Virginia Pollutant Discharge Elimination System (VPDES)
Pesticide General Permit – VAG87
Pesticide Discharge Management Plan (PDMP)

Company Name [1] _____

Address _____

City _____ State _____ Zip_____

Phone _____

Email_____

Section 1 - Pesticide Discharge Management Team

Instructions: Identify each person by name, title or both and check off their specific responsibilities: *(This form allows for four individuals. If you have more than four people composing the Management Team, make copies of this page or copy and insert a new box and complete the information).*

❶	Name _____ Title _____
	Responsibilities include:
☐	Managing pests in relation to the pest management area
☐	Developing and revising the PDMP
☐	Developing, revising and implementing control measures to meet effluent limits
☐	Developing, revising and implementing corrective actions during adverse incidents

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Section 2 – Problem Identification *(add additional space as needed or additional pages)*

Instructions: Complete the following information which is related to the pest problem and the location of the treatment area.

Pest Problem Description *(check all that apply).*

☐	**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.
☐	**Weed and algae pest control** – to control weeds, algae and pathogens that are pests in surface water.
☐	**Animal pest control** – to control animal pests in surface waters.
☐	**Forest canopy pest control** – application of a pesticide to the 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 surface water.
☐	**Intrusive vegetation pest control** –. to control vegetation along roads, ditches, canals, waterways, and utility rights of way where to target the intrusive pests effectively, a portion of the pesticide unavoidable will be applied over and deposited to surface water.

General Description of Application Site(s) [2]

_____

_____

_____

_____

_____

Target Pest(s) [3]

_____

_____

_____

_____

Source of the Pest Problem[4]

_____

_____

_____

_____

_____

Action Thresholds[5] – the point at which pest populations can no longer be tolerated necessitating that pest control action be taken based on economic, human health, aesthetic, or other effects.

Describe information related to action thresholds here and/or attach documentation:

_____

_____

_____

_____

_____

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General Location Map(s) – Include a general location map (e.g., USGS quadrangle map, a portion of a city or county map, computer or other map) that identifies the geographic boundaries of the area to which the plan applies and location of major surface waters.

Section 3 –Integrated Pest Management Options Evaluation

Instructions: Check all boxes that describe the procedures that you or your organization will implement in order to minimize discharge of pesticides into surface waters using integrated pest management. Attach or cite supporting documentation such as Best Management Practices, Integrated Pest Management Plans, certificates, licenses, etc.

IPM Control Methods[6] **That Will Be Used** *(Check all that apply and explain method used and, if unchecked, why a method is not feasible. Note: No explanation is needed for pesticides to be used because further description follows later in this document.)*

☐	No Action
☐	Prevention
☐	Mechanical/Physical
☐	Cultural
☐	Biological

IPM Non-pesticide Management Measures Used *(check all that apply)*

☐	Devices including light traps, sticky, pheromone, and other traps.
☐	Water management including diversion and draining.
☐	Nutrient management including erosion and fertilizer control.
☐	Biological control including insects, vertebrate organisms, and/or pathogens.

☐	Mechanical controls including burning, mowing, and harvesting.
☐	Preventative methods including exclusion, quarantines, clean equipment, certified seed, feed, and straw.
☐	Other measures as described below.

Describe Other IPM Non-pesticide Management Methods To Be Used or Considered

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Pesticides

Information on pesticide application, spill prevention, equipment maintenance, and pest surveillance methods that will be used is provided here **(***check all that apply).*

☐	Pest surveillance is conducted or environmental conditions are assessed that can no longer be tolerated based on economic, human health, aesthetic or other effects, prior to pesticide application.
☐	Pesticides are applied when action thresholds are met.
☐	Most susceptible developmental stage (e.g., larvicides) considered and used when practical and feasible (if applicable).
☐	Environmental conditions are assessed (temperature, precipitation, wind) prior to application.
☐	Consult with local Cooperative Extension and Department of Agriculture pest management specialists.
☐	Use the lowest effective amount of pesticide per application and optimum frequency of pesticide applications necessary to control the target pest consistent with reducing the potential for development of pest resistance.
☐	Read and comply with pesticide labeling.
☐	Mix and apply the pesticide according to pesticide labeling.
☐	Perform regular maintenance activities to reduce leaks, spills, or other unintended discharges of pesticides.
☐	All pesticide application equipment is properly equipped to dispense the proper amount of material.
☐	All mixing, storage, or holding tanks are leak proof, whether on application equipment or not.
☐	All spray distribution systems are leak proof, and any pumps that these systems have are capable of operating at sufficient pressure to assure a uniform and adequate rate of pesticide application.
☐	All pesticide application equipment has cut-off valves and discharge orifices to enable the operator to pass over non-target areas.
☐	All hoses, pumps or other equipment used to fill pesticide handling, storage or application equipment is fitted with an effective valve or device to prevent back flow into water supply systems, streams, lakes, other sources of water, or other materials.[7]
☐	Inspect all application equipment including hoses, tanks, nozzles, and valves before each application.
☐	Replace or repair broken or worn application equipment per manufacturers guidelines.

