida Water Management District or California Department of Water Resources or organizations with comparable resources are the types of entities that manage 20 or more miles of engineered irrigation system

conveyances and that this is a reasonable limit to trigger the application submission requirement. The same rationale is applied to managers of ditch and canal banks. Therefore, US EPA believes the threshold appropriately captures the relatively large applications but excludes a significant number of small applications.

**Aquatic Nuisance Animals:** Invasive and nuisance aquatic animals are most commonly treated by public agencies such as departments of fish and game or utilities such as water management districts that manage areas of surface water in excess of 20 acres. The high mobility and prolific breeding ability that necessitate control of aquatic animals usually means that their treatment most often occurs in the entirety or large portions of the water bodies they inhabit. For example, fishery management treatments using *Rotenone* shall occur in the entire lake and, thus any treatment to a lake of more than 20 acres in area will trigger the annual treatment area threshold. US EPA expects that for this reason, only spot treatments to eradicate small emergent populations of sessile animals or treatments to very small water bodies might be excluded from the application submission requirement. Therefore, US EPA believes the threshold appropriately captures the relatively large operators engaging in this use pattern.

**Forest Canopy:** Forest canopy pest suppression programs are designed to aerially blanket large tracts of terrain, throughout which operators may not be able to see waters of the U.S. beneath the canopy. US EPA has set the annual treatment area threshold at 640 acres for this use pattern with the understanding that this will exclude only the smallest applications from the application submission requirement. These smaller applications generally occur on private lands. Therefore, US EPA believes the threshold appropriately captures most operators engaging in this use pattern, particularly public agencies managing large tracts of land.

NJDEP's rational for the annual treatment area threshold for the following use pattern:

**Aquatic Agricultural Activities:** The NJDEP believes that the annual threshold value of 100 acres will capture the majority of large farming operations and will exclude smaller operations from the application submission requirement, consistent with the approach taken by the USEPA for the other use patterns.

## VI. WHO MUST APPLY

### 1. Operators Required to Submit an RFA

- All operators discharging pesticides to Pinelands or FW1 waters;
- Operators discharging pesticides to waterbodies not classified as Pinelands or FW1, if they have reasons to believe they will exceed one or more of the annual (i.e. calendar year) treatment area thresholds;
- Operators hiring another party to apply pesticides if:
  - The application exceeds any applicable annual treatment area threshold, or
  - The application, in addition to any other treatments made under the hiring operator's authority in the same calendar year, will exceed any applicable annual treatment area threshold;
- For hire applicators applying pesticides under contract from another party will include the acreage treated on behalf of the client in their annual total unless that client has submitted or has responsibility for submitting an RFA reflecting that treatment. If the client has already

submitted an RFA for the area to be treated, the applicator does not need to include it in his/her RFA threshold calculation.

Based on a review of the RFA or other information, NJDEP may in certain, circumstances delay or deny coverage under the general permit and require submission of an application for an individual permit. Please be advised that the processing time for an individual permit is approximately six (6) months.

**2. Operators Not Required to Submit an RFA**

- Operators who discharge to waterbodies not classified as Pinelands or FW1 waters and do not exceed any of the applicable annual treatment area threshold values during any individual calendar year of the permit cycle (5 years);

Operators whose discharges are authorized by this permit, but are not required to submit an RFA are automatically covered under the permit for their application and are authorized to discharge in accordance with the permit requirements as soon as the permit becomes effective. Nonetheless, NJDEP emphasizes that these operators are still subject to all applicable requirements contained within the permit.

If an operator, otherwise not required to submit an RFA, anticipates that he or she will exceed an applicable annual treatment area threshold during any time in a given calendar year of the permit cycle, he or she shall submit an RFA at least 30 days prior to exceeding the threshold to continue to be authorized to discharge. NJDEP is requiring RFAs be submitted at least 30 days in advance of permit authorization to provide NJDEP with time necessary to ensure that permit coverage is appropriate for those activities identified in the RFA and to issue the authorization.

If an operator that is not required to submit an RFA wants NJDEP to consider alternative permit requirements for the application, the operator shall apply to NJDEP for a substitute individual permit applicable to his or her application. Please be advised that the processing time for an individual permit is approximately six (6) months.

**VII. RFA SUBMITTAL AND AUTHORIZATION EFFECTIVE DATES**

Operators shall submit a complete and accurate RFA no later than the deadlines set forth below.

<b>Discharge Authorization Date</b>		
<b>I. Category</b>	<b>RFA Submittal Deadline</b>	<b>Discharge Authorization Date</b>
Operators not required to submit an RFA.	Not applicable.	Effective Date of Master General Permit
Operators that discharge to Pinelands or FW1 waters.	At least 30 days prior to commencement of discharge.	Effective Date of Permit Authorization (EDPA)

Operators who know or should have reasonably known, prior to commencement of discharge, that they will exceed an annual treatment area threshold for that year.	At least 30 days prior to commencement of discharge.	Effective Date of Permit Authorization (EDPA)
Operators who do not know or would reasonably not know until after commencement of discharge that they will exceed an annual treatment area threshold for that year.	At least 30 days prior to exceeding an annual treatment area threshold.	Original authorization terminates when annual treatment area threshold is exceeded. Operator is reauthorized on the EDPA.

## VIII. INDIVIDUAL PERMITS

In accordance with N.J.A.C. 7:14A-6.13(e), NJDEP may require an individual permit or coverage under an alternative NJPDES general permit instead of the PGP. The regulations also provide that any interested party may petition NJDEP to take such an action. The issuance of the individual permit or alternative NJPDES general permit is in accordance with N.J.A.C. 7:14A and provides for public comment and appeal of any final permit decision. The circumstances in which such an action would be taken are set forth at N.J.A.C. 7:14A-6.13(e).

**Permittee Requesting Coverage under an Individual Permit:** In place of being covered by this permit, the permittee may request to be excluded from such coverage by applying for an individual permit. In this case, the permittee shall submit an individual permit application in accordance with N.J.A.C. 7:14A-4.1, along with a statement of reasons supporting the request, to NJDEP. The request may be granted by issuance of an individual permit or authorization of coverage under an alternative general permit if the reasons are adequate to support the request. Cases where an individual permit may be required are described in N.J.A.C. 7:14A-6.13(e). Under this scenario, if an individual permit is issued, or authorization to discharge under an alternative general permit is granted, coverage under this permit is automatically terminated under N.J.A.C. 7:14A-6.13(h) on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit. Please be advised that the processing time for an individual permit is approximately six (6) months.

## IX. EFFLUENT LIMITATIONS IN THE PERMIT

### A. Technology Based Effluent Limitations (Applicable to all Operators)

#### 1. What are the Technology Based Effluent Limitations?

The technology-based effluent limitations require the operator to minimize discharges of pesticides to surface waters of the State. The term “minimize” means to reduce and/or eliminate pesticide discharges to surface waters of the State through the use of control measures to the extent technologically available and economically achievable and practicable for the category or class of point sources covered under this permit taking into account any unique factors relating to the operators to be covered under the permit. The technology-based effluent limitations section is divided into two parts.

- a. The first part applies to all operators and addresses the general requirement to minimize discharges. In this part, all operators shall minimize discharges of pesticides by using the lowest effective amount of pesticide product per application and optimum frequency of pesticide applications necessary to control the target pest taking into account pest resistance concerns, perform regular maintenance activities, calibrate and clean/repair application equipment.
- b. The second part requires operators, who are required to submit an RFA, to implement additional Integrated Pest Management (IPM) Practices which involve the following:
  - identifying and assessing the pest problem;
  - assessing effective pest management; and
  - following specified procedures for pesticide application.

## **2. Basis for the Technology Based Effluent Limitations**

The technology-based effluent limitations contained in the PGP are non-numeric and constitute the levels of control that reduce the area and duration of impacts caused by the discharge of pesticides to surface waters of the State in a treatment area. In addition, these effluent limitations provide for protection of water quality standards, including protection of beneficial uses of the receiving waters inside the treatment area following completion of pest management activities.

The NJDEP's decision to include non-numeric technology based effluent limitations in this general permit is consistent with US EPA's approach as described in the 2010 NPDES Pesticides General Permit Fact Sheet.

It cannot be easily determined at what point a numeric effluent limit would apply. Since discharges from the application of pesticides are highly intermittent, it would be difficult to separate the discharge from the pesticide application itself. For example, the discharge from the application of a chemical pesticide to a surface water of the State is represented by the residual remaining in the ambient water after the pesticide is no longer serving its intended purpose (i.e., acting as a pesticide against targeted pests in the applied medium). Chemical pesticides applied directly to water are not considered pollutants until some time after actual discharge at which point the pesticides will have performed their intended function for pest control, dissipated in the waterbody, and broken down into other compounds to some extent, etc. This discharge also will have combined with any other discharges to that waterbody (be it from other point sources, non-point source runoff, air deposition, etc). Given this situation, it is not practicable to measure to determine compliance with a numeric limit or when such a measurement might occur.

For discharges from the application of pesticides, there are often many short duration, highly variable, pesticide discharges to surface waters from many different locations for which it would be difficult to establish a numeric limitation at each location. This variability makes setting numeric effluent limitations for pesticide applications extremely difficult. In this situation, requiring the use of standard control practices (i.e., narrative non-numeric effluent limitations), provides a reasonable approach to control pesticides discharges.

Determining the precise location for which a numeric effluent limitation would apply is also not possible. Discharges from the application of pesticide are different from discharges of process wastewater from a particular industrial or commercial facility where the effluent is more predictable and easily identified as an effluent from a conveyance (e.g., pipe or ditch), can be

precisely measured for compliance prior to discharge, and can be more effectively analyzed to develop numeric effluent limitations.

Information needed to develop numeric effluent limitations is not available at this time. To develop numeric technology-based effluent limitations, US EPA shall fully evaluate factors outlined in 40 CFR 125.3, such as the age of equipment and facilities involved, the process employed, the potential process changes, and non-water quality environmental impacts. In addition, US EPA estimates that more than 400 pesticide active ingredients contained in over 3,500 pesticide products may be covered under this permit.

Technology-based effluent limitations in this permit are presented specific to each pesticide use pattern to reflect the variations in procedures and expectations for the use and application of pesticides.

The effluent limitations in this permit are expressed as specific pollution prevention requirements for minimizing the pollutant levels in the discharge. NJDEP has determined that the combination of pollution prevention approaches and structural management practices required by these limits are the most environmentally sound way to control the discharge of pesticide pollutants to meet the effluent limitations. Pollution prevention continues to be the cornerstone of the NJPDES program.

### **3. Control Measures Used to Meet the Technology-Based Effluent Limitations**

Because there is variability in the control measures that can be used to meet the effluent limitations, the NJDEP is not mandating the specific control measures operators shall use to meet the limitations. This is analogous to other NJPDES discharge to surface water permits that contain numeric effluent limitations. For pesticides, namely mosquitocides, for example, mosquito control operators are required to consider mechanical/physical methods of control or source reduction to eliminate or reduce mosquito habitat. How this is achieved will vary by operator: For some, this may be achieved through water management, wetlands management, or regular mowing while for others mowing will not be feasible. Thus, a given control measure may be acceptable and appropriate in some circumstances but not in others. In this respect, the non-numeric effluent limitations in this permit are similar to numeric effluent limitations, which also do not require specific control technologies as long as the limitations are met.

Control measures can be actions (including processes, procedures, schedules of activities, prohibitions on practices and other management practices), or structural or installed devices to prevent or reduce water pollution. The key is determining what measure is appropriate for your situation in order to meet the effluent limitation. In this permit, operators are required to implement site-specific control measures to meet these limitations. The permit along with this fact sheet provides examples of control measures, but operators shall tailor these to their situations as well as improve upon them as necessary to meet permit limits. The examples emphasize minimization over treatment.

NJDEP notes that this permit uses both the term “control measures” and “best management practices” or “BMPs”. Use of the term control measure is intended to better describe the range of pollutant reduction practices that may be employed, whether they are structural, non-structural or procedural and includes BMPs as one of the components.

#### 4. Implementation of Control Measures to Meet the Technology-Based Effluent Limitations

This permit requires operators to implement control measures to meet the technology-based effluent limitations. It also provides operators with important considerations for the implementation of their specific control measures. Some operators will have to document how such factors were taken into account in the implementation of their control measures. NJDEP recognizes that not all of these considerations will be applicable to every site nor will they always affect the choice of control measures. If operators find their control measures are not minimizing discharges of pesticide adequately, the control measures shall be modified as expeditiously as practicable.

The following is excerpted from US EPA's 2010 NPDES Pesticides General Permit Fact Sheet (Section 2.1.1- 2.1.3):

**Use the lowest effective amount of pesticide product per application and optimum frequency of pesticide applications necessary to control the target pest, consistent with reducing the potential for development of pest resistance.**

- As noted earlier, it is illegal to use a pesticide in any way prohibited by the FIFRA labeling. Also, use of pesticides shall be consistent with any other applicable state or federal laws. To minimize the total amount of pesticide discharged, operators shall consider lower application rates, frequencies, or both to accomplish effective control keeping in mind pesticide resistance. Using the lowest possible effective rate ensures maximum efficiency in pest control with the minimum quantity of pesticide. The lowest effective application rate also reduces the amount of pesticide available that is not performing a specific pest-control function. Using the lowest possible effective rate and frequency of applications can result in cost and time savings to the user. To minimize discharges of pesticide, operators should base the rate and frequency of application on what is known to be effective against the target pest or necessary for resistance management.

Operators shall also consider pest resistance to pesticides when reducing discharges from application of pesticide. Resistance management is an important part of pest control. Some pests can develop resistance to pesticides unless resistance management techniques are adopted by pesticide users. Resistance can result in the loss of effectiveness of pesticides with relatively unfavorable environmental and human health risks and increase reliance on riskier pesticides. When resistance occurs, users may increase rates and frequency of application in an attempt to maintain pesticide effectiveness. This can lead to the loss of efficacy and increased exposure to the pesticide. Pesticide applicators should be aware of the potential for pest resistance to develop by considering the pest, the pesticide and its mode of action, the number of applications and intervals, and application rates.

Pest resistance develops because intensive pesticide use kills the susceptible individuals in a population, leaving only the resistant ones to reproduce. Several pest management tactics help prevent or delay the occurrence of pesticide resistance. One tactic is to reduce dosages in order to avoid establishing a population of resistant organisms and instead allowing some survivors to pass on genes for susceptibility. Another is to apply pesticides over limited areas to reduce the proportion of the total pest population exposed to the pesticide, thereby maintaining a large pool

of individuals still susceptible to the pesticide. A third tactic to prevent development of resistant pest populations is to rotate pesticides with different modes of actions against the pests rather than depend on a single mode of action. See National Pesticide Applicator Certification Core Manual, Chapter 1 – Pest Management for additional information on pesticide resistance.