☐	Maintain pesticide application equipment in proper operating condition which includes proper cleaning, repairing, and calibration.
☐	Individuals on the PDMP team have attended pesticide applicator training or continuing education programs.

Describe Procedures for Determining the Proper Pesticide Application[8], Spill Prevention[9], Equipment Maintenance[10] and Pest Surveillance[11] That Will Be Used:

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Spill and Adverse Incident Response Procedures

☐	Control, contain, and clean up the spill immediately.
☐	Keep the public and others out of the spill area.
☐	Report adverse incidents within 24 hours to DEQ by telephone (see table below).[12]
☐	Provide written adverse incident report within five days to DEQ (see table below).[13]
☐	In emergency situations, contact the VA Dept of Emergency Management (see table below).
☐	Report adverse incidents to threatened and endangered species immediately to additional state agencies (see table below).[14]
☐	Report the spill to immediate supervisors and management.
☐	Provide written spill report within five days to DEQ (see table below).[15]
☐	Additional spill and adverse incident response procedures as described below.

Additional Spill and Adverse Incident Procedures

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Complete the Emergency Phone Number List and Post in a Readily Accessible Location

Agency	Phone Number/Web
VA Dept of Environmental Quality (DEQ)	http://www.deq.virginia.gov/Programs/PollutionResponsePreparedness/PollutionReportingForm.aspx *(Insert appropriate DEQ regional office phone numbers and addresses in additional instructions[16]).*

Virginia Department of Emergency Management	For emergencies only: 1-800-468-8892 (24-hour hotline) Emergency Operations Center: 1-804-674-2400
VA Department of Agriculture and Consumer Services	No VDACS reporting is required for this permit unless it is for endangered or threatened plants or insects (below); HOWEVER, you might need to contact VDACS under their regulations or FIFRA requirements.
Nearest Medical Facility	
Additional Phone Numbers When Adverse Incidents Occur to Threatened or Endangered Species	
VA Dept of Game and Inland Fisheries (when aware of adverse incidents to anadromous fish, animal or invertebrate endangered or threatened species)	(804) 367-1000 vafwis_support@dgif.virginia.gov
National Marine Fisheries Service (when aware of adverse incidents to anadromous or marine endangered or threatened species)	NOAA OLE Hotline 1-800-853-1964
U.S. Fish and Wildlife Service (when aware of adverse incidents to animal, invertebrate, insects or plant endangered or threatened species)	USFWS Law Enforcement (703) 358-1949 Regional LE Office (413) 253-8274 VA Field Office (804) 693-6694
VA Dept of Agriculture and Consumer Services (when aware of adverse incidents to plants or insects endangered or threatened species)	Keith Tignor (804) 786-3515 Keith.Tignor@vdacs.virginia.gov

The Process, Schedule, and Site Selection For Monitoring Includes *(check all that apply).*

☐	Visual monitoring for possible and observable adverse incidents including but not limited to the unanticipated death or distress of non-target organisms and disruption of wildlife

	habitat, recreational, or municipal water use (to be conducted before, during, and after pesticide applications, if feasible).
☐	Monitoring includes visual counts and/or photos and surveys if an adverse incident occurs or non-target organisms are affected.
☐	Visual monitoring occurs during post-application surveillance or efficacy checks.
☐	Monitoring sites are selected based on pesticide application locations, human population, pest sightings, pest population, and environmental conditions.
☐	Other procedures and processes as described below.

List Other Processes and Procedures Related to Monitoring and Documenting Impacts to Non-target Organisms

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List the Name of the Pesticide(s) Used and the Active Ingredient(s) - Use Additional Sheets if Necessary.

Pesticide Name	Active Ingredient

Pesticide Discharge Management Plan Modifications

You must modify your PDMP whenever necessary to address any of the triggering conditions for corrective action in Part I D 1 of the Pesticide General Permit or when a change in pest control activities significantly changes the type or quantity of pollutants discharged. Changes to your PDMP must be made before the next pesticide application that results in a discharge to surface water, if practicable, or if not practicable, as soon as possible thereafter. A new signature and date must be added to the revised PDMP.

The operator shall also review the PDMP at a minimum once per calendar year and whenever necessary to update the pest problem identified and pest management strategies evaluated for the pest management area.

A copy of the current PDMP, along with all supporting maps and documents will be retained. The PDMP and supporting information will be made available to the Department of Environmental Quality upon request.

Signature Section 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 gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information contained 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 knowing violations.

_____ _____

Signature of Responsible Party [17] **Date**

_____

Position/Title

Additional Instructions and Examples for Filling out the PDMP

[1] **Company Name -** Insert name of company, municipality, organization or operator.

[2] **General Description of Application Site(s) –** This does not have to include addresses. It is a general description. Examples: 10 golf courses, approximately 30 wetland mitigation banks, 1 reservoir (name), approximately 10,000 forested woodlands in X,Y, Z Counties, etc…

[3] **Target Pest(s) -** Insert common and Latin names. Does not have to be to species level.

[4] **Source of the pest problem** - Explain the source of the pest problem (provide some information as to the nature of the pest) and source of data used to identify that there is a problem (Is data collected from maintenance and monitoring reports by you? Is historical or alternate site data used?).

Examples of explanation of source of the pest problem:

1. The restored streams consist of disturbed land that was denuded of vegetation during construction, leaving large areas of bare soil to be invaded by aggressive, exotic species. Target species found along the stream restoration bank consist of Mile-a-Minute (Polygonum perfoliatum), Japanese Hops (Humulus japonicus), and Stilt Grass (Microstegium vimineum). Several of these species where present before any stream restoration activities took place and are still found throughout the neighboring forested regions. It is believed that these target species were introduced several years ago through human and animal dispersal, as well as environmental factors such as wind, and water. Any target pests identified during regular visits to the streams, or vegetation monitoring is recorded in maintenance logs or monitoring reports, respectively. The data collected from these maintenance and monitoring reports is the primary source of information used by to determine the priority level and occurrence of target species within each site.

*2. <u>Aedes albopictus</u>, the Asian tiger mosquito, is an introduced species of mosquito that was first found in our service area **<u>describe date, if known</u>**. This species is a container breeding mosquito, and is commonly associated with the more urbanized areas in our jurisdiction. However, it can also be an abundant species in the more rural regions of the county, especially in the vicinity of trash piles or tire dumps. It is a fierce daytime biter and a major nuisance mosquito within our service area. Data is collected during pest surveillance (see action threshold, pest surveillance schedules and procedures, e.g.).*

[5] **Action Threshold(s) Description -**

Examples of Action Threshold Descriptions:

1. Pest Plant Species in Constructed Wetlands

The 50/20 rule outlined in the US Army Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Regional Supplement. According to this supplement "dominants are the most abundant species that individually or collectively account for more than 50 percent of the total coverage of vegetation in the stratum, plus any other species that, by itself, accounts for at least 20 percent of the total cover." The "stratum" mentioned above is the breakdown of plants into four categories: Trees (woody plants with a DBH 3 inches or greater), Sapling/Shrub (woody plants less than 3 inches DBH and taller than 3.28 ft.), Herbs (all non-woody plants as well as woody plants less than 3.28 ft. tall), and Woody Vines (greater than 3.28 ft. tall). Monitoring reports (see section 4.1) include the absolute percent cover of vegetation at each monitoring plot surveyed within the report. Thus any target species considered dominant within these monitoring plots is given a high priority status. Areas falling outside of these monitoring plots are evaluated by employees trained in both aquatic weed control, wetland vegetation identification, and wetland delineation (per

Army Core of Engineers Standards) using the same guidelines set forth by 50/20 rule mentioned above to determine the priority level of target pests found. The priority level of noxious species present as dominant vegetation are to be evaluated according to the invasive status (highly invasive vs. occasionally invasive) of the species reported by the Virginia Department of Conservation and Recreation (see http://www.dcr.virginia.gov/natural-heritage/invsppdflist)

2. Adult Mosquito Control:

The adult mosquito population must meet, or exceed, a minimum density to justify the application of pesticide. Two measurements of adult mosquito density are used in Maryland: (1) landing rate counts, and (2) light traps.