**Perform regular maintenance activities to minimize potential for leaks, spills, or other unintended discharges of pesticides associated with the application of pesticides covered under this permit.**

Common-sense and good housekeeping practices enable pesticide users to save time and money and reduce potential for unintended discharges of pesticides to waters of the U.S. Regular maintenance activities should be practiced and improper pesticide mixing and equipment loading should be avoided. When preparing the pesticides for application be certain that you are mixing them correctly and preparing only the amount of material that you need. Carefully choose the pesticide mixing and loading area and avoid places where a spill will discharge into waters of the U.S. Some basic factors operators should consider are:

- Inspect pesticide containers at purchase to ensure proper containment;
- Maintain clean storage facilities for pesticides;
- Regularly monitor containers for leaks;
- Rotate pesticide supplies to prevent leaks that may result from long term storage; and
- Promptly deal with spills following manufacturer recommendations.

**Maintain application equipment in proper operating condition by adhering to any manufacturer's conditions and industry practices, and by calibrating, cleaning, and repairing such equipment on a regular basis to ensure effective pesticide application and pest control. You shall ensure that the equipment's rate of pesticide application is calibrated to deliver the precise quantity of pesticide needed to achieve greatest efficacy against the target pest.**

To minimize discharges of pesticide, operators shall ensure that the rate of application is calibrated (i.e. nozzle choice, droplet size, etc.) to deliver the appropriate quantity of pesticide needed to achieve greatest efficacy against the target pest. Improperly calibrated pesticide equipment may cause either too little or too much pesticide to be applied. This lack of precision can result in excess pesticide being available or result in ineffective pest control. When done properly, equipment calibration can assure uniform application to the desired target and result in higher efficiency in terms of pest control and cost. It is important for applicators to know that pesticide application efficiency and precision can be adversely affected by a variety of mechanical problems that can be addressed through regular calibration. Sound calibration practices to consider are:

- Choosing the right spray equipment for the application;
- Ensuring proper regulation of pressure and choice of nozzle to ensure desired application rate and droplet size (if applicable);
- Calibrating spray equipment prior to use to ensure the rate applied is that required for effective control of the target pest;

- Cleaning all equipment after each use and/or prior to using another pesticide unless a tank mix is the desired objective and cross contamination is not an issue;
- Checking all equipment regularly (e.g., sprayers, hoses, nozzles, etc.) for signs of uneven wear (e.g., metal fatigue/shavings, cracked hoses, etc.) to prevent equipment failure that may result in inadvertent discharge into the environment; and
- Replacing all worn components of pesticide application equipment prior to application.

## **B. Additional Technology Based Effluent Limitations -Integrated Pest Management Practices (Applicable to Operators who are required to submit an RFA)**

In addition to the technology-based effluent limitations described above that apply to all permittees, NJDEP is requiring permittees, who are required to submit an RFA, to also comply with additional technology-based effluent limitation in the form of Integrated Pest Management Practices (IPM). NJDEP expects that many of these permittees are already performing some of the IPM practices required in these additional technology-based effluent limitations. Additionally, operators whose discharges of pesticides to surface waters of the State are solely from pesticide research and development activities do not have to comply with these additional technology-based effluent limitations to the extent the limits may compromise the research design.

The additional technology-based effluent limitations are based on IPM practices. IPM, as defined in FIFRA, is a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools in a way that minimizes economic, health, and environmental risks. (FIFRA, 7 U.S.C. 136r-1) IPM is not a single pest control method but, rather, a series of pest management evaluations, decisions and controls. In evaluating available and relevant information, US EPA has found that some commercial (for-hired applicators) and non-commercial (e.g., state governments, federal governments, local governments, utilities) entities are currently implementing IPM practices or components of IPM to minimize pesticide use. For example, federal agencies are required to implement IPM under 7 USC 136r-1, "Federal agencies shall use Integrated Pest Management techniques in carrying out pest management through procurement and regulatory policies, and other activities." US EPA has found that mosquito control operations are performed by local government entities and that they are generally performing IPM.

This permit requires operators above the annual treatment area threshold to identify the pest problem; to evaluate and implement efficiently and effectively pest management; and to properly use pesticides. Operators are required to perform each of these permit conditions prior to the first pesticide application covered under this permit and at least once each calendar year thereafter. Below is a general discussion describing the limitations for all use patterns. Following the general discussion are more detailed descriptions of each specific requirement under each use pattern. Requirements for documentation of the specific measures implemented are discussed under Recordkeeping and Annual Reporting.

Operators required to perform IPM practices are required to do the following regardless of use pattern:

### **Identify the Problem**

Operators are required to identify the pest problem, identify the target pest, and establish an action threshold. Understanding the pest biology and ecology will provide insight into selecting the most effective and efficient pest management strategies (pesticidal or non-pesticidal methods), and in developing an action threshold. An action threshold is a point at which pest populations or environmental conditions indicate that pest control action shall be taken. Action thresholds help determine both the need for control actions and the proper timing of such actions. It is a predetermined pest level that is deemed to be unacceptable. In some situations, the action threshold for a pest may be zero (i.e., no presence of the pest is tolerated). This is especially true when the pest is capable of transmitting a human pathogen (e.g., mosquitoes and the West Nile virus). In areas where aquatic weeds are problematic, it may be preferable to use an aquatic herbicide as a preventive measure rather than after weeds become established. In some situations, even a slight amount of pest damage may be unacceptable for ecological or aesthetic reasons. Sometimes pre-emergent pesticide application is needed, as preventive measure to keep aquatic weeds at bay. Action thresholds can vary by pest, by site, and by season. Often the action threshold is expressed as the number of pests per unit area. Action thresholds may be difficult to establish. In a new IPM program, a practical approach is to establish an action threshold for the major pests. As operators gain insight and experience into specific pest management settings, the action levels can be revised up or down.

To identify the problem at a treatment area, operators may use existing data to meet the conditions of the permit. For example, a mosquito district may use monitoring data from an adjacent district to identify mosquito species at their pest management area. Operators may also use relevant historic site data.

### **Pest Management**

Operators are required to implement efficient and effective means of pest management that most successfully minimizes discharges to surface waters of the State resulting from the application of pesticides while still applying in accordance with FIFRA regulations and label instructions and achieving the intended results. Operators shall evaluate both pesticide and non-pesticide methods. Operators shall consider and evaluate the following options: no action, prevention/ source reduction, mechanical/physical methods, cultural methods/ education, biological control agents, and pesticides. In the evaluation of these options, operators shall consider impacts to water quality, impacts to non-target organisms, pest resistance, feasibility, and cost effectiveness. Combinations of various management methods are frequently the most effective pest management strategies over the long term. The goal should be to emphasize long-term control rather than a temporary fix. For additional information, see USEPA 2010 NPDES Pesticides General Permit Fact Sheet, pages 37 – 71.

### **Pesticide Use**

Operators are required to conduct pest monitoring and reduce the impact on the environment. Pest monitoring is important to properly time the need for pest control. To reduce the impact on the environment and non-target organisms, operators are required to apply pesticide when the action threshold has been met. As noted earlier, action thresholds help determine both the need for control actions and the proper timing of such actions. For additional information, see USEPA 2010 NPDES Pesticides General Permit Fact Sheet, pages 37 – 71.

## **C. Water Quality Based Effluent Limitations (Applicable to all Operators)**

### **A. What are the Water Quality Based Effluent Limits?**

In addition to the technology-based effluent limitations, the PGP also contains water-quality-based effluent limitations. In this permit, NJDEP has included a narrative statement that addresses WQBELs. The WQBEL is as follows:

*Your discharge shall be controlled as necessary to meet applicable numeric and narrative state water quality standards (see Appendix B or N.J.A.C. 7:9B-1.14(d)). If at any time you become aware, or NJDEP determines, that your discharge causes or contributes to an excursion of applicable water quality standards, you shall take corrective action and document and report the excursion(s) to NJDEP.*

The first sentence includes the general requirement to control discharges as necessary to meet water quality standards, while the second sentence implements this requirement in more specific terms by imposing on operators a responsibility to take corrective action in response to an excursion of applicable water quality standards, whether discovered by NJDEP or by the permittee. Failure to take such corrective action is a violation of the permit. Additionally, the permit includes a provision that specifies that NJDEP may determine that additional technology-based and/or water quality-based effluent limitations are necessary, or may deny coverage under this permit and require submission of an application for an individual NJPDES permit. Please be advised that the processing time for an individual permit is approximately six (6) months.

### **B. Compliance with the Water Quality Based Effluent Limits**

Each permittee is required to control its discharge as necessary to meet applicable water quality standards. As explained in US EPA's 2010 NPDES Pesticide General Permit Fact Sheet (Section 3), generally, compliance with the other conditions in this permit (e.g., the technology-based limitations, corrective actions, etc.) will result in discharges that are controlled as necessary to meet applicable water quality standards based on the cumulative effect of the following factors:

1. Under FIFRA, US EPA evaluates risk associated with pesticides and mitigates unreasonable ecological risk. Compliance with FIFRA is assumed.
2. US EPA evaluated national-scale ambient monitoring data, as well as the frequency of the identification of specific pesticides as the cause of water impairments, to assess whether pesticide residues are currently present in waters at levels that would exceed water quality standards. The monitoring data show that, in most samples, most pesticides were below ambient water quality criteria or benchmarks developed by US EPA's Office of Pesticide Programs (OPP) as indicators of narrative water quality criteria. For the small number of pesticides found in monitoring data to be present above such benchmarks, the evaluation, as summarized in Appendices B and C of the US EPA PGP fact sheet, also documents risk mitigation actions taken by US EPA (such as cancellation of pesticide uses) that US EPA expects have reduced the levels of those pesticides in water.

3. Technology-based effluent limitations in the PGP provide further protections beyond compliance with existing FIFRA requirements.
4. Biological pesticides discharged to waters, by regulatory definition, do not work through a toxic mode of action. For chemical pesticides, the discharges covered under this permit are the residues after the pesticide has performed its intended purpose. Thus, the residue will be no higher than, and in many instances, lower than, the concentration of the pesticide as applied.
5. The PGP excludes pesticide applications that result in discharges of any pesticide to waters impaired for that pesticide.

This permit requires permittees to control discharges as necessary to meet applicable water quality standards. When the permittee or NJDEP determines a discharge will cause or contribute to an excursion above any WQS, including failure to protect and maintain existing designated uses of receiving waters, the permittee shall take corrective action to ensure that the situation is eliminated and will not be repeated in the future. If additional control measures are required, NJDEP expects the operator to vigilantly and in good-faith follow and document, as applicable, the process for BMP selection, installation, implementation and maintenance, and cooperate to eliminate the identified problem within the timeframe in the permit.

## **X. MONITORING REQUIREMENTS**

### **Basis of Monitoring Requirements**

Monitoring is required in any NJPDES permit specifically for the purpose of demonstrating compliance with the permit conditions. The monitoring requirements of this permit are narrative and demonstrate compliance with permit conditions by using currently established pesticide use routines for monitoring pest control. For instance, the permit requires routine visual inspections (described below) to be conducted as part of the pest treatment activity or as part of post-application pest monitoring, and calls for records of the pesticide discharge volume to be kept. The monitoring requirements of the permit are reasonable measures of good pest management practice that the conscientious operator should be currently employing to ensure environmental health and safety and optimal control of pest organisms.

Monitoring of pesticide discharges poses several challenges not generally encountered in “traditional” NJPDES permitting situations. For example, there is no “wastewater discharge” per se from pesticide applications that is analogous to end-of-pipe discharges. A manufacturing plant would, for example, typically direct its wastewater through a treatment system to remove pollutants, and then would direct the effluent through a pipe into a receiving waterbody. However, for chemical pesticide applications, at the time of application the pesticide contains both the portion serving its intended purpose as well as the potential residual for which monitoring data would be appropriate. Thus, monitoring the “outfall” in this case would merely provide data on the amount of the product as applied (information already known through the FIFRA registration process) and would not be useful for comparing with any type of effluent limitation or water quality standard.

NJDEP also considered requiring ambient water quality monitoring. However NJDEP determined that it was infeasible for the following reasons:

- 1) Uncertainty: Ambient water quality monitoring would generally not be able to distinguish between the amount coming from the pesticide application and the amount of some other upstream source.
- 2) State water quality standards do not exist at this time for the vast majority of constituents in the products authorized for use under this PGP.
- 3) Difficulty of residue sampling for chemical pesticides: For chemical pesticides, the “pollutant” regulated by the PGP is the residue that remains after the pesticide has completed its activity, and it is this residue that would be the subject of any water quality monitoring requirement. However, the point at which only “residue” remains is not practically discernable at this time for all pesticides.

Given the questionable ability of ambient water quality data to demonstrate permit compliance, NJDEP has determined that there are suitable alternative monitoring activities to determine permit compliance, other than ambient water quality monitoring, for this permit.

NJDEP also considered Whole Effluent Toxicity (WET) testing as a possible option for assessing operator compliance with permit conditions; however, WET testing in a NJPDES permit program is best used to monitor whether an operator’s discharge is toxic and not whether a receiving stream (i.e., the ambient environment), that may be influenced by a number of different discharges from different operators and different sources is toxic. In addition, WET testing would not indicate the actual source of the toxicity. If a waterbody is found to be toxic or to contain pollutants above water quality standards, it can be quite complex to identify the source of the toxicity, which may or may not be from the pesticide application.

Therefore, the monitoring program that is required in this permit has been tailored to accommodate the unique situations related to pesticide applications. Visual monitoring is required to determine if any pesticide use practices may need to be revised to ensure that avoidable adverse impacts to the environment do not occur. Monitoring records required by those operators who submit RFAs will establish a history that may indicate if or when practices need to be reconsidered.

#### **A. Monitoring Requirements for all Permittees**

All permittees shall monitor the amount of pesticide used to ensure that the lowest amount needed to effectively control the pest is balanced with the potential for development of pesticide resistance. NJDEP understands that appropriate application rates are variable depending on conditions, and expects permittees to use their best professional judgment in combination with the label requirements in determining the appropriate amount of product needed to optimize efficacy of the treatment. NJDEP expects that should a pest be eradicated or marginalized, no further discharge to control that pest should occur unless it is absolutely necessary for the continued control of that pest.

All permittees shall also monitor their operation to ensure the integrity of application equipment by calibrating, cleaning, and repairing equipment on a regular basis to reduce the potential for leaks, spills, and unintended/accidental release of pesticides to surface waters of the State.

#### **B. Visual Monitoring Requirements for all Operators**

Visual monitoring assessments are required as a means of identifying, for example, instances of detrimental impact to non-target organisms, disruption or degradation of wildlife habitat, or the prevention of designated recreational or municipal uses of a waterbody that may possibly be related to the operator's use of pesticides in a given area. Visual monitoring will consist of spot checks in the area to and around which pesticides are applied for possible and observable adverse incidents, such as fish kills and/or distressed fish or macro-invertebrates.

Visual monitoring assessments are also required during the pesticide application when feasibility and safety allow. Visual monitoring is not required during the course of treatment when that treatment is performed in darkness as it would be infeasible for the inspector to note adverse effects under these circumstances. Additionally, the following scenarios often preclude visual monitoring during pesticide application:

1. Applications made from an aircraft
2. Applications made from a moving road vehicle when the applicator is the driver
3. Applications made from moving watercraft when the applicator is the driver
4. Applications made from a moving off-road wheeled or tracked vehicle when the applicator is the driver.