The minimum landing rate threshold to initiate spraying of insecticide with ULV ground application equipment is 3 mosquitoes landing on an inspector in a 2-minute period. The minimum light trap collection to warrant ground spraying is 12 female mosquitoes, of a species known to feed on humans, per night.

The minimum action thresholds for aerial application of an insecticide for nuisance adult mosquito control are: (1) an average landing rate count of 12 mosquitoes per minute; or (2) a light trap collection of 100 female mosquitoes per night.

It is preferred that landing rate and light trap criteria be used to evaluate the need for application of an insecticide. However, either method alone can be used. Aerial or ground spraying for adult mosquitoes will be done only when the minimum action threshold for landing rate counts or light trap collections is met or exceeded. The mosquito surveillance data must have been collected in the vicinity of the proposed treatment area within 48 hours prior to the treatment date.

Service requests, i.e., complaints, from communities participating in mosquito control efforts do not provide sufficient justification for nuisance adult mosquito control. However, service requests will result in increased mosquito surveillance by mosquito control staff. An inspector will respond to a service request within two (2) business days after the request is received.

[6] **IPM control methods** –

No Action - Insert incidence where no action would be the choice. Examples might be cases where available control methods may cause secondary or non-target impacts that are not justified.

Prevention – Describe primary pathways of introduction and actions to cut off those pathways and how to reduce conditions that encourage the spread of the pest. Example 1 – Educating the public on how to avoid introduction and spread of invasive plants and animals. Example 2 – Shaking clothing before leaving the site or entering vehicles to prevent the accidental spread of the pest that may have become caught on applicator's clothing.

Mechanical/Physical - Describe mechanical/physical methods for eliminating pests. Example 1 – Weed removal by hand or machine. Example 2 – Clipping seed heads with proper disposal. Example 3 – Capturing nuisance animals (traps, fishing, etc.)

Cultural – Describe methods to alter the habitat to avoid culture of the pest. Example 1 – Dumping water in flower pots to eliminate mosquito breeding areas. Example 2 – Adding dyes to prevent algae growth.

Biological – Insert biological methods (diseases, predators or parasites) to use to control the pest. Example 1 – Use of mosquitofish (Gambusia holbrooki) as a biocontrol agent to feed on mosquito larvae.

[7] **Pesticides (Spill prevention- hoses and pumps) -** These backflow devices or valves are not required for separate water storage tanks used to fill pesticide application equipment by gravity systems when the fill spout, tube, or pipe is not allowed to contact or fall below the water level of the application equipment being filled, and no other possible means of establishing a back siphon or backflow exists.

[8] **Describe procedure(s) for determining proper pesticide application**

Example of procedure for proper pesticide application:

In accordance with Part I A.1 of the VPDES Pesticide General Permit, all pesticide products applied through {INSERT NAME OF COMPANY, MUNICIPALITY, ORGANIZATION OR OPERATOR} are to be used at "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 without exceeding the maximum allowable rate of the product label." Before any product mixing takes place all operators must first read the respective specimen label of the {pesticide, herbicide, insecticide, etc…} in which they plan to apply, specifically focusing on the target species and treatment applications being implemented. The following spray solution guidelines should be strictly adhered to during all application processes:

Product Name	*Active Ingredient*	*Controlled Species*	*Percent Solution Used (Note – proprietary information is not required, including percentages that are considered proprietary.)*	*Volume Product Used Per Gallon*
Rodeo	*Glyphosate*	*Purple Loostrife*	*1%*	*1.3 fluid ounces*
Clearcast	*ammonium salt of imazamox*	*Reed Canarygrass*	*3%*	*4 fluid ounces*
Renovate 3	*Triclopyr*	*Floating & Emerged Vegetation*	*surface acres treated*	*2 quarts/acre*
Renovate 3	*Triclopyr*	*Submerged Vegetation*	*surface acres treated*	*5 gallons/ surface acre*
Captain	*Copper Carbonate*	*Planktonic, or Filamentous Algae*	*0.2ppm Copper*	*0.6 gallons/ surface acre*
*Sonar A.S.**	*Fluridone*	*Floating, Emergent & Submerged Vegetation*	*45ppb*	*0.12 Quarts/ surface acre*

In the event that these solutions are not adequately controlling the target species, the concentration of the solution may need to be increased only after the specimen label has been checked to ensure the maximum allowable rate of the product is not exceeded. If the target species is showing signs of resistance, an alternative chemical should be investigated and used during the next application. Whenever possible, alternative chemicals should be used for sites being treated on multiple occasions in order to decrease the chances of pest resistance and unnecessary chemical residues.