For all waterbodies, except those classified as PL or FW1, post application visual monitoring is only required if the operator performs such monitoring in the normal course of business. NJDEP expects that visual monitoring may reasonably be conducted during applications and efficacy inspections and may be conducted on foot or from a stationary vehicle.

### **C. Visual Monitoring Requirements for Operators Discharging to Waterbodies classified as Pinelands or FW1**

A visual monitoring assessment shall be conducted during any post application monitoring of a waterbody classified as Pinelands or FW1 as described below.

Applicators or operators discharging to Pinelands or FW1 waters on any given calendar day shall choose one of the Pinelands or FW1 waterbodies treated on that day to conduct post application monitoring. The waterbody that received the highest quantity of pesticides shall be the one chosen for post application monitoring in order to check for any adverse effects.

## **XI. PESTICIDE DISCHARGE MANAGEMENT PLAN (PDMP)**

### **A. What is a PDMP?**

Distinct from the technology-based or water quality-based effluent limitation provisions in the permit, operators that exceed any annual treatment area threshold or those that discharge to Pinelands or FW1 waters (i.e. one who is required to submit an RFA) are required to prepare a PDMP to document the implementation (including inspection, maintenance, monitoring, and corrective action) of control measures being used to comply with the effluent limitations.

Developing a PDMP helps operators ensure they have (1) taken steps to identify the pest problem, (2) evaluated pest management options, and (3) appropriate control measures to control pesticide discharges.

The PDMP itself does not contain effluent limitations; rather it constitutes a tool both to assist the operator in documenting what control measures it is implementing to meet the effluent limitations, and to assist the permitting/compliance authority in determining whether the effluent limitations are being met. A PDMP is a “living” document that requires periodic reviews and shall be kept up-to-date. Where control measures are modified or replaced to meet effluent limitations, such changes shall be documented in the PDMP. If operators fail to develop and maintain an up-to-date PDMP, they will have violated the permit. This recordkeeping violation is separate and distinct from a violation of any of the other substantive requirements in the permit (e.g., effluent limitations, corrective action, monitoring, and reporting).

Operators may choose to reference other documents, such as a pre-existing integrated pest management (IPM) plan or spill prevention and response plan, in the PDMP rather than recreating the same text in the PDMP. It is not required that an operator shall have authored the pre-existing plan in order to use it. When referencing other documents, the operator is responsible for ensuring his/her PDMP and the other documents together contain all the necessary elements for a complete PDMP. In addition, the operator shall ensure that a copy of relevant portions of those referenced documents is attached to the PDMP and is located on-site and it is available for review. Failure to have a PDMP, where required, is a violation of the permit.

## **B. When do you need to prepare a PDMP?**

- Operators who know or should have reasonably known prior to commencement of discharge, that they will exceed an annual treatment area threshold for that year, shall develop a PDMP prior to first pesticide application covered under this permit.
- Operators who do not know or would reasonably not know until after commencement of discharge, that they will exceed an annual treatment area threshold for that year, shall develop a PDMP prior to exceeding the annual treatment area threshold..
- Once the operator meets the requirement to prepare a PDMP, he/she shall maintain the plan thereafter for the duration of coverage under this general permit. This means even if the operator’s annual treatment area subsequently falls below the annual treatment area threshold, the operator is required to keep the plan up-to-date.

## **C. Contents of Your PDMP**

In general, the permit requires that the following be documented in the PDMP: (1) pesticide discharge management team information; (2) pest management area description; (3) control measure description; (4) schedules and procedures pertaining to control measures used to comply with the effluent limitations (e.g., application rate and frequency, spill prevention, pesticide application equipment, pest monitoring, and assessing environmental conditions) and pertaining to other actions necessary to minimize discharges (e.g., spill response procedures, adverse incident response procedures, and pesticide monitoring schedules and procedures). The PDMP shall be kept

up-to-date and modified whenever necessary to document any corrective actions as necessary to meet the effluent limitations in this permit.

## **1. Pesticide Discharge Management Team**

The permit requires that a qualified individual or team of individuals be identified to manage pesticide discharge, including the pesticide applicator. If the pesticide applicator has not been identified at the time of the plan development, the operator should indicate whether or not a for-hire applicator will be used. Identification of a pesticide discharge management team ensures that appropriate persons (or positions) are identified as necessary for developing and implementing the plan. Inclusion of the team in the plan provides notice to staff and management (i.e., those responsible for signing and certifying the plan) of the responsibilities of certain key staff for following through on compliance with the permit's conditions and limits.

The pesticide discharge management team is responsible for developing and revising the PDMP, implementing and maintaining the control measures to meet effluent limitations, and taking corrective action where necessary. Team members should be chosen for their expertise in the relevant areas to ensure that all aspects of pest management are considered in developing the plan. The PDMP shall clearly describe the responsibilities of each team member to ensure that each aspect of the PDMP is addressed. NJDEP expects most operators will have more than one individual on the team, except for small entities with relatively simple plans and/or staff limitations. The permit requires that team members have ready access to any applicable portions of the PDMP and the permit.

## **2. Pest Management Area Description**

The pest management area description includes the pest problem description, action threshold(s), a general location map, and water quality standards.

### **a. Pest Problem Description**

The permit requires that the PDMP include a description of the pest problem at the pest management area. A detailed pest management area description assists operators in subsequent efforts to identify and set priorities for the evaluation and selection of control measures taken to meet effluent limitations and in identifying necessary changes in pest management. The description shall include identification of the target pest(s), source of the pest problem, and source of data used to identify the problem. The permit allows use of historic data or other available data (eg, from another similar site) to identify the problem at your site. If you use other site data, you shall document in this section why data from your site is not available or not taken within the past year and explain why the data is relevant to your site. Additionally, the pest management area descriptions should include any sensitive resources in the area, such as unique habitat areas, rare or listed species, or other species of concern that may limit pest management options. As required in Part II, Section B.4.b., the permittee must take all necessary and practicable steps to avoid adverse incidents to the state and federally listed endangered and threatened plant and wildlife species.

### **b. Action Threshold(s)**

The permit requires that the PDMP include a description of the action threshold(s) established for the target pest, including a description of how they were determined. An action threshold is a level of pest prevalence at which an operator takes action to reduce the pest population.

**c. General Location Map**

The PDMP shall also contain a general location map of the site that identifies the geographic boundaries of the area to which the plan applies and location of the waters of the U.S. To improve readability of the map, some detailed information may be kept as an attachment to the site map and pictures may be included as deemed appropriate.

**d. Water Quality Standards**

Operators shall identify the water quality standards applicable to their discharge. This shall include a list of pesticide(s) or any degradates for which the water is impaired. The State Water Quality Standards are listed in Appendix B and the list of impaired waters can be found in the Division of Water Quality website at [http://www.nj.gov/dep/dwq/gp\\_surfacewater.htm](http://www.nj.gov/dep/dwq/gp_surfacewater.htm) under Surface Water General Permits.

**3. Description of Control Measure**

The permit requires that the PDMP include a description of the control measures to demonstrate how the operators specifically plan to meet the applicable technology-based or water quality-based effluent limitations. The description of the control measures selected to meet the effluent limitations shall include a brief explanation of the control measures used at the site to reduce pesticide discharge, including evaluation and implementation of the six pest management tools (no action, prevention, mechanical/physical methods, cultural methods, biological control agents, and pesticides). Operators shall consider impact to non-target organisms, impact to water quality, pest resistance, feasibility, and cost effectiveness when evaluating and selecting the most efficient and effective means of pest management to minimize pesticide discharge to surface waters of the State.

All six pest management tools may not be available for a specific use category and/or treatment area. However, the PDMP shall include documentation of how the six pest management tools were evaluated prior to selecting a site specific pest management strategy. For the no action option, operators should document the impact of this option without any current pest management strategy at the site. For the prevention management option, the operator should document the methods implemented to prevent new introductions or the spread of the pests to new sites such as identifying routes of invasion and how these can be intercepted to reduce the chance of invasion. Prevention may include source reduction, using pathogen-free or weed-free seeds or fill; exclusion methods (e.g., barriers) and/or sanitation methods, like wash stations, to prevent reintroduction by vehicles, personnel, etc. Some prevention management methods may fall under mechanical/physical or cultural methods as well.

For the pesticide management option, operators shall include a list of active ingredient(s) evaluated. Discussion should also identify specific equipment or methods that will prevent or reduce the risks to non-target organisms and pesticide discharges to surface waters of the State.

While the permit requires the operator to select control measures to meet the effluent limitations in this permit, the control measures themselves described in the PDMP are not effluent limitations because the permit does not impose on the operator the obligation to comply with the PDMP, when variable site conditions indicate otherwise in order to comply with FIFRA and other health and safety concerns; rather, the permit imposes on the operator the obligation to meet the effluent limitations prescribed. Therefore, the operator is free to change, as appropriate, the control measures used to meet the effluent limitations contained in the permit. This flexibility helps ensure that the operator is able to adjust its practices as necessary to ensure continued compliance with the permit's effluent limitations. However, the permit also contains a recordkeeping condition that requires that the PDMP be updated with any such changes in the operator's practices. Thus, if an operator's on-the-ground practices differ from what is in the PDMP, this would constitute a violation of the permit's recordkeeping requirement to keep the PDMP up-to-date, and not per se a violation of the permit's effluent limitations, which are distinct from the PDMP. NJDEP recognizes, however, that because the PDMP documents how the operator is meeting the effluent limitations contained in the permit, not following through with actions identified in the PDMP as the method of complying with the effluent limitations in the permit is relevant to evaluating whether the operator is complying with the permit's effluent limitations.

#### **4. Schedules and Procedures**

The following schedules and procedures, used to comply with the effluent limitations, shall be documented in the PDMP:

- 1. Application Rate and Frequency Procedures** In the PDMP, operators shall describe the procedures for determining the lowest effective amount of pesticide product per application and the optimum frequency of pesticide applications to minimize discharges from the application of pesticide.
- 2. Spill Prevention**
  - a.** Operators shall describe the spill prevention program for their pest management area. The program should address areas and activities at the site that typically pose a high risk for spills including loading and unloading areas, storage areas, process areas, and waste disposal activities. It should also address appropriate material handling procedures, storage requirements, and containment or diversion equipment that will minimize the potential for spills, or in the event of a spill, enable proper and timely response.
  - b.** As required in this permit, any spills or leaks that occur while covered under this permit shall be documented.
  - c.** Documenting spills does not relieve operators of any reporting requirements established in 40 CFR 110, 40 CFR 117, and 40 CFR 302, or any other statutory requirements relating to spills or other releases of oils or hazardous substances.
- 3. Pesticide Application Equipment Procedures-** Operators shall describe the preventive equipment maintenance program to keep the pesticide application equipment in proper operating condition, including how and when the following will be addressed: calibration,

regular inspections, and cleaning/repairing of the application equipment to avoid situations that may result in leaks, spills, and other releases.

4. **Pest Monitoring Procedures-** Operators shall discuss how their pest monitoring programs assess the pest treatment area, to determine when the action threshold(s) is met. The discussion should also include monitoring method(s) selected.
5. **Environmental Conditions Assessment Procedures**  
Operators shall discuss the procedures and methods to assess environmental conditions in the treatment area.

The following additional schedules and procedures necessary to minimize discharges shall also be documented in the PDMP

1. **Spill Response Procedures-** The PDMP shall document procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other release. In addition, the PDMP shall include documentation of the procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies.
2. **Adverse Incident Response Procedures**  
In the PDMP, operators shall document appropriate procedures for responding to an adverse incident resulting from pesticide applications. Operator shall identify and document the following:
  - Course of action or responses to any incident resulting from pesticide applications;
  - Chain of command notification for the incident, both internal to your agency/organization and external;
  - State/Federal contacts with phone numbers;
  - Name, location, and telephone of nearest emergency medical facility;
  - Name, location, and telephone of nearest hazardous chemical responder; and (including police and fire department).
3. **Pesticide Monitoring Schedules and Procedures-** In the PDMP, operators shall describe procedures for monitoring including:
  - The process for determining the location and timing of monitoring;
  - A schedule and procedures for monitoring;
  - The person (or position) responsible for conducting monitoring; and
  - Procedures for documenting any observed impacts to non-target organisms resulting from your pesticide discharge.

## **5. Signature Requirements**

The PDMP shall be signed and certified in accordance with the signatory requirements in Part II of the permit. This requirement is consistent with standard NJPDES permit conditions described in N.J.A.C. 7:14A-4.9 and is intended to ensure that the operator understands his/her responsibility to create and maintain a complete and accurate PDMP. The signature requirement includes an acknowledgment that there are significant penalties for submitting false information.

## **D. Pesticide Discharge Management Plan Modifications**

This permit requires that the PDMP be updated whenever any of the triggering conditions for corrective action occur, or when a review following the triggering conditions requires the operator to revise his/her control measures as necessary to meet the effluent limitations in this permit. Keeping the PDMP up-to-date will help the operator ensure that the condition that triggered the corrective action does not reoccur. Operators are also required to review the PDMP at least once a year or whenever necessary to update the pest problem description and pest management strategies at the pest management area.

It is important to note that failure to update the PDMP is a recordkeeping violation, not a violation of an effluent limit. For example, if the operator changes its maintenance procedures, but fails to update its PDMP to reflect these changes, a recordkeeping violation will result. The operator shall revise its PDMP to reflect the new maintenance procedures and include documentation of the corrective action to return to full compliance.

#### **E. Pesticide Discharge Management Plan Availability**

In accordance with N.J.A.C. 7:14A-2.11, a copy of the current PDMP, along with all supporting maps and documents, shall be kept at the address provided on the RFA. The PDMP and all supporting documents shall be immediately available to representatives of NJDEP or a local agency governing pesticide applications, as well as representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) at the time of an on-site inspection or upon request. In accordance with N.J.A.C. 7:14A-18.1, the NJDEP shall provide the PDMP for inspection and duplication to a member of the public upon request. Confidential Business Information (CBI) may be withheld from the public in accordance with N.J.A.C. 7:14A-18.2, but shall not be withheld from NJDEP or the Services.

## **XII. CORRECTIVE ACTION**

### **A. Purpose of Corrective Action**

The purpose of including corrective action requirements in this permit is to assist this new universe of NJPDES permittees with effectively meeting technology-based and water quality-based effluent limitations, and implementing integrated pest management practices. Corrective actions in this permit are follow-up actions a permittee shall take to assess and correct problems. They require review and revision of control measures and pesticide application activities, as necessary, to ensure that these problems are eliminated and will not be repeated in the future. The permit makes clear that the permittee is expected to assess why a specific problem has occurred and document what steps were taken to eliminate the problem. NJDEP believes this approach will help permittees in complying with the requirements of the permit quickly. Compliance with many of the permit's requirements -- for instance, those related to reporting and recordkeeping and some of those related to operation and maintenance -- can be accomplished immediately, and therefore, are not considered problems that trigger corrective actions.