[9] **Describe procedure(s) for spill prevention**

Describe the spill prevention program for the pest management areas. The program should address areas and activities at the site that typically pose a high risk for spill including loading and unloading areas, storage areas, process areas, and waste disposal activities. It should address

appropriate material handling procedures, storage requirements, and containment or diversion equipment that will minimize the potential for spill or in the event of a spill, enable proper and timely responses. Note that per Part I D 3 of the permit, any spills or leaks must be documented.

Example of spill prevention procedures:

In an effort to reduce the possibility of chemical spills this company has taken the following precautions:

- *All spray equipment must be emptied of pesticide solutions before the loading of vehicles, transportation and storage of equipment.*
- *The universal spill kit, safety kit, and tool kit is required to be brought to every site during applications to ensure proper materials in the event of an adverse incident.*
- *All mixing shall be done on site, above/on the chemical resistant mat provided.*
- *Water to create pesticide solutions is brought with each application crew in 55 gallon barrels. A hand pump is used to pump water from barrels into packs.*
- *During pumping operations the spray pack filters should be in place at the opening of the pack with the pump's tube held above the opening to ensure no pesticide residue contaminate the hand pump. If chemicals are already inside spraying equipment, the packs must be left on the chemical resistant mat while filling with water.*
- *All pesticide chemicals and spray equipment are not allowed to be inside the passenger compartment of any vehicle. They shall be transported in truck beds and closed trailers to prevent any vapors from causing the driver or passengers to be ill.*
- *Chemicals are to remain in the original containers with proper labeling during transportation.*
- *The handling of chemicals or spraying equipment is only permitted when the operator is wearing the proper personal protective gear outlined in the specimen label of the chemical (often long sleeves, long pants, gloves, protective eyewear).*
- *Cleaning of spray equipment is performed on a chemical resistant material, often large plastic sheets, which can be discarded after use.*
- *All stored equipment must be empty of chemicals and properly labeled with the last chemical used in equipment in case any residues are present.*
- *All stored chemicals contain proper labeling in accordance with EPA regulations, and are stored in latched green cabinets that are clearly labeled for pesticide use.*

[10] **Describe procedure(s) for equipment maintenance**

Describe the preventative equipment maintenance program to keep 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 situation that may result in leaks, spills and other releases.

Examples of equipment maintenance schedule and procedures:

1. Typical pesticide applications are made using 3 gallon Solo® backpack sprayers. Large treatment areas may occasionally require the use of a 25 gallon ATV sprayer where driving conditions permit. All spraying equipment is furnished with shut-off valves to prevent any accidental spraying while transporting equipment or searching for target species. Before the start of any pesticide applications (near the end of every winter, before the onset of spring) all backpack, hand pump, and ATV sprayers are inspected for proper function. This includes all mechanical pieces not limited to; spray nozzles, filters, piston pumps, seals, pumping wands, safety locks, and backpack straps. Extra parts are kept in the warehouse in order to

ensure the sprayers can be fixed at the time of diagnosis to prevent the accidental use of faulty equipment. Sprayers that are unable to be fixed are clearly labeled and set aside for further examination. A tool kit including extra parts and the respective tools necessary is brought with each application crew to address any equipment concerns that may arise on site. At each site careful consideration is taken to prepare the minimum amount of pesticide solution needed to adequately control the target species while reducing the amount of excess solution left over in packs. All spraying equipment is clearly labeled with a chemical warning to alert applicators of what chemical was last used in the equipment (in case of any residues), the concentration of these chemicals, and emergency contact information. Unless thoroughly cleaned the only chemicals that should be put into spraying equipment is that which is listed on the respective chemical warning label. All equipment is thoroughly cleaned at the close of each application season, usually shortly after the start of fall, to make sure there are no pesticide residues setting in the tanks for extended periods of time. With this maintenance schedule the integrity of all spraying equipment should not be compromised. This should help prevent any unwanted leaks or spills from faulty equipment, minimizing unnecessary pesticide discharges.

2. Operations:

Application equipment must be calibrated annually to confirm the Volume Median Diameter is according to the label of the pesticide being used.

A visual inspection of spray equipment for leaks or wear in the lines, tanks and nozzle is done prior to the start up of spray equipment.

Routine cleaning and maintenance of the spray system must be performed to ensure system is operating properly.

3. Maintenance:

Daily Checks - Visually check the fog generator each day before use and make any necessary adjustments and /or repairs. Before making any repairs ensure that required PPE is worn.

a. Check all gasoline hoses, insecticide lines and fittings for cracks, leaks or wear. Replace if needed.

b. Check all bolts and fasteners and tighten as necessary.

c. Ensure that pesticide tanks have sufficient chemicals for assigned spray mission.

d. Check all nozzle parts for wear or physical damage. Replace damaged parts.

e. Inspect blower air filter for cleanliness and serviceability.

f. Check engine oil. Add oil as needed.

g. Check fuel level.

h. Start engine, listen for any unusual noises and watch for excessive smoke or any engine oil leaks.

4. Every 50 Hours

a. Check the flow rate calibration.

b. Check all gasoline hoses, insecticide lines and fittings for cracks, leaks or wear. Replace if needed.

c. Check all nozzle parts for wear or physical damage. Replace damaged parts as required.

Replace blower filter element and wing nut washer.

d. Change blower oil.

e. Grease blower.

f. Change Briggs and Stratton engine oil and filter.

g. Clean insecticide filter.

h. Check the battery for serviceability. Test the battery with a volt-ohmmeter. (Volt reading must be between 11.5 and 12 VDC.)

i. Replace the in-line gasoline filter.

j. Clean blower air vent.

5. Calibrating Sentinel Spray System - Note: 2 people are required for this operation.

a. Disconnect the insecticide discharge line from the nozzle. Do not allow insecticide to be discharged into the nozzle of an idle fog generator.

b. Connect plastic hose to chemical hose at elbow fitting on spray nozzle. (Plastic hose should be long enough to reach pesticide tank). Place other end of plastic hose in pesticide tank.

c. Connect battery charger to battery.

d. Place Control Panel pump switch to "FOG" position.

e. Place Control Panel GPS switch in "CAL" position. When GPS switch is set to "CAL" position this is simulating that the vehicle is running at 10 MPH.

f. Open pump box lid (ensure that plastic hose is connected and placed inside pesticide tank) place pump control switch in the "CONTROL BYPASS ON" position. Let pump run until no air can be seen going through plastic hose from nozzle to tank. If air is seen in plastic lines after 2 minutes while pump is running check all connectors for tightness.

g. When air is no longer seen in plastic hose place pump control switch in the "PRESSURE BYPASS ON" position.

h. Observe timer clock or times, and at appreciate time remove plastic hose from pesticide tank quickly placing it inside of measuring beaker.

i. Let pesticide run into the measuring beaker for one minute then place plastic hose back in pesticide tank.

j. Check for correct amount of pesticide in measuring beaker. Repeat steps g. through i. until desired amount of pesticide is present.

k. Place pump control switch in "OFF" position, also place control panel PUMP and GPS switches in "OFF" positions.

6. Repairs and Services - Repairs and services on ULV equipment will be performed by an appointed mechanic only.

[11] **Describe the procedure(s) for pest surveillance**

Discuss how the pest surveillance programs assess the pest treatment area, to determine when the action threshold(s) is met. The discussion should include surveillance method(s) selected.

Example of schedule and procedure for pest surveillance

1. During every site visit, regardless of season or purpose of visit, maintenance reports are filled out detailing observations. All invasive species found during these visits are documented including the species identified, date found, priority level, and approximate location of the species when applicable. All wetland mitigation sites maintained by our company undergo vegetation monitoring during Years 1,2,3,5,7,and 10 after construction has been completed. During the vegetation monitoring any noxious species discovered are reported to this company's Ecosystem Management Department in order for best management practices to be implemented. Detailed record keeping allows employees to locate areas of concern from previous years and monitor the propagation, size, and reaction of the target species to previous pesticide treatments. Before the any pesticide application

proceeds the entire site must first be surveyed for target species locations and densities. Sites that have been recently treated are given 1-2 weeks to allow chemicals to take full effect before monitoring of treated areas is repeated, to ensure the minimal amount of pesticide necessary is being used.