It should be noted that a situation triggering corrective action is not necessarily a permit violation and, as such, may not necessarily trigger a modification of control measures to meet effluent limitations. However, failure to conduct (and document) corrective action reviews in such cases does constitute a permit violation.

### **B. Situations Requiring Revision of Control Measures**

Permittees are required to review and, as necessary, revise the selection and implementation of their control measures to eliminate any of the following situations:

- an unauthorized release or discharge occurs;
- the permittee becomes aware, or NJDEP determines, that control measures are not stringent enough for the discharge to meet applicable water quality standards;
- you become aware, or NJDEP concludes, that your control measures are not adequate/sufficient to avoid adverse incidents to state and/or federally listed endangered and threatened plant and wildlife species;
- an inspection or evaluation of your facility by a NJDEP official determines that modifications are necessary to meet the non-numeric effluent limits; or
- the permittee observes or is otherwise made aware (e.g., a third party notification) of an adverse incident for which symptoms are unusual or unexpected during the normal course of treatment.

NJDEP considers the above situations to be of significant concern. Thus, NJDEP is requiring permittees to assess the cause of these situations which may be affiliated with the permittees discharge from the application of pesticides and to take any necessary steps to eliminate the situation and ensure that the situation will not be repeated in the future.

The purpose of this section is to ensure compliance with corrective action requirements through increased accountability and oversight. NJDEP views ongoing assessment of control measure effectiveness and corrective actions as integral to an effective pesticide management program. This corrective action assessment shall be kept with the other recordkeeping documentation required by this permit.

### **C. Corrective Action Deadlines.**

The permit requires that corrective action be completed “before the next pesticide application that results in a discharge, if practicable, or if not, as soon as practicable thereafter.” NJDEP emphasizes that this timeframe is not a grace period within which an operator is relieved of any liability for a permit violation. NJDEP is adopting this flexible deadline to account for the variation in types of responses (e.g., evaluate situation and select, design, install, and implement new or modified control measures) that may be necessary to address any identified situations of concern. NJDEP recognizes that in rare cases a corrective action review may identify the need for substantial improvements to the permittee’s control measures, and does not want to limit the selection and implementation of such controls with an inflexible deadline.

Another possibility is that NJDEP or the permittee may determine that further monitoring is needed to pinpoint the source of the problem, and this monitoring may need to be conducted during future pesticide application activities. However, NJDEP believes that in the vast majority of cases, corrective action reviews will identify responses that can be taken quickly, either before the next pesticide application that results in a discharge or shortly thereafter. NJDEP expects operators to document and justify any schedules for selecting, designing, installing, and implementing new or modified control measures.

When any of the situations requiring revision of control measures listed above are identified, such as discovery that water quality standards are being exceeded, the permittee shall take steps to ensure the problems causing any violation are eliminated. If the original inadequacy constitutes a permit violation, then that violation is not excused by response within the timeframe NJDEP has allotted for corrective action, though NJDEP may consider this when determining the appropriate enforcement response to a violation. NJDEP assumes that permittees will need less time to make minor repairs or change practices than to make substantial operational changes or equipment repair. A timeframe, albeit flexible, is included specifically so that problems are not allowed to persist indefinitely. Failure to take the necessary corrective action within the stipulated timeframe constitutes an additional and independent permit violation.

#### **D. Effect of Corrective Action**

The occurrence of a situation requiring revision of control measures may, but does not implicitly, constitute a violation of the permit. Also, the occurrence of the situation does require the permittee to immediately review and as necessary, revise the selection and implementation of their control measures to eliminate the situation. This section explains that taking corrective action does not absolve the permittee of any liability for a permit violation requiring that action, however, failure to take required corrective action will constitute an original or an additional permit violation. NJDEP will consider the appropriateness and promptness of corrective action in determining enforcement responses to permit violations. NJDEP or a court may impose additional requirements and schedules of compliance, including requirements to submit additional information concerning the condition(s) triggering corrective action, additional site-specific water-quality based limitations, additional monitoring requirements, or other schedules and requirements more stringent than specified in this permit. Those requirements and schedules will supersede those specified under "Situations Requiring Revision of Control Measures" if such requirements conflict.

### **XIII. WHEN TO CONTACT THE NJDEP HOTLINE**

#### **A. Adverse Incidents**

##### **1. Adverse Incidents that are Required to be Reported**

Permittees are required to take specific actions in response to identified adverse incidents which may have resulted from a discharge from the permittee's pesticide application. Namely, permittees are required to contact the NJDEP Hotline (1-877-WARN-DEP) immediately, but no later than 2 hours and then follow-up with a written report within 5 days of becoming aware of the adverse incident. NJDEP defines an "adverse incident" in Appendix A, but generally it is defined as any effect of a pesticide's use that is unexpected or unintended.

The following information shall be reported to the NJDEP Hotline:

- The caller's name and telephone number;
- Operator name and mailing address;
- If you received a General Permit Authorization, the NJPDES permit number;
- The name and telephone number of a contact person, if different than the person providing the 24-hour notice;
- How and when you became aware of the adverse incident, spill, leak, or other unpermitted discharge;
- Description of the location of the adverse incident, spill, leak, or other unpermitted discharge;

- Description of the adverse incident, spill, leak, or other unpermitted discharge identified and the US EPA pesticide registration number for each product that was applied, spilled, leaked, or discharged in the affected area; and
- Description of any steps you have taken or will take to correct, repair, remedy, cleanup, or otherwise address any adverse effects.

Permittees are required to provide a written report of the adverse incident to the NJDEP within 5 days of discovering the adverse incident. The adverse incident report shall include the following information:

- Information required to be provided in Part IV.F.4 of the permit;
- Date and time you contacted NJDEP notifying the Agency of the adverse incident;
- Location of incident, including the names of any waters affected and appearance of those waters (sheen, color, clarity, etc.)
- A description of the circumstances of the incident including species affected, number of individual and approximate size of dead or distressed organisms
- Magnitude of the effect (e.g., aquatic square area or total stream distance affected)
- Pesticide application rate, intended use site (e.g., banks, above, or direct to water), and method of application;
- Description of the habitat and the circumstances under which the incident occurred (including any available ambient water data for pesticides applied);
- Actions to be taken to prevent recurrence of the incident.

## **2. Adverse Incidents that Do Not Need to be Reported**

Reporting of adverse incidents is not required under this permit in the following situations when:

(a) you are aware of facts that clearly establish that the adverse incident was not related to toxic effects or exposure from the pesticide application;

(b) you have been notified in writing by NJDEP that the reporting requirement has been waived for this incident or category of incidents;

(c) an adverse incident occurs to pests that are similar in kind to pests identified as potential targets on the FIFRA label.

However, records of all visual inspections, even for these situations, shall be kept on site with the permittee.

## **B. Reportable Spills and Leaks**

The permittee is required to call the NJDEP Hotline at 1-877-927-6337 for any reportable spill or leak of a hazardous substance into surface waters of the State immediately but no later than 2 hours of becoming aware of the spill or leak.<sup>1</sup> Permittees shall document this notification within 5 days of becoming aware of such spill or leak. This documentation

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<sup>1</sup> Reportable Spills and Leaks are defined as those that trigger the requirement to notify the National Response Center (40 CFR Parts 110, 117, 302) based on the type of pollutant and quantity released.

provides a written record of what you reported to NJDEP orally. It should also include a description of the reporting system that will be used to alert responsible managers and legal authorities in the event of a future spill or leak and a description of preventive measures to prevent, contain, or treat spills and leaks of these materials. This information will be used by NJDEP to ascertain compliance with permit conditions.

#### PURPOSE of NJDEP NOTIFICATION

NJDEP believes adverse incident information associated with discharges from the application of pesticides is useful to the Department because the information:

- Provides the NJDEP with an indication of the effectiveness of the permit in controlling discharges to protect water quality, including data upon which the NJDEP may base future permit decisions (e.g., modifications to or reissuance of this permit).
- May be considered when reviewing applications for registration of new pesticides that are chemically similar to existing pesticides;
- May be considered in ecological risk assessment and during deliberations on risk management decisions;
- May be reviewed to determine trends that may indicate potential ecological impacts with an existing pesticide and/or to track improvements when mitigation measures are applied;
- Provides information on the nature, extent, and severity of incidents to decision-makers, stakeholders, and the public; and
- Provides the NJDEP with information on which to assess compliance with regulatory requirements, including documentation and reporting.

Currently, there is no database that includes adverse reporting from anyone other than the registrant under Section 6(a)(2) of FIFRA. NJDEP does not consider inclusion of adverse incident reporting in the NJPDES permit to be a duplicative requirement to the FIFRA Section 6(a)(2) requirements for registrant reporting of adverse incidents. This is because pesticide registrants are not likely to be directly covered under the PGP. Requiring the reporting of adverse incidents and follow-up corrective actions may address the lack of a universal, mandatory legal duty for pesticide users to report adverse incidents, at least for the pesticide use patterns covered by this permit.

NJDEP acknowledges that assessing and correcting adverse incidents may be complicated in certain instances. For example, symptoms associated with adverse incidents are often vague or mimic other causes which may lead to incorrect diagnoses. Thus, it may be difficult to identify and track chronic effects resulting from pesticides discharges. It may also be difficult to observe adverse effects because of limited visibility or access such in sparsely populated areas or because scavengers scatter or devour carcasses before discovery. However, NJDEP believes that it is important to identify to the extent feasible situations where adverse effects occur where discharges from the application of pesticides also occur.

Immediately observable signs of distress or damage to non-target plants, animals and other macro-organisms within the treatment area may warrant concern for a possible adverse incident related to a discharge of pesticides during application.

During a visual inspection, operators should watch for distressed or dead juvenile and small fishes, washed up or floating fish, fish swimming abnormally or erratically, fish lying lethargically at the water surface or in shallow water, fish that are listless or nonresponsive to disturbance, the stunting, wilting,

or desiccation of non-target submerged or emergent aquatic plants, and other dead or visibly distressed non-target organisms including amphibians, turtles, and macro-invertebrates. These observations shall be noted.

Complete information concerning adverse impacts will aid NJDEP in any review of current or future pesticide use, adherence to Best Management Practices, or effectiveness of Best Management Practices.

## **XIV. RECORDKEEPING AND ANNUAL REPORTING**

### **A. Recordkeeping**

This permit requires operators to maintain certain records to help them assess performance of control measures and to document compliance with permit conditions. Operators can rely on records and documents developed for other programs, such as requirements under FIFRA, provided all requirements of the permit are satisfied.

This permit requires those who will exceed the annual treatment area threshold in Part II to keep additional records and to submit an annual report if an adverse incident has occurred during the past calendar year.

NJDEP recommends that all operators keep records of acres of linear miles treated each calendar year for all applicable use patterns covered under this general permit. This record will help operators estimate when they will exceed the annual treatment area threshold. As explained, the total acres or linear miles should not include those acres/miles accounted for in another operator's RFA.

#### **1. Recordkeeping Requirements (Applicable to all Operators)**

The records that shall be kept by all operators, specifically the entity who has operational control over the decision to perform pesticide applications, include the following:

- A copy of the permit;
- Adverse incident reports; and  
Rationale for any determination that reporting of an identified adverse incident is not required;
- A copy of any corrective action documentation.

#### **2. Additional Recordkeeping Requirements (Applicable to Operators Required to Submit an RFA)**

As noted above, operators who are required to submit an RFA and any pesticide applicator hired by such entity to perform activities covered under the permit shall keep additional records. These records are listed below and identified in Part IV of the permit. Records of equipment maintenance and calibration are to be maintained only by the entity performing the pest management activity on behalf of self or client.

- a. A copy of the RFA submitted to NJDEP, any correspondence exchanged between you and NJDEP specific to coverage under this permit, and a copy of your permit authorization,
- b. The date on which you knew or should have known that you would exceed an annual treatment area threshold during any calendar year;

- c. Monitoring method(s) used, date(s) of monitoring activities, and findings of monitoring;
- d. Target pest(s);
- e. Pest density prior to pesticide application;
- f. Company name and contact information for pesticide applicator;
- g. Pesticide application date(s);
- h. Description of treatment area, including location and size (acres or linear feet) of treatment area and identification of any waters, either by name or by location, to which you discharged any pesticide(s);
- i. Name of each pesticide product used including the US EPA registration number;
- j. Quantity of pesticide applied (and specify if quantities are for the pesticide product as packaged or as formulated and applied)
- k. Concentration (%) of active ingredient in formulation;
- l. For pesticide applications directly to waters, the effective concentration of active ingredient required for control;
- m. Any unusual or unexpected effects identified to non-target organisms;
- n. Documentation of any equipment cleaning, calibration, and repair (to be kept by pesticide application equipment operator);
- o. A copy of your PDMP, including any modifications made to the PDMP during the term of this permit.

### **3. When Records Need to be Prepared**

All required records shall be prepared as soon as possible but no later than 14 days following completion of the associated activity. Operators shall retain copies of these documents for a period of at least 5 years from the date their coverage under this permit expires or is terminated, in accordance with N.J.A.C. 7:14A-6.6.

### **4. Access to Records**

In accordance with N.J.A.C. 7:14A-2.11, the permittee shall allow an authorized representative of the NJDEP, access to any records that are required to be kept under the conditions of this permit.

## **B. Annual Reports (Applicable to Operators Required to Submit an RFA)**

The NJDEP's Pesticide Control Program receives annual reports that contain the above information from permittees of Mosquito/Fly Control and aquatic pesticide permits. Therefore, if the discharge is to waters other than Pinelands or FW1, the NJDEP is requiring annual reports only from those operators that are required to submit an RFA and reported an adverse incident in the past calendar year. This information will be compiled and reviewed to ensure that there are adequate measures in place to minimize adverse incidents. The annual report shall include the following information:

- a. Operator's name
- b. NJPDES permit number(s)
- c. Contact person name, title, e-mail address (if any), and phone number
- d. A summary report of all adverse incidents that occurred during the previous calendar year; and
- e. A summary of any corrective actions, including spill responses, in response to adverse incidents, and the rationale for such actions.

## **C. Annual Reports (Applicable to Operators Discharging to Pinelands or FW1 Waters)**

The Department is requiring all operators discharging to Pinelands or FW1 waters to submit an annual report that details the findings of the post application monitoring. This information will be used by the Department to assess permit compliance and to determine whether additional controls on pesticide discharges are necessary to protect water quality. Operators discharging to Pinelands or FW1 waters shall submit an annual report to the Bureau of Surface Water Permitting at the address specified in Part IV. I. no later than February 15 of the following year that includes all of the following:

- a.** Operator's name
- b.** NJPDES permit number(s)
- c.** Contact person name, title, e-mail address (if any), and phone number
- d.** Brief description of what was observed at the post application monitoring, including the location, date, and time.
- e.** A summary report of any adverse incidents that occurred during the previous calendar year; and
- f.** A summary of any corrective actions, including spill responses, in response to adverse incidents, and the rationale for such actions.

# PART I GENERAL REQUIREMENTS: NJPDES

## A. General Requirements of all NJPDES Permits

### 1. Requirements Incorporated by Reference

- a. The permittee shall comply with all conditions set forth in this permit and with all the applicable requirements incorporated into this permit by reference. The permittee is required to comply with the regulations, including those cited in paragraphs b. through e. following, which are in effect as of the effective date of the final permit.
- b. General Conditions
  - Penalties for Violations N.J.A.C. 7:14-8.1 et seq.
  - Incorporation by Reference N.J.A.C. 7:14A-2.3
  - Toxic Pollutants N.J.A.C. 7:14A-6.2(a)4i
  - Duty to Comply N.J.A.C. 7:14A-6.2(a)1 & 4
  - Duty to Mitigate N.J.A.C. 7:14A-6.2(a)5 & 11
  - Inspection and Entry N.J.A.C. 7:14A-2.11(e)
  - Enforcement Action N.J.A.C. 7:14A-2.9
  - Duty to Reapply N.J.A.C. 7:14A-4.2(e)3
  - Signatory Requirements for Applications and Reports N.J.A.C. 7:14A-4.9
  - Effect of Permit/Other Laws N.J.A.C. 7:14A-6.2(a)6 & 7 & 2.9(c)
  - Severability N.J.A.C. 7:14A-2.2
  - Administrative Continuation of Permits N.J.A.C. 7:14A-2.8
  - Permit Actions N.J.A.C. 7:14A-2.7(c)
  - Reopener Clause N.J.A.C. 7:14A-6.2(a)10
  - Permit Duration and Renewal N.J.A.C. 7:14A-2.7(a) & (b)
  - Consolidation of Permit Process N.J.A.C. 7:14A-15.5
  - Confidentiality N.J.A.C. 7:14A-18.2 & 2.11(g)
  - Fee Schedule N.J.A.C. 7:14A-3.1
- c. Operation And Maintenance
  - Need to Halt or Reduce not a Defense N.J.A.C. 7:14A-2.9(b)
  - Proper Operation and Maintenance N.J.A.C. 7:14A-6.12
- d. Monitoring And Records
  - Monitoring N.J.A.C. 7:14A-6.5
  - Recordkeeping N.J.A.C. 7:14A-6.6
  - Signatory Requirements for Monitoring Reports N.J.A.C. 7:14A-6.9
- e. Reporting Requirements
  - Planned Changes N.J.A.C. 7:14A-6.7
  - Reporting of Monitoring Results N.J.A.C. 7:14A-6.8
  - Noncompliance Reporting
    - Hotline/Two Hour & Twenty-four Hour Reporting N.J.A.C. 7:14A-6.10 & 6.8(h)
    - Written Reporting N.J.A.C. 7:14A-6.10(c) & (d)
    - N.J.A.C. 7:14A-6.10(e) & (f) & 6.8(h)
  - Duty to Provide Information N.J.A.C. 7:14A-2.11, 6.2(a)14 & 18.1
  - Schedules of Compliance N.J.A.C. 7:14A-6.4
  - Transfer N.J.A.C. 7:14A-6.2(a)8 & 16.2

## PART II

### GENERAL REQUIREMENTS DISCHARGE CATEGORIES

- A. The permittee must comply with all other applicable federal, state, local laws and regulations that pertain to your application of pesticides, including but not limited to the following: Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), Pinelands Commission Certificate of Filing, N.J.A.C. 7:30-9.3 (Aquatic Pesticide Permits), N.J.A.C. 7:30-9.2 (Mosquito/Fly Control Permit), and Reporting to the National Response Center. For example, this permit does not negate the requirements under FIFRA and its implementing regulations to use registered pesticides consistent with the product’s labeling, including contacting the local fish and wildlife service if required.**
- 1.** Application of herbicides to waterbodies, with the exception of lakes and ponds, requires the operator to apply and receive a Pinelands Commission Consistent Certificate of Filing prior to submitting an application to the NJDEP for a NJPDES Pesticide Application Discharge permit. This is consistent with the terms of the June 1991 Memorandum of Agreement between the Commission and the Pesticide Control Program.
- B. Coverage under This Permit.** This permit covers any operator, defined in Appendix A that meets the eligibility requirements identified below and submits a Request for Authorization in accordance with Section C, if required.
- 1. Activities For Which a Permit is Required**

**Activities Covered.** This permit is available to operators who discharge to surface waters of the State from the application of (1) biological pesticides or (2) chemical pesticides that leave a residue (hereinafter collectively “pesticides”), when the pesticide application is for one of the following pesticide use patterns:

    - a. Mosquito and Other Flying Insect Pest Control** – to control public health/nuisance and other flying insect pests that develop or are present during a portion of their life cycle in or above standing or flowing water. Public health/nuisance and other flying insect pests in this use category include but are not limited to mosquitoes and black flies.
    - b. Aquatic Weed and Algae Control** – to control invasive or other nuisance weeds and algae in water and at water's edge, including irrigation ditches and/or irrigation canals.
    - c. Aquatic Nuisance Animal Control** –to control invasive or other nuisance animals in water and at water’s edge. Aquatic nuisance animals in this use category include, but are not limited to fish, lampreys, and mollusks.
    - d. Forest Canopy Pest Control** - aerial application of a pesticide over a forest canopy to control the population of a pest species (e.g., insect or pathogen) where to target the pests effectively a portion of the pesticide unavoidably will be applied over and deposited to water.

- e. **Agricultural Activities**- application of pesticides to or near waters of the State used in the operation of agricultural activities.

**2. Activities Exempted**

- a) Irrigation return flows and agricultural stormwater runoff do not require NJPDES permits, even when they contain pesticides or pesticide residues, as the CWA specifically exempts these categories of discharges from requiring NJPDES permit coverage.

**3. Permit by Rule (Does not apply to operators who discharge to Pinelands and FW1 waters)**

Operators whose application of pesticides will not exceed one or more of the annual (i.e. calendar year) treatment area thresholds listed in Table 1 below for the “treatment area” as defined in Appendix A, are automatically authorized to discharge after April 9, 2011, in compliance with the requirements of this permit without submission of a Request for Authorization (RFA).

<b>Table 1. Annual Treatment Area Thresholds</b>		
<b>PGP Part</b>	<b>Pesticide Use</b>	<b>Annual Threshold</b>
B.1.a.	Mosquitoes and Other Flying Insect Pests	640 acres of treatment area <sup>1</sup>
B.1.b.	Aquatic Weed and Algae Control:	
	-In Water	20 acres of treatment area <sup>1</sup>
	- At Water’s Edge:	20 linear miles of treatment area at water’s edge <sup>2</sup>
B.1.c.	Aquatic Nuisance Animal Control:	
	-In Water	20 acres of treatment area <sup>1</sup>
	- At Water’s Edge	20 linear miles of treatment area at water’s edge <sup>2</sup>
B.1.d.	Forest Canopy Pest Control	640 acres of treatment area <sup>1</sup>
B.1.e.	Agricultural Activities	100 acres of treatment area <sup>1</sup>

<sup>1</sup>Calculations shall include the area of the applications made to surface waters of the State. For calculating annual treatment area totals, count each pesticide application activity as a separate activity. For example, applying pesticides twice a year to a ten acre site shall be counted as twenty acres of treatment area.

<sup>2</sup>Calculations shall include the linear extent of the application made at water’s edge adjacent to surface waters of the State. For calculating annual treatment totals, count each pesticide application activity and each side of a linear water body as a separate activity or area. For example, treating both sides of a ten mile ditch is equal to twenty miles of water treatment area.

**4. Activities Not Covered**

**Discharges to Water Quality Impaired Waters.** You are not eligible for coverage under this permit for any discharges from a pesticide application to surface waters of the State if the water is identified as impaired by that specific pesticide or its degradates. For purposes of this permit, impaired waters are those that have been

identified by the Department of Environmental Protection (DEP) pursuant to Section 303(d) of the CWA as not meeting applicable State water quality standards. Impaired waters for the purposes of this permit include both waters with approved or established Total Maximum Daily Loads (TMDLs) and waters for which the DEP has not yet approved or established a TMDL. A list of these waters is available in the Division of Water Quality website at [http://www.nj.gov/dep/dwq/gp\\_surfacewater.htm](http://www.nj.gov/dep/dwq/gp_surfacewater.htm) under Surface Water General Permits.

**b. Endangered and Threatened Plant Species**

It is a condition of this permit that the permittee take all necessary and practicable steps to avoid adverse incidents to the federally listed or candidate New Jersey plant species listed below. Application of pesticides in a manner that results in such adverse incidents is a violation of this permit and a violation of state and/or federal endangered species statutes and subject to applicable penalties.

*Aeschynomene virginica* (sensitive joint-vetch) – Federally threatened  
*Amaranthus pumilus* (seabeach amaranth) – Federally threatened  
*Helonias bullata* (swamp pink) – Federally threatened  
*Isotria medeoloides* (small whorled pogonia) – Federally threatened  
*Narthecium americanum* (bog asphodel) – Federal candidate  
*Panicum hirstii* (Hirst brothers' panic grass) – Federal candidate  
*Rhynchospora knieskernii* (Knieskern's beaked-rush) – Federally threatened  
*Schwalbea americana* (American chaffseed) – Federally endangered

**c. Endangered and Threatened Wildlife**

It is a condition of this permit that the permittee take all necessary and practicable steps to avoid adverse incidents to state and federally listed endangered and threatened wildlife. Application of pesticides in a manner that results in such adverse incidents is a violation of this permit and a violation of state and/or federal endangered species statutes and subject to applicable penalties. The list of federally endangered or threatened wildlife species occurring in New Jersey is listed below.

Indiana Bat, *Myotis sodalis*  
Black Right, Whale *Balaena glacialis*  
Blue Whale, *Balaenoptera musculus*  
Fin Whale, *Balaenoptera physalus*  
Humpback Whale, *Megaptera novaeangliae*  
Sei Whale, *Balaenoptera borealis*  
Sperm Whale, *Physeter macrocephalus*  
Piping Plover, *Charadrius melodus*  
Roseate Tern, *Sterna dougallii*  
Bog Turtle, *Glyptemys muhlenbergii*  
Atlantic Green Turtle, *Chelonia mydas*  
Atlantic Hawksbill, *Eretmochelys imbricata*  
Atlantic Leatherback, *Dermochelys coriacea*  
Atlantic Loggerhead, *Caretta caretta*  
Atlantic Ridley, *Lepidochelys kempi*  
Shortnose Sturgeon, *Acipenser brevirostrum*  
American Burying Beetle, *Nicrophorus mericanus*

Northeastern Beach Tiger Beetle, *Cincindela d. dorsalis*  
Mitchell's Satyr, *Neonympha m. mitchellii*  
Dwarf Wedgemussel, *Alasmidonta heterodon*

**C. Authorization to Discharge under This Permit**

1. **How to Obtain Authorization.** To obtain authorization under this permit, an operator must:
  - a. Seek a permit for a pesticide use pattern identified in Section B.1, and
  - b. Submit a complete and accurate RFA. In accordance with Section C, operators who qualify for a permit by rule in accordance with Section B.3 are automatically authorized to discharge after April 9, 2011, in compliance with the requirements of this permit without submission of an RFA.
  - c. If you are required to submit an RFA, you shall prepare a Pesticide Discharge Management Plan in accordance with Part IV. F. and Section D below.
  
2. An RFA provides notice of an operator’s intent to be covered under this permit for discharges from its pesticide application. Coverage is for the operator who filed the RFA, including its employees, contractors, subcontractors, and other agents, for all activities identified on the RFA for the duration of this permit unless coverage is terminated. If a submitted RFA is not timely, accurate, or complete, then any employee, contractor, subcontractor or other entity that discharges without the required RFA is not covered by this permit.
  
3. **Operators Required to Submit a Request for Authorization (RFA).** The following operators are required to submit a RFA to obtain coverage under this general permit for discharges to surface waters of the State resulting from the application of pesticides:
  - a. If you are in control over the financing for, or over the decision to perform pest control activities that will result in a discharge and know or reasonably should have known that those activities will exceed one or more of the annual (i.e., calendar year) treatment area thresholds listed in Table 2 below for the “treatment area,” as defined in Appendix A, or
  - b. If you apply pesticides that result in a discharge and know or reasonably should have known that those activities will exceed one or more of the pesticide application annual (i.e., calendar year) treatment area thresholds listed in Table 2 below for the “treatment area,” as defined in Appendix A. To determine whether an entity’s activities will exceed one or more of the annual treatment area thresholds, the entity should exclude from its calculation any pesticide application activities conducted under another entity’s RFA required under (a) above or

<b>Table 2. Annual Treatment Area Thresholds (Does not apply to Pinelands or FW1 waters)</b>		
<b>PGP Part</b>	<b>Pesticide Use</b>	<b>Annual Threshold</b>
B.1.a.	Mosquitoes and Other Flying Insect Pests	640 acres of treatment area
B.1.b.	Aquatic Weed and Algae Control:	
	-In Water	20 acres of treatment area <sup>1</sup>
	- At Water’s Edge:	20 linear miles of treatment area at water’s edge <sup>2</sup>

B.1.c.	Aquatic Nuisance Animal Control:	
	-In Water	20 acres of treatment area <sup>1</sup>
	- At Water's Edge	20 linear miles of treatment area at water's edge <sup>2</sup>
B.1.d.	Forest Canopy Pest Control	640 acres of treatment area <sup>1</sup>
B.1.e.	Agricultural Activities	100 acres of treatment area <sup>1</sup>
<p><sup>1</sup>Calculations shall include the area of the applications made to surface waters of the State. For calculating annual treatment area totals, count each pesticide application activity as a separate activity. For example, applying pesticides twice a year to a ten acre site shall be counted as twenty acres of treatment area.</p> <p><sup>2</sup>Calculations shall include the linear extent of the application made at water's edge adjacent to surface waters of the State. For calculating annual treatment totals, count each pesticide application activity and each side of a linear water body as a separate activity or area. For example, treating both sides of a ten mile ditch is equal to twenty miles of water treatment area.</p>		

If you apply pesticides to waters designated as Pinelands (PL) or FW1, exemption from submission of an RFA based on annual treatment area thresholds do not apply to these waters. You can find the stream designations at [http://www.nj.gov/dep/rules/rules/njac7\\_9b.pdf](http://www.nj.gov/dep/rules/rules/njac7_9b.pdf), on pages 42-113. For your convenience, the NJDEP will include in the individual authorizations the stream designations for those waterbodies that are being regulated by this permit.

- 4. Discharge Authorization Date.** Beginning April 9, 2011, you must be covered under a NJPDES permit for discharges to surface waters of the State as a result of the application of a pesticide. Operators are authorized to discharge under this permit consistent with Table 3 below.