2. Adult Mosquito Surveillance

a. Service request inspections are taken during normal working hours and from telephone messages or emails outside of the normal work day. Many of these are simple requests for treatments, although occasionally such calls lead to finding problems needing attention. Technicians generally will check for mosquito larvae and determine if adult populations warrant treatment during these inspections from observed densities.

b. Gravid trap collections are paramount to our west nile virus (WNV) surveillance. This trap type is particularly effective in catching gravid Culex quinquefasciatus, which is our primary WNV vector. Twenty-six gravid traps are deployed throughout the jurisdiction each week during the mosquito season.

c. Center for Disease Control (CDC) light trap collections are used for both nuisance mosquito census and EEE surveillance. Currently, 25 CDC light traps are deployed on a weekly basis.

d. Exit traps were developed by our staff to aid in earlier detection of any possible eastern equine encephalitis (EEE) threat in the county. An exit trap is a passive funnel type trap attached to the tops of our sentinel chicken cages that collect some of the mosquitoes exiting the cage. All Culiseta melanura captured from these traps are pooled based on location and tested for virus.

[12] Twenty-four hour adverse incident notification.

If the operator observes or is otherwise made aware of an adverse incident that may have resulted from a discharge from the operator's pesticide application, the operator shall immediately notify the Department. This notification must be made within 24 hours (phone (DEQ regional office phone numbers below) or online at http://www.deq.virginia.gov/Programs/PollutionResponsePreparedness/MakingaReport.aspx) of when the operator becomes aware of the adverse incident and must include at least the following information:

(1) The caller's name and telephone number;

(2) Operator's name and mailing address;

(3) The name and telephone number of a contact person if different than the person providing the 24-hour notice;

(4) How and when the operator became aware of the adverse incident;

(5) Description of the location of the adverse incident;

(6) Description of the adverse incident identified and the EPA pesticide registration number for each product that was applied in the area of the adverse incident; and

(7) Description of any steps the operator has taken or will take to correct, repair, remedy, cleanup, or otherwise address any adverse effects.

If the operator is unable to notify the Department within 24 hours, notification shall be made as soon as possible and the rationale for why the notification was not possible within 24 hours shall be provided.

The adverse incident notification and reporting requirements are in addition to what the operator is required to submit under FIFRA § 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:

(1) The operator is aware of facts that clearly establish that the adverse incident was not related to toxic effects or exposure from the pesticide application.

(2) The operator has been notified in writing by the Board that the reporting requirement has been waived for this incident or category of incidents.

(3) The operator receives notification of a potential adverse incident but that notification and supporting information are clearly erroneous.

(4) An adverse incident occurs to pests that are similar in kind to pests identified as potential targets.

[13] Five-day adverse incident written report.

Within five days of a reportable adverse incident, the operator shall provide a written report of the adverse incident to the appropriate DEQ regional office. The adverse incident report must include at least the following information:

(1) Information required to be provided above for 24 hour reporting (above);

(2) Date and time the operator contacted DEQ notifying the Department of the adverse incident, and whom the operator spoke with at DEQ, and any instructions the operator received from DEQ;

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

(4) A description of the circumstances of the adverse incident including species affected, estimated number of individuals, and approximate size of dead or distressed organisms;

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

(6) Pesticide application rate, intended use site, method of application, and name of pesticide product, description of pesticide ingredients, and EPA registration number;

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

(8) If laboratory tests were performed, indicate what tests were performed, and when, and provide a summary of the test results within five days after they become available;

(9) If applicable, explain why it is believed the adverse incident could not have been caused by exposure to the pesticide;

(10) Actions to be taken to prevent recurrence of adverse incidents; and

(11) Signed and dated in accordance with the signature section certification of the PDMP.

[14] Adverse incident to threatened or endangered species or critical habitat.

If the operator becomes aware of an adverse incident to threatened or endangered species or critical habitat that may have resulted from a discharge from the operator's pesticide application, the operator shall immediately notify the:

(1) National Marine Fisheries Service (NMFS) and the Virginia Department of Game and Inland Fisheries (DGIF) in the case of an anadromous or marine species;

(2) U.S. Fish and Wildlife Service (FWS) and the DGIF in the case of an animal or invertebrate species; or

(3) FWS and the Virginia Department of Agriculture and Consumer Services in the case of plants or insects.