<b>Table 3. Discharge Authorization Date</b>		
<b>I. Category</b>	<b>RFA Submittal Deadline</b>	<b>Discharge Authorization Date</b>
Operators covered under permit by rule.	Not applicable.	Effective Date of Master General Permit
Operators discharging to FW1 and/or PL waters.	At least 30 days prior to commencement of discharge.	Effective Date of Permit Authorization (EDPA)
Operators who know or should have reasonably known, prior to commencement of discharge that they will exceed an annual treatment area threshold identified in Table 2 for that year.	At least 30 days prior to commencement of discharge.	Effective Date of Permit Authorization (EDPA)
Operators who do not know or would reasonably not know until after commencement of discharge that they will exceed an annual treatment	At least 30 days prior to exceeding an annual treatment area threshold.	Original authorization terminates when annual treatment area threshold is exceeded. Operator is reauthorized on the EDPA.

area threshold identified in Table 2 for that year.		
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Timing for RFA submittal is based on when an operator is aware or reasonably should be aware through consideration of past experience, planned activities, planning, and other analyses, that it will exceed an annual treatment area threshold during the calendar year, not on the time when the threshold is actually exceeded. For example, many large operators have exceeded the threshold the last several years and have no reason to believe activities will change such that they will not exceed these thresholds in the future. For those operators, RFAs are due prior to commencement of any discharge under this permit.

Late RFAs will be accepted, but authorization to discharge will not be retroactive. RFA submissions must be in accordance with the deadlines specified below.

Based on a review of your RFA or other information, DEP may delay your authorization for further review, or may determine that additional technology-based and/or water quality-based effluent limitations are necessary, or may deny coverage under this permit and require submission of an application for an individual NJPDES permit. Please be advised that the processing time for an individual permit is six (6) months.

**D. Contents of Your Pesticide Discharge Monitoring Plan.** In accordance with Part IV.F, your PDMP must include the following elements:

**1. Pesticide Discharge Management Team**

Identification of team members must include any written agreement(s) between you and any other operator(s), such as a for-hire pesticide applicator, that specify the division of responsibilities between operators as necessary to comply with the provisions of this permit. You must identify all the persons (by name and contact information) that compose the team as well as each person's individual responsibilities, including:

- a. Person(s) responsible for managing pests in relation to the pest management area
- b. Person(s) responsible for developing and revising the PDMP;
- c. Person(s) responsible for developing, revising, and implementing corrective actions and other effluent limitation requirements ; and
- d. Person(s) responsible for pesticide applications. If the pesticide applicator is unknown at the time of plan development, indicate whether or not a for-hire applicator will be used and when you anticipate that you will identify the applicator.

**2. Pest Management Area Description**

You must document the following:

- a. Pest problem description. Document a description of the pest problem at your pest management area, including identification of the target pest(s), source of the pest problem, and source of data used to identify the problem.
- b. Action Threshold(s). Describe the action threshold(s) for your pest management area, including a description of how they were determined.

- c. General location map. In the plan, include a general location map (e.g., USGS quadrangle map, a portion of a city or county map, or other map) that identifies the geographic boundaries of the area to which the plan applies and location of the surface waters of the State; and
- d. Water quality standards. The water quality standards applicable to this permit are listed in Appendix B.
- e. Whether the discharge is to any of the State's impaired waterbodies. A list of the State's impaired waterbodies can be found in the Division of Water Quality website at [http://www.nj.gov/dep/dwq/gp\\_surfacewater.htm](http://www.nj.gov/dep/dwq/gp_surfacewater.htm) under Surface Water General Permits.

### **3. Control Measure Description**

You must document your evaluation of control measures for your pest management area. You must document the control measures you will implement to comply with the effluent limitations required in Part IV. Include in the description the active ingredient(s) evaluated.

### **4. Schedules and Procedures**

You must document the following schedules and procedures in your PDMP:

- a. Pertaining to Control Measures Used to Comply with the Effluent Limitations in Part IV. The following must be documented in your PDMP:
  - i. Application Rate and Frequency. Procedures for determining the lowest effective amount of pesticide product per application and the optimum frequency of pesticide applications necessary to control the target pest, consistent with reducing the potential for development of pest resistance;
  - ii. Spill Prevention. Procedures and schedule of maintenance activities for preventing spills and leaks of pesticides associated with the application of pesticides covered under this permit.
  - iii. Pesticide Application Equipment. Schedules and procedures for maintaining the pesticide application equipment in proper operating condition, including calibrating, cleaning, and repairing the equipment.
  - iv. Pest Surveillance. Procedures and methods for conducting any pre- and/or post application pest surveillance required.
  - v. Assessing Environmental Conditions. Procedures and methods for assessing environmental conditions in the treatment area.
- b. Pertaining to Other Actions Necessary to Minimize Discharges. The following must be documented in your PDMP:
  - i. Spill Response Procedures – At a minimum you must have:

Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect, or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of your PDMP team.

Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies.

- ii. Adverse Incident Response Procedures – At a minimum you must have:

Procedures for responding to any incident resulting from pesticide applications;

Procedures for notification of the incident, both internal to your agency/organization and external. Contact information for state permitting agency, nearest emergency medical facility, and nearest hazardous chemical responder must be in locations that are readily accessible and available.

- iii. Pesticide Monitoring Schedules and Procedures – You must document procedures for monitoring consistent with the requirements in Part IV including:

The process for determining the location of any monitoring;

A schedule for monitoring;

The person (or position) responsible for conducting monitoring; and

Procedures for documenting any observed impacts to non-target organisms resulting from your pesticide discharge.

## **5. Signature Requirements**

You must sign, date and certify your PDMP in accordance with Section E.7. below.

## **E. General Conditions**

### **1. Scope**

- a. The issuance of this permit shall not be considered as a waiver of any applicable federal, state, and local rules, regulations, permits, and ordinances.

### **2. Permit Renewal Requirement**

- a. Permit conditions remain in effect and enforceable until and unless the permit is modified, renewed or revoked by the Department.
- b. Submit a complete Request for Authorization: 180 days before the Expiration Date.

### **3. Notification of Non-Compliance**

- a. The permittee shall notify the Department of all non-compliance when required in accordance with N.J.A.C. 7:14A-6.10 by contacting the DEP HOTLINE at 1-877-927-6337 immediately but no later than 2 hours after the permittee becomes aware of the non-compliance.
- b. The permittee shall submit a written report as required by N.J.A.C. 7:14A-6.10 within five days.

### **4. Operation Restrictions**

- a. The pesticide activity resulting in a point source discharge to surface waters of the State shall at no time be conducted in a manner and location, except as specifically authorized by a valid NJPDES permit.
- b. The use of a pesticide not listed in the permit is not authorized under this permit. The permittee may request a permit modification in order to obtain authorization to use a pesticide not listed in this permit.

**5. Permit Modification/Transfer/Termination**

- a. The permittee may request a permit modification in order to obtain authorization to use a pesticide not listed in this authorization in accordance with N.J.A.C. 7:14A-16.3.
- b. This permit may be transferred to another operator in accordance with N.J.A.C. 7:14A-16.2.
- c. To terminate permit coverage, an operator who is required to submit a RFA must submit a Request for Revocation (RFR) in accordance with N.J.A.C. 7:14A-16.3. Your authorization to discharge under this permit terminates on the effective date of the Permit Revocation. If you were required to submit annual reports pursuant to Part IV, you must file an annual report for the portion of the year up through the effective date of the permit revocation. The annual report is due no later than 45 days after the effective date of the permit revocation.
- d. Operators covered under this permit that are not required to submit a RFA are terminated from permit coverage when they no longer have a discharge from the application of pesticides or their discharge is covered under a NJPDES individual permit or alternative general permit.

**6. Access to Information**

- a. The permittee shall allow an authorized representative of the Department, upon the presentation of credentials, to enter upon a person's premises, for purposes of inspection, and to access/copy any records that must be kept under the conditions of this permit.

**7. Signatory Requirements.**

- a. In accordance with N.J.A.C. 7:14A-4.9, all applications, RFAs, reports required by permits shall be signed as follows:
  - 1) For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated activity including having the explicit or implicit duty of making major capital investment

recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations and ensuring that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

- 2) For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or
- 3) For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit or the agency or
- 4) By a duly authorized representative. A person is a duly authorized representative only if (i) the authorization is made in writing by a person described in 1 through 3 above, (ii) the authorization specifies either an individual or a position whose occupant has the responsibility for the overall operation of the regulated facility or activity or an individual or position whose occupant has overall responsibility for environmental matters for the company and (iii) the written authorization is submitted to the Department.
- 5) If an authorization under 4 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility or overall responsibility for environmental matters for the company, a new authorization satisfying the requirements above must be submitted to the Department prior to or together with any reports, information, or applications signed by an authorized representative.
- 6) Any person signing a document under 1 through 4 above shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for purposely, knowingly, recklessly, or negligently submitting false information.”
- 7) Any person not listed above, please contact the Bureau of Surface Water Permitting at (609) 292- 4860 for information on the applicable signatory requirements.

PART III  
LIMITS AND MONITORING REQUIREMENTS

Reserved.

## PART IV

### SPECIFIC REQUIREMENTS: NARRATIVE

#### Pesticide Application Discharges

##### A. TECHNOLOGY BASED EFFLUENT LIMITATIONS

1. To meet the effluent limitations in this Section, you shall implement site-specific control measures that minimize discharges of pesticides to surface waters of the State.
  - a. **Minimize Pesticide Discharges to Surface Waters of the State.** All operators, regardless of whether you are required to submit an RFA, shall minimize the discharge of pollutants resulting from the application of pesticides as follows:
    - i. Use the lowest effective amount of pesticide product per application and optimum frequency of pesticide applications necessary to control the target pest, consistent with reducing the potential for development of pest resistance;
    - ii. Perform regular maintenance activities to reduce leaks, spills, or other unintended discharges of pesticides associated with the application of pesticides covered under this permit; and
    - iii. Maintain application equipment in proper operating condition by adhering to any manufacturer's conditions and industry practices, and by calibrating and cleaning, and repairing such equipment on a regular basis to ensure effective pesticide application and pest control. You shall ensure that the equipment's rate of pesticide application is calibrated to deliver the precise quantity of pesticide needed to achieve greatest efficacy against the target pest.

##### B. INTEGRATED PEST MANAGEMENT (IPM) PRACTICES

1. IPM Practices apply to any operator that is required to submit an RFA, including any pesticide applicator hired by such entity or any other employee, contractor, subcontractor, or other agent. Note: Part IV.E. of this permit requires any operator that is required to submit an RFA to also develop a written Pesticide Discharge Management Plan (PDMP) to document measures taken to meet the effluent limits. The IPM, as described in Section C below, shall be attached to the PDMP, kept at the address specified on the RFA, and made available to the DEP upon request.
2. If your discharge of pollutants results from the application of a pesticide that is being used solely for the purpose of "pesticide research and development," as defined in Appendix A, you are not required to fully implement IPM Practices for such discharge, but you shall implement IPM to the extent that its requirements do not compromise the research design.

##### C. SPECIFIC IPM PRACTICES FOR EACH ACTIVITY

###### 1. Mosquito and Other Flying Insect Pest Control

This part applies to discharges from the application of pesticides for mosquito and other flying insect pest control as defined in Part II of this permit.

- a. Identify the Problem.** Prior to the first pesticide application covered under this permit that will result in a discharge to surface waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, you shall do the following for each pest management area, as defined in Appendix A:
- i.** Establish densities for larval and adult mosquito or flying insect pest populations to serve as action threshold(s) for implementing pest management strategies;
  - ii.** Identify target mosquito or flying insect pest species to develop species-specific pest management strategies based on developmental and behavioral considerations for each species;
  - iii.** Identify known breeding sites for source reduction, larval control program, and habitat management;
  - iv.** Analyze existing monitoring data to identify new or unidentified sources of mosquito or flying insect pest problems as well as sites that have recurring pest problems; and
  - v.** In the event there are no data for your pest management area in the past calendar year, see Part IV.F.3 for documentation requirements regarding why current data are not available and the data you used to meet the permit conditions in Section A.1.a.i.
- b. Pest Management.** Prior to the first pesticide application covered under this permit that will result in a discharge to surface waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, you shall select and implement, for each pest management area, efficient and effective means of pest management that minimize discharges resulting from application of pesticides to control mosquitoes or other flying insect pests. In developing these pest management strategies, you shall evaluate the following management options, considering impact to water quality, impact to non-target organisms, pest resistance, feasibility, and cost effectiveness:
- i.** No action
  - ii.** Prevention/ Source Reduction
  - iii.** Mechanical or physical methods
  - iv.** Cultural methods/ Education
  - v.** Biological control agents
  - vi.** Pesticides
- c. Pesticide Use.** If a pesticide is selected to manage mosquitoes or flying insect pests and application of the pesticide will result in a discharge to surface waters of the State, you shall:
- i.** Conduct larval and/or adult monitoring prior to each pesticide application to assess the pest management area and to determine when action threshold(s) are met that necessitate the need for pest management;
  - ii.** Assess environmental conditions (e.g. temperature, precipitation, and wind speed) in the treatment area prior to each pesticide application to identify whether existing environmental conditions support development of pest populations and are suitable for control activities;
  - iii.** Reduce the impact on the environment and on non-target organisms by applying the pesticide only when the action threshold has been met;
  - iv.** In situations or locations where practicable and feasible for efficacious control, use larvicides as a preferred pesticide for mosquito or flying insect pest control when larval action thresholds have been met; and

- v. In situations or locations where larvicide use is not practicable or feasible for efficacious control, use adulticides for mosquito or flying insect pest control when adult action thresholds have been met.

## 2. Aquatic Weed and Algae Control

This part applies to discharges from the application of pesticides for aquatic weed and algae control as defined in Part II of this permit.

- a. **Identify the Problem.** Prior to the first pesticide application covered under this permit that will result in a discharge to surface waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year you shall do the following for each pest management area, as defined in Appendix A:
  - i. Identify areas with aquatic weed or algae problems and characterize the extent of the problems, including, for example, water use goals not attained (e.g. wildlife habitat, fisheries, vegetation, and recreation);
  - ii. Identify target weed species;
  - iii. Identify possible factors causing or contributing to the weed or algae problem (e.g., nutrients, invasive species, etc);
  - iv. Establish past or present aquatic weed or algae densities to serve as action threshold(s) for implementing pest management strategies; and
  - v. In the event there are no data for your pest management area in the past calendar year, see Part IV.F.3 for documentation requirements regarding why current data are not available and the data you used to meet the permit conditions in Section A.1.a.i. above.
- b. **Pest Management.** Prior to the first pesticide application covered under this permit that will result in a discharge to surface waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, you shall select and implement, for each pest management area, efficient and effective means of pest management that minimize discharges resulting from application of pesticides to control aquatic weeds or algae. In developing these pest management strategies, you shall evaluate the following management options, considering impact to water quality, impact to nontarget organisms, pest resistance, feasibility, and cost effectiveness:
  - i. No action
  - ii. Prevention
  - iii. Mechanical or physical methods
  - iv. Cultural methods
  - v. Biological Control Agents
  - vi. Pesticides
- c. **Pesticide Use.** If a pesticide is selected to manage aquatic weeds or algae and application of the pesticide will result in a discharge to surface waters of the State, you shall:
  - i. Conduct monitoring prior to each pesticide application to assess the pest management area and to determine when the action threshold is met that necessitates the need for pest management; and
  - ii. Reduce the impact on the environment and non-target organisms by applying the pesticide only when the action threshold has been met.

## 3. Aquatic Nuisance Animal Control

This part applies to discharges from the application of pesticides for aquatic nuisance animal control as defined in Part II of this permit.

- a. Identify the Problem.** Prior to the first pesticide application covered under this permit that will result in a discharge to surface waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, you shall do the following for each pest management area, as defined in Appendix A:
  - i.** Identify areas with aquatic nuisance animal problems and characterize the extent of the problems, including, for example, water use goals not attained
  - ii.** (e.g. wildlife habitat, fisheries, vegetation, and recreation);
  - iii.** Identify target aquatic nuisance animal species;
  - iv.** Identify possible factors causing or contributing to the problem (e.g., nutrients, invasive species);
  - v.** Establish past or present aquatic nuisance animal densities to serve as action threshold(s) for implementing pest management strategies; and
  - vi.** In the event there are no data for your pest management area in the past calendar year, see Part IV. F.3 for documentation requirements regarding why current data are not available and the data you used to meet the permit conditions in Section A.1.a.i. above.
  
- b. Pest Management.** Prior to the first pesticide application covered under this permit that will result in a discharge to surface waters of the State, and at least once each year thereafter prior to the first pesticide application during that calendar year, you shall select and implement, for each pest management area, efficient and effective means of pest management that minimize discharges resulting from application of pesticides to control aquatic nuisance animals. In developing these pest management strategies, you shall evaluate the following management options, considering impact to water quality, impact to nontarget organisms, pest resistance, feasibility, and cost effectiveness:
  - i.** No action.
  - ii.** Prevention
  - iii.** Mechanical or physical methods
  - iv.** Biological control agents
  - v.** Pesticides
  
- c. Pesticide Use.** If a pesticide is selected to manage aquatic nuisance animals and application of the pesticide will result in a discharge to surface waters of the State, you shall:
  - i.** Conduct monitoring prior to each application to assess the pest management area and to determine when the action threshold is met that necessitates the need for pest management; and
  - ii.** Reduce the impact on the environment and non-target organisms by evaluating site restrictions, application timing, and application method in addition to applying the pesticide only when the action threshold has been met.

#### **4. Forest Canopy Pest Control**

This part applies to discharges from the application of pesticides for forest canopy pest control as defined in Part II of this permit.

- a. Identify the Problem.** Prior to the first pesticide application covered under this permit that will result in a discharge to surface waters of the State, and at least once each calendar year

thereafter prior to the first pesticide application in that calendar year, you shall do the following for each pest management area, as defined in Appendix A:

- i. Establish target pest densities to serve as action threshold(s) for implementing pest management strategies;
- ii. Identify target species to develop a species-specific pest management strategy based on developmental and behavioral considerations for each species;
- iii. Identify current distribution of the target pest and assess potential distribution in the absence of control measures; and
- iv. In the event there are no data for your pest management area in the past calendar year, see Part IV. F.3 for documentation requirements regarding why current data are not available and the data you used to meet the permit conditions in Section A.1.a.i. above.

**b. Pest Management.** Prior to the first pesticide application covered under this permit that will result in a discharge to surface waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, you shall select and implement for each pest management area efficient and effective means of pest management that minimize discharges resulting from application of pesticides to control forestry pests. In developing these pest management strategies, you shall evaluate the following management options, considering impact to water quality, impact to nontarget organisms, pest resistance, feasibility, and cost effectiveness:

- i. No action
- ii. Prevention
- iii. Mechanical/physical methods
- iv. Cultural methods
- v. Biological control agents
- vi. Pesticides

**c. Pesticide Use.** If a pesticide is selected to manage forestry pests and application of the pesticide will result in a discharge to surface waters of the State, you shall:

- i. Conduct monitoring prior to each application to assess the pest management area and to determine when the pest action threshold is met that necessitates the need for pest management;
- ii. Assess environmental conditions (e.g. temperature, precipitation, and wind speed) in the treatment area to identify conditions that support target pest development and are conducive for treatment activities.

## 5. Agricultural Activities

This part applies to discharges from the application of pesticides to Surface waters of the State, which are used in the operation of agricultural activities as defined in Part II of this permit.

**a. Identify the Problem.** Prior to the first pesticide application covered under this permit that will result in a discharge to surface waters of the State, and at least once each calendar year thereafter prior to the first pesticide application in that calendar year, you shall do the following for each pest management area, as defined in Appendix A:

- v. Establish target pest densities to serve as action threshold(s) for implementing pest management strategies;

- vi. Identify target species to develop a species-specific pest management strategy based on developmental and behavioral considerations for each species;
  - vii. Identify current distribution of the target pest and assess potential distribution in the absence of control measures; and
  - viii. In the event there are no data for your pest management area in the past calendar year, see Part IV. F.3 for documentation requirements regarding why current data are not available and the data you used to meet the permit conditions in Section A.1.a.i. above.
- b. Pest Management.** Prior to the first pesticide application covered under this permit that will result in a discharge to surface waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, you shall select and implement for each pest management area efficient and effective means of pest management that minimize discharges resulting from application of pesticides to control forestry pests. In developing these pest management strategies, you shall evaluate the following management options, considering impact to water quality, impact to nontarget organisms, pest resistance, feasibility, and cost effectiveness:
- vii. No action
  - viii. Prevention
  - ix. Mechanical/physical methods
  - x. Cultural methods
  - xi. Biological control agents
  - xii. Pesticides
- c. Pesticide Use.** If a pesticide is selected to manage pests and application of the pesticide will result in a discharge to surface waters of the State, you shall:
- i. Conduct monitoring prior to each application to assess the pest management area and to determine when the pest action threshold is met that necessitates the need for pest management;
  - ii. Assess environmental conditions (e.g. temperature, precipitation, and wind speed as applicable) in the treatment area to identify conditions that support target pest development and are conducive for treatment activities.

## **D. WATER QUALITY BASED EFFLUENT LIMITATIONS**

1. Your discharge shall be controlled as necessary to meet applicable numeric and narrative State Water Quality Standards.
2. If at any time you become aware, or DEP determines, that your discharge causes or contributes to an excursion of applicable State Water Quality Standards, you shall take corrective action as required in Section G below.

## **E. SITE MONITORING**

1. **Usage Monitoring Requirements for all Pesticide Applicators.**
  - a. You shall monitor the amount of pesticide applied to ensure that you are using the lowest amount to effectively control the pest, consistent with reducing the potential for development of pest resistance.



as a pre-existing integrated pest management (IPM) plan, you shall attach to your PDMP a copy of any portions of any documents that you are using to document your implementation of the effluent limitations. All operators subject to the effluent limitations described above shall implement control measures to satisfy the effluent limitations. This includes the operator who submitted the RFA as well as any employees, contractors, subcontractors, or other agents. The control measures implemented shall be documented and the documentation shall be kept up-to-date.

4. Your PDMP shall include the elements specified in Part II. D.
5. **Pesticide Discharge Management Plan Modifications.** You shall modify your PDMP whenever necessary to address any of the triggering conditions for corrective action in Section F. below or when a change in pest control activities significantly changes the type or quantity of pollutants discharged. Changes to your PDMP shall be made before the next pesticide application that results in a discharge, if practicable, or if not, as soon as possible thereafter. The revised PDMP shall be signed and dated in accordance with Part II. E.7.
  - a. You shall review your PDMP at a minimum once per calendar year and whenever necessary to update the pest problem identified and pest management strategies evaluated for your pest management area.
6. **Pesticide Discharge Management Plan Availability.** You shall retain a copy of the current PDMP, along with all supporting maps and documents, at the address provided on your RFA. The PDMP and all supporting documents shall be immediately available, upon request, and copies of any of these documents provided, upon request, to DEP or a local agency governing pesticide applications within their respective jurisdictions.

## G. CORRECTIVE ACTION

1. **Situations Requiring Revision of Control Measures.** If any of the following situations occur, you shall review and, as necessary, revise the evaluation and selection of your control measures to ensure that the situation is eliminated and will not be repeated in the future:
  - a. An unauthorized release or discharge associated with the application of pesticides (e.g., spill, leak, or discharge not authorized by this or another NJPDES permit) occurs;
  - b. You become aware, or NJDEP concludes, that your control measures are not adequate/sufficient for the discharge to meet applicable water quality standards;
  - c. You become aware, or NJDEP concludes, that your control measures are not adequate/sufficient to avoid adverse incidents to state and/or federally listed endangered and threatened plant and wildlife species;
  - d. Any monitoring activities indicate that you failed to:
    - i. Use the lowest amount of pesticide product per application and optimum frequency of pesticide applications necessary to control the target pest, consistent with reducing the potential for development of pest resistance;
    - ii. Perform regular maintenance activities to reduce leaks, spills, or other unintended discharges of pesticides associated with the application of pesticides covered under this permit; or



**viii.** Description of any steps you have taken or will take to correct, repair, remedy, cleanup, or otherwise address any adverse effects.

**b.** If you are unable to notify DEP within 2 hours, you shall do so as soon as possible and also provide your rationale for why you were unable to provide such notification within 2 hours. The adverse incident notification and reporting requirements are in addition to what the registrant is required to submit under FIFRA section 6(a)(2) and its implementing regulations at 40 CFR Part 159. Reporting of adverse incidents is not required under this permit in the following situations:

i. You are aware of facts that clearly establish that the adverse incident was not related to toxic effects or exposure from the pesticide application when applied according to label directions.

ii. You have been notified in writing by the DEP that the reporting requirement has been waived for this incident or category of incidents.

iii. You receive information notifying you of an adverse incident but that information is clearly erroneous.

**5. Five (5) Day Adverse Incident, Reportable Spill or Leak, or Other Unpermitted Discharge Written Report.** Within five (5) business days of an adverse incident, reportable spill or leak, or other unpermitted discharge pursuant to Section F.4.a., you shall provide a written report of the incident to the Bureau of Pesticide Operations at the address listed in Section I. You shall report adverse incidents even for those instances when the pesticide labeling states that adverse effects may occur. Your incident report shall include at least the following information:

**a.** Information required to be provided in Section G.4.a;

**b.** Date and time you contacted DEP notifying the Department of the incident and who you spoke with at DEP and any instructions you received from DEP;

**c.** Location of incident, including the names of any waters affected and appearance of those waters (sheen, color, clarity, etc);

**d.** A description of the circumstances of the incident including species affected, estimated number of individual and approximate size of dead or distressed organisms;

**e.** Magnitude and scope of the effected area (e.g. aquatic square area or total stream distance affected);

**f.** Pesticide application rate, intended use site (e.g., banks, above, or direct to water), method of application, and name of pesticide product, formulation, description of pesticide ingredients, amount applied, and EPA registration number;

**g.** Description of the habitat and the circumstances under which the incident occurred (including any available ambient water data for pesticides applied);

**h.** If laboratory tests were performed, indicate what test(s) were performed, and when, and provide a summary of the test results within 5 days after they become available;

**i.** If applicable, explain why you believe the incident could not have been caused by exposure to the pesticide;

**j.** Summary of corrective action taken or to be taken including date initiated and date completed or expected to be completed;

**k.** Actions to be taken to prevent recurrence of adverse incident, spill or leak, or other unpermitted discharge; and

**l.** Signed and dated in accordance with Part II.E.7.

## H. RECORDKEEPING AND ANNUAL REPORTING

### 1. Recordkeeping

You shall keep written records as required in this permit. These records shall be accurate and complete and sufficient to demonstrate your compliance with the conditions of this permit. You can rely on records and documents developed for other obligations, such as requirements under FIFRA, and state or local pesticide programs, provided all requirements of this permit are satisfied.

DEP recommends that all operators covered under this permit keep records of acres or linear miles treated for all applicable use patterns covered under this general permit. The records should be kept up-to-date to help you determine if you will meet the annual treatment area threshold during any calendar year.

- a. All operators shall keep the following records:
  - i. A copy of this permit (an electronic copy is also acceptable);
  - ii. A copy of any Adverse Incident Reports;
  - iii. Your rationale for any determination that reporting of an identified adverse incident is not required consistent with allowances identified in Section G.4.b;
  - iv. A copy of any corrective action documentation.
  
- b. This part applies to any entity required to submit an RFA and to any pesticide applicator hired by such entity to perform activities covered under this permit. Records listed below are required to be kept at the address provided on the RFA. Records of equipment maintenance and calibration are to be maintained only by the entity performing the pest application activity (on behalf of self or client).
  - i. A copy of the RFA submitted to DEP, any correspondence exchanged between you and DEP specific to coverage under this permit, and a copy of the Pesticide General Permit Authorization (PGPA);
  - ii. The date on which you knew or reasonably should have known that you would exceed an annual treatment area threshold during any calendar year, as identified in Part II;
  - iii. Monitoring method(s) used, date(s) of monitoring activities, and findings of monitoring;
  - iv. Target pest(s);
  - v. Pest density prior to pesticide application;
  - vi. Company name and contact information for pesticide applicator
  - vii. Pesticide application date(s);
  - viii. Description of treatment area, including location and size (acres or linear feet) of treatment area and identification of any waters, either by name or by location, to which you discharged any pesticide(s);
  - ix. Name of each pesticide product used including the EPA registration number;
  - x. Quantity of pesticide applied (and specify if quantities are for the pesticide product as packaged or as formulated and applied)
  - xi. Concentration (%) of active ingredient in formulation;
  - xii. For pesticide applications directly to waters, the effective concentration of active ingredient required for control;
  - xiii. Any unusual or unexpected effects identified to non-target organisms
  - xiv. Documentation of any equipment cleaning, calibration, and repair (to be kept by pesticide application equipment operator);

- xv. A copy of your PDMP, including any modifications made to the PDMP during the term of this permit.
  - c. All required records shall be documented as soon as possible but no later than 14 days following completion of such activity. You shall retain any records required under this permit for at least 5 years from the date that your coverage under this permit expires or is terminated. You shall make available to DEP, including an authorized representative of DEP, all records kept under this permit upon request and provide copies of such records, upon request.
2. **Annual Reporting:** If you are required to submit an RFA and you reported an adverse incident(s) in the previous calendar year as described in Part IV. G.4.a, you shall submit an annual report to NJDEP. You shall submit the annual report to the Bureau of Surface Water Permitting at the address specified in Section I. below. You shall submit the annual report to no later than February 15 of the following year (and retain a copy for your records), which includes the following:
- a. Operator's name
  - b. NJPDES permit number(s)
  - c. Contact person name, title, e-mail address (if any), and phone number
  - d. A summary report of all adverse incidents that occurred during the previous calendar year; and
  - e. A summary of any corrective actions, including spill responses, in response to adverse incidents, and the rationale for such actions.
3. **Annual Reporting Requirements for Discharges to Waters Designated as Pinelands or FW1:** Operators discharging to Pinelands or FW1 waters shall submit an annual report to the Bureau of Surface Water Permitting at the address specified in Section I below no later than February 15 of the following year that includes all the items in number 2 above, if applicable, including the following:
- a. Brief description of what was observed at the post application monitoring, including the location, date, and time.