Threatened or endangered species or critical habitats include the following:

(1) Federally listed threatened or endangered species;

(2) Federally designated critical habitat;

(3) State-listed threatened or endangered species;

(4) Tier I (critical conservation need), or Tier II (very high conservation need) species of greatest conservation need (SGCN) as defined in Virginia's Wildlife Action Plan (http://www.bewildvirginia.org/wildlifeplan/).

This notification must be made by telephone immediately upon the operator becoming aware of the adverse incident and must include at least the following information:

(1) The caller's name and telephone number;

(2) Operator's name and mailing address;

(3) The name of the affected species, size of area impacted, and if applicable, the approximate number of animals affected;

(4) How and when the operator became aware of the adverse incident;

(5) Description of the location of the adverse incident;

(6) Description of the adverse incident, including the EPA pesticide registration number for each product the operator applied in the area of the adverse incident;

(7) Description of any steps the operator has taken or will take to alleviate the adverse impact to the species; and

(8) Date and time of application.

A listing of threatened and endangered species in Virginia is in the pesticide general permit fact sheet. If needed, additional information on federally listed threatened or endangered species and federally designated critical habitat can also be found at www.nmfs.noaa.gov for anadromous or marine species or www.fws.gov for terrestrial or freshwater species. Also, state-listed threatened or endangered wildlife species is available through the Virginia Fish and Wildlife Information Service (www.dgif.virginia.gov). Listing of state threatened or endangered plants and insects can be found in §§ 3.2-1000 through 3.2-1011 of the Code of Virginia and 2VAC5-320-10 of the Virginia Administrative Code.

[15] Five-day spill, leak, or other unauthorized discharge report.

Within five days of the operator becoming aware of a spill, leak, or other unauthorized discharge triggering the spill, the operator shall submit a written report to the appropriate DEQ regional office. The report shall contain the following information:

(1) A description of the nature and location of the spill, leak, or discharge;

(2) The cause of the spill, leak, or discharge;

(3) The date on which the spill, leak, or discharge occurred;

(4) The length of time that the spill, leak, or discharge continued;

(5) The volume of the spill, leak, or discharge;

(6) If the discharge is continuing, how long it is expected to continue and what the expected total volume of the discharge will be;

(7) A summary of corrective action taken or to be taken including date initiated and date completed or expected to be completed; and

(8) Any steps planned or taken to prevent recurrence of such a spill, leak, or other discharge, including notice of whether PDMP modifications are required as a result of the spill or leak.

Discharges reportable to the Department under the immediate reporting requirements of other regulations are exempted from this requirement.

The Board may waive the written report on a case-by-case basis for reports of noncompliance if the oral report has been received within 24 hours and no adverse impact on state waters has been reported.

[16] DEQ regional office addresses.
(to see counties of the regional service area see

http://www.deq.virginia.gov/Programs/PollutionResponsePreparedness/Contacts.aspx)

(1) Blue Ridge Regional Office - Roanoke (BRRO-R)
3019 Peters Creek Road
Roanoke, VA 24019
(540) 562-6700

(2) Northern Virginia Regional Office (NVRO)
13901 Crown Court
Woodbridge, VA 22193
(703) 583-3800

(3) Piedmont Regional Office (PRO)
4949-A Cox Road
Glen Allen, VA 23060
(804) 527-5020

(4) Southwest Regional Office (SWRO)
355 Deadmore St.
P.O. Box 1688
Abingdon, VA 24212
(276) 676-4800

(5) Tidewater Regional Office (TRO)
5636 Southern Blvd.
Virginia Beach, VA 23462
(757) 518-2000

(6) Valley Regional Office (VRO)
4411 Early Road
Mailing address: P.O. Box 3000
Harrisonburg, VA 22801
(540) 574-7800

[17] Signature of responsible party

For a corporation: by a responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means: 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-making or decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make

management decisions that 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; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.

For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a federal agency includes the chief executive officer of the agency, or a senior executive officer having responsibility for the overall operations of a principal geographic unit or the agency.

A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described above;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated activity such as the position of superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or any individual occupying a named position; and

(3) The signed and dated written authorization is included in the PDMP. A copy of this authorization must be submitted to the Department if requested.

All other changes to the PDMP, and other compliance documentation required under this permit, must be signed and dated by the person preparing the change or documentation.