## I. DEP CONTACT INFORMATION AND MAILING ADDRESSES

- a. Bureau of Surface Water Permitting  
Mail Code 401-02B  
P.O. Box 420  
Trenton, NJ 08625-0420  
(609) 292-4860
- b. Bureau of Pesticide Operations  
P.O. Box 420  
Trenton, NJ 08625-0420  
(609) 984-6507

## **APPENDIX A**

### **Definitions, Abbreviations, and Acronyms**

**This is to supplement the Definitions, Abbreviations, and Acronyms specified at N.J.A.C. 7:14A-1.1 and 1.2.**

#### **A.1. DEFINITIONS**

**Action Threshold** – A point at which pest populations or environmental conditions indicate that pest control action must be taken. Action thresholds help determine both the need for control actions and the proper timing of such actions.

**Active ingredient** – any substance (or group of structurally similar substances if specified by the Agency) that will prevent, destroy, repel or mitigate any pest, or that functions as a plant regulator, desiccant, or defoliant within the meaning of FIFRA sec. 2(a). [40 CFR 152.3] Active ingredient also means a pesticidal substance that is intended to be produced and used in a living plant, or in the produce thereof, and the genetic material necessary for the production of such a pesticidal substance. [40 CFR 174.3]

**Adverse incident** – means an incident which you have observed upon inspection or of which you otherwise become aware, in which:

(1) A person or non-target organism may have been exposed to a pesticide residue, and

(2) The person or non-target organism suffered a toxic or adverse effect.

The phrase “toxic or adverse effects” includes effects that occur within a water of the State on non-target plants, fish or wildlife that are unusual or unexpected (e.g., effects are to organisms not otherwise described on the pesticide product label or otherwise not expected to be present) as a result of exposure to a pesticide residue, and may include:

- Distressed or dead juvenile and small fishes
- Washed up or floating fish
- Fish swimming abnormally or erratically
- Fish lying lethargically at water surface or in shallow water
- Fish that are listless or nonresponsive to disturbance
- Stunting, wilting, or desiccation of non-target submerged or emergent aquatic plants
- Other dead or visibly distressed non-target aquatic organisms (amphibians, turtles, invertebrates, etc.)

The phrase, “toxic or adverse effects,” also includes any adverse effects to humans (e.g., skin rashes) or domesticated animals that occur either directly or indirectly from a discharge to waters of the State which are temporally and spatially related to exposure to a pesticide residue (e.g., vomiting, lethargy).

**Biological Control Agents** – These agents are organisms which can be introduced to your sites, such as herbivores, predators, parasites, and hyperparasites. [Source: US FWS IPM Guidance, 2004]

**Biological pesticides (also called biopesticides)** - include microbial pesticides, biochemical pesticides and plant-incorporated protectants (PIP). Microbial pesticide means a microbial agent intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or dessicant, that (1) is a eucaryotic microorganism including, but not limited to, protozoa, algae, and fungi; (2) is a procaryotic microorganism, including, but not limited to, Eubacteria and Archaeobacteria; or (3) is a parasitically replicating microscopic element, including but not limited to, viruses. [40 CFR 158.2100(a)] Biochemical pesticide mean a pesticide that (1) is a naturally-occurring substance or structurally-similar and functionally identical to a naturally-occurring substance; (2) has a history of exposure to humans and the environment demonstrating minimal toxicity, or in the case of a synthetically-derived biochemical pesticides, is equivalent to a naturally-occurring substance that has such a history; and (3) Has a non-toxic mode of action to the target pest(s). [40 CFR 158.2000(a)] Plant-incorporated protectant means a pesticidal substance that is intended to be produced and used in a living plant, or in the produce thereof, and the genetic material necessary for production of such a pesticidal substance. It also includes any inert ingredient contained in the plant, or produce thereof. [40 CFR 174.3]

**Chemical pesticides** – all pesticides not otherwise classified as biological pesticides.

**Control Measure** – refers to any BMP or other method used to meet the effluent limitations to minimize the discharge of pollutants to waters of the State.

**Cultural Methods** - manipulation of the habitat to increase pest mortality by making the habitat less suitable to the pest.

**Approved or Established Total Maximum Daily Loads (TMDLs)** – “Approved TMDLs” are those that are developed by a State and approved by EPA. “Established TMDLs” are those that are finalized by the State and submitted to EPA for approval.

**Establishment** – generally a single physical location where business is conducted or where services or industrial operations are performed (e.g., factory, mill, store, hotel, movie theater, mine, farm, airline terminal, sales office, warehouse, or central administrative office).

**For-Hire Applicator** - Includes persons who make contractual pesticide applications for which they or their employer receives compensation (e.g., lawn care firms, pest control companies).

**Herbicides** – kill weeds and other plants that grow where they are not wanted. The use patterns associated with this pesticide may include aquatic weed and algae control, forest canopy pest control, and aquatic agricultural activities.

**Hydrologic Unit Code (or HUC)** - The United States is divided and sub-divided into successively smaller hydrologic units which are classified into four levels: regions, sub-regions, accounting units, and cataloging units. The hydrologic units are arranged within each other, from the smallest (cataloging units) to the largest (regions). Each hydrologic unit is identified by a unique hydrologic unit code (HUC) consisting of two to eight digits based on the four levels of classification in the hydrologic unit system.  
(<http://water.usgs.gov/GIS/huc.html>)

**Impaired Water** (or “Water Quality Impaired Water” or “Water Quality Limited Segment”) – A water is impaired for purposes of this permit if it has been identified by NJDEP pursuant to Section 303(d) of the Clean Water Act as not meeting applicable State water quality standards (these waters are called “water quality limited segments” under 40 CFR 30.2(j)). Impaired waters include both waters with approved or established TMDLs, and those for which a TMDL has not yet been approved or established.

**Inert Ingredient** - any substance (or group of structurally similar substances if designated by the Agency), other than an active ingredient, which is intentionally included in a pesticide product. [40 CFR 152.3] Inert ingredient also means any substance, such as a selectable marker, other than the active ingredient, where the substance is used to confirm or ensure the presence of the active ingredient, and includes, the genetic material necessary for the production of the substance, provided that genetic material is intentionally introduced into a living plant in addition to the active ingredient. [40 CFR 174.3]

**Insecticides**- kill insects and other arthropods. The use patterns associated with this discharge may include mosquito and other flying insect pest control, aquatic nuisance animal control, forest canopy pest control, and aquatic agricultural activities.

**Integrated Pest Management** – is an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices. IPM uses current, comprehensive information on the life cycles of pests and their interaction with the environment. This information, in combination with available pest control methods, is used to manage pest damage by the most economical means, and with the least possible hazard to people, property, and the environment.

**Mechanical/Physical Methods** - mechanical tools, or physical alterations of the environment, for pest prevention or removal.

**Minimize** - to reduce and/or eliminate pesticide discharges to waters of the State through the use of control measures and to the extent technologically available and economically practicable and achievable.

**Near** – for the purposes of this permit, on an embankment leading to or within three feet from surface waters of the State.

**Non-target Organisms** – includes the plant and animal hosts of the target species, the natural enemies of the target species living in the community, and other plants and animals, including vertebrates, living in or near the community that are not the target of the pesticide.

**Operator** – any entity involved in the application of a pesticide that results in a discharge to surface waters of the State that meets either of the following two criteria:

- (i) The entity has control over the financing for, or the decision to perform pesticide applications that result in discharges, including the ability to modify those decisions; or
- (ii) The entity has day-to-day control of or performs activities that are necessary to ensure compliance with the permit (e.g., they are authorized to direct workers to carry out activities required by the permit or perform such activities themselves).

**Outstanding National Resource Waters** – means high quality waters that constitute an outstanding national resource (for example, waters of National/State Parks and Wildlife Refuges and waters of exceptional recreational or ecological significance). Waters classified as FW1 waters and Pinelands waters (PL) are Outstanding National Resource Waters.

**Permittee** – For the purposes of this permit, the permittee is the same as operator.

**Person** – an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

**Pest** – Consistent with 40 CFR 152.5, any organism under circumstances that make it deleterious to man or the environment, if it is:

- (a) Any vertebrate animal other than man;
- (b) Any invertebrate animal, including but not limited to, any insect, other arthropod, nematode, or mollusk such as a slug and snail, but excluding any internal parasite of living man or other living animals;
- (c) Any plant growing where not wanted, including any moss, alga, liverwort, or other plant of any higher order, and any plant part such as a root; or
- (d) Any fungus, bacterium, virus, or other microorganism, except for those on or in living man or other living animals and those on or in processed food or processed animal feed, beverages, drugs (as defined in Federal Food, Drug, and Cosmetic Act (FFDCA) sec. 201(g)(1)) and cosmetics (as defined in FFDCA sec. 201(i)).

**Pest Management Area** – The area of land, including any water, which you are responsible for pest management.

**Pesticide** – means (1) any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, (2) any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant, and (3) any nitrogen stabilizer, except that the term “pesticide” shall not include any article that is a “new animal drug” within the meaning of section 201(w) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321(w)), that has been determined by the Secretary of Health and Human Services not to be a new animal drug by a regulation establishing conditions of use for the article, or that is an animal feed within the meaning of section 201(x) of such Act (21 U.S.C. 321(x)) bearing or containing a new animal drug. The term “pesticide” does not include liquid chemical sterilant products (including any sterilant or subordinate disinfectant claims on such products) for use on a critical or semi-critical device, as defined in section 201 of the FFDCA (21 U.S.C. 321). For purposes of the preceding sentence, the term “critical device” includes any device which is introduced directly into the human body, either into or in contact with the bloodstream or normally sterile areas of the body and the term “semi-critical device” includes any device which contacts intact mucous membranes but which does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body. [FIFRA Section 2(u)]

The term pesticide applies to insecticides, herbicides, fungicides, rodenticides, and various other substances used to control pests. The definition encompasses all uses of pesticides authorized under FIFRA including uses authorized under sections 3 (registration), 5 (experimental use permits), 18 (emergency exemptions), 24(c) (special local needs registrations), and 25(b) (exemptions from FIFRA).

Note: drugs used to control diseases of humans or animals (such as livestock and pets) are not considered pesticides; such drugs are regulated by the Food and Drug Administration. Fertilizers, nutrients, and other substances used to promote plant survival and health are not considered plant growth regulators and thus are not pesticides. Biological control agents, except for certain microorganisms, are exempted from regulation as pesticides under FIFRA. (Biological control agents include beneficial predators such as birds or ladybugs that eat insect pests, parasitic wasps, fish, etc).

*This permit uses the term “pesticide” when referring to the “pesticide, as applied.” When referring to the chemical in the pesticide product with pesticidal qualities, the permit uses the term “active ingredient.”*

**Pesticide Product** – a pesticide in the particular form (including composition, packaging, and labeling) in which the pesticide is, or is intended to be, distributed or sold. The term includes any physical apparatus used to deliver or apply the pesticide if distributed or sold with the pesticide.

**Pesticide Research and Development** – Activities undertaken on a systematic basis to gain new knowledge (research) and/or the application of research findings or other scientific knowledge for the creation of new or significantly improved products or processes (experimental development). These types of activities are generally categorized under the four-digit code of 5417 under the 2007 NAICS.

**Pesticide Residue** – includes that portion of a pesticide application that is discharged from a point source to waters of the State and no longer provides pesticidal benefits. It may include the pesticide and its degradates of the pesticide.

**Pollutant** – In addition to the definition provided in N.J.A.C. 7:14A-1.2, for purposes of this permit, a “biological pesticide” is considered a “biological material,” and any “pesticide residue” resulting from use of a “chemical pesticide” is considered a “chemical waste.”

**Surface Water** - means water at or above the land’s surface which is neither ground water or contained within the unsaturated zone, including, but not limited to, the ocean and its tributaries, all springs, streams, rivers, lakes, ponds, wetlands, and artificial waterbodies.

**Target Pest** – the organism toward which pest control measures are being directed.

**Treatment Area** – The area of land including any waters, or the linear distance along water’s edge, to which pesticides are being applied. Multiple treatment areas may be located within a single “pest management area.”

The “treatment area” includes the entire area, whether over land or water, where the pesticide application is intended to provide pesticidal benefits. In some instances, the treatment area will be larger than the area where pesticides are actually applied. For example, the treatment area for a stationary drip treatment into a canal should be calculated by multiplying the width of the canal by the length over which the pesticide is intended to control weeds. The treatment area for a lake or marine area is the water surface area where the application is intended to provide pesticidal benefits.

Treatment area calculations for pesticide applications that occur “at water’s edge”, where the discharge of pesticides directly to waters is unavoidable, are determined by the linear distance over which pesticides are applied. For example, treating both sides of a five mile long river, stream, or ditch is equal to ten miles of treatment area. Treating five miles of shoreline or coast would equal a five mile treatment area.

**Water Quality Impaired** – See ‘Impaired Water’.

**“You” and “Your”** – as used in this permit are intended to refer to the operator, or the discharger as the context indicates and that party’s activities or responsibilities.

## **A.2. ABBREVIATIONS AND ACRONYMS**

ESA – Endangered Species Act  
FFDCA- Federal Food, Drug, and Cosmetic Act  
FIFRA – Federal Insecticide, Fungicide, and Rodenticide Act, 7 USC 136 et seq.  
HUC – Hydrologic Unit Code  
IPM – Integrated Pest Management

NPDES – National Pollutant Discharge Elimination System  
NRC – National Response Center  
PDMP – Pesticide Discharge Management Plan

Appendix B: Surface Water Quality Criteria

Parameter	Fresh Water (µg/L)	Saline Water (µg/L)
Phosphorus, Total (for Lakes)	0.05	--
Phosphorus, Total (for Streams)	0.1	--
Aldrin	3.0	1.3
Gamma-BHC (Lindane)	0.95	0.16
Chlordane	2.4	0.09
Chlorpyrifos	0.083	0.011
4,4'-DDT	1.1	0.13
Dieldrin	0.24	0.71
Endosulfans (alpha and beta)	0.22	0.34
Endrin	0.86	0.037
Heptachlor	0.52	0.053
Heptachlor Epoxide	0.52	0.053
Parathion	0.065	--
Toxaphene	0.73	--
Copper, Dissolved (with hardness of 50 mg/L)	6.6	4.8
Copper, Dissolved (with hardness of 100 mg/L)	12.7	4.8
Copper, Dissolved (with hardness of 150 mg/L)	18.67	4.8
Copper, Dissolved (with hardness of 200 mg/L)	24.4	4.8
Copper, Dissolved (Newark Bay, Raritan Bay, Arthur Kill, Kill Van Kull, saline portions of the Passaic, Hackensack and Hudson Rivers and saline portions of tributaries to all of these waters)	--	7.9