

From: [Heather Hansen](#)
To: [Jennings, Jonathan \(ECY\)](#)
Subject: Comments on the mosquito control NPDES permit
Date: Wednesday, March 17, 2010 2:11:26 PM
Attachments: [Comments on the Draft Aquatic Mosquito Control National Pollutant Discharge Elimination System State Waste Discharge General Permit.doc](#)
Importance: High

See attached comments on the draft mosquito control NPDES permit.

Heather Hansen
Executive Director
PO Box 7644
Olympia, WA 98507

Office: 360-705-2040
Cell: 360-480-5567

E-mail: heatherhh@qwestoffice.net 

Washington Friends of Farms & Forests educates the public and decision makers about the science and technology necessary to produce safe, abundant, economical food, fiber and landscaping and to maintain a healthy, productive and safe environment for our agricultural and urban communities.

Comments on the Draft Aquatic Mosquito Control National Pollutant Discharge Elimination System State Waste Discharge General Permit, February 3, 2010

Submitted by Heather Hansen, Washington Friends of Farms & Forests
PO Box 7644, Olympia, WA 98507 – Phone: 360-705-2040

General comments:

The majority of adulticiding is conducted with ULV equipment designed to release a fine mist into the air. This mist generally evaporates prior to hitting the ground, thus deposition in water would be minimal. There is no data indicating that residue from adulticiding is deposited in waters of the state at detectable levels. Product labels are designed to protect both public health and the environment. Restrictions that go beyond label language should be limited to special circumstances.

This permit appears to ban spraying for adult mosquitoes unless public health issues have been verified. The Washington State Department of Health and mosquito control experts believe that in order to prevent illness, adulticides need to be allowed prior to the detection of disease. Mosquito control districts are funded with tax dollars and have a statutory mandate to control mosquitoes regardless of disease.

Specific comments on the permit:

Page 6, Section S2. A states, “Notify Ecology by submitting a *completed application* for coverage **at least 60 days prior** to the planned activity that will result in the discharge to waters of the state.”

A limited alternative should be provided in case of an unexpected outbreak, especially if disease is involved.

Page 7, Section S3 C c States, “Use Ultra Low Volume (ULV) spraying apparatus to apply adulticides.”

While this is the most common type of equipment, it does not work in all situations, nor is it required on all labels. This statement should be deleted or amended by adding the words, when practical.

Page 10, Section S5 A Nuisance Mosquito Control

According to the state Department of Health, there is no clear differentiation between nuisance and vector mosquitoes. All species have not been studied adequately to ensure whether or not they carry disease. In addition, a significant portion of the population has allergic reactions to mosquito bites, thus making any bite a public health issue. Mosquito control should not be divided into nuisance and vector control.

Page 11, Section S5 C 2

Malathion and Naled are used to prevent the development of resistance. This is part of the definition of Integrated Pest Management. In addition, these products are more economical allowing mosquito control districts to most effectively use their resources to maximize public health.

Page 11, Section S6. A. - Public Notification and B. 2 - Posting Requirements

There should be some sort of exemption from public notice for small applications on private property. Occasionally a private property owner will hire a licensed applicator to control mosquitoes on their property. Because this is not an area-wide application, and access to the property is controlled by the owner, public notification should not be required.

Specific Comments on the Fact Sheet for Aquatic Mosquito Control

Page 2, Executive Summary

A lengthy discussion explains the history of the permit and that this new permit will now also cover the use of adulticides to control vector mosquitoes when human health is at risk.

Ecology has made a number of assumptions that do not fully take into account public health or the principles of mosquito control. These assumptions resulted in a division between “vector” mosquitoes and “nuisance” mosquitoes that is not so clear cut in practice. This conflicts with RCW 17.28 and is not supported by federal or state law.

Page 7

“Ecology will **not** revise the original fact sheet after it publishes the public notice. Appendix C (Response to Comments) will summarize comments and any resultant changes to the Permit.”

This statement appears to nullify the public comment process. The purpose of soliciting public input is to modify proposed regulations based on new information. This statement should be removed and the fact sheet updated.

Page 13

“MCDs may also apply adulticides, but ordinarily only when adult populations become so large that they cause extreme annoyance to many people or when the threat of disease transmission to humans or economically important (horses or cattle) livestock is high.”

A basic tenet of public health is to manage a potential problem to prevent it from becoming a real problem. Waiting until “populations become so large that they cause extreme annoyance” or until the threat of disease transmission is high, is waiting too long to be effective.

Page 14

“Applicators use Ultra Low Volume (ULV) application equipment to apply adulticides from air (aerial ULV) and ground (ground ULV) based vehicles.”

Not all applicators use ULV equipment and not all mosquito control products require ULV equipment. This should read “Applicators typically use...” rather than mandating application methods that conflict with the label.

Page 14 - Integrated Pest Management (IPM)

“IPM is an ecologically based strategy that relies heavily on natural mortality factors and seeks control tactics that are compatible with or disrupt the natural factors as little as possible.”

This definition is vague and inconsistent with both statute and the language in the permit. This text should be consistent with definitions used elsewhere.

RCW 17.15.010

(1) "Integrated pest management" means a coordinated decision-making and action process that uses the most appropriate pest control methods and strategy in an environmentally and economically sound manner to meet agency programmatic pest management objectives. The elements of integrated pest management include:

- (a) Preventing pest problems;
- (b) Monitoring for the presence of pests and pest damage;
- (c) Establishing the density of the pest population, that may be set at zero, that can be tolerated or correlated with a damage level sufficient to warrant treatment of the problem based on health, public safety, economic, or aesthetic thresholds;
- (d) Treating pest problems to reduce populations below those levels established by damage thresholds using strategies that may include biological, cultural, mechanical, and chemical control methods and that must consider human health, ecological impact, feasibility, and cost-effectiveness; and
- (e) Evaluating the effects and efficacy of pest treatments.

Page 14 - IPM

“adulticiding as a last resort -- can control mosquitoes effectively while reducing pesticide exposure to humans and the environment.”

The words, “a last resort” should be changed to “when appropriate”. Declaring an option to be used only as a last resort nullifies the principles of IPM. The most appropriate pest control method should be used.

Page 15

“In Washington, mosquito control is provided by mosquito control districts, cities, counties, municipalities (Public Utility Districts) and commercial applicators depending on the region and resources available.”

Both local and state health departments have responsibility for, and authority to, manage public health. RCW 70.05.060 states, “Each local board of health shall have supervision over all matters pertaining to the preservation of the life and health of the people within its jurisdiction and shall:

- (4) Provide for the control and prevention of any dangerous, contagious or infectious disease within the jurisdiction of the local health department;

(5) Provide for the prevention, control and abatement of nuisances detrimental to the public health;”

RCW 70.05.070 states, “The local health officer, acting under the direction of the local board of health or under direction of the administrative officer appointed under RCW 70.05.040 or 70.05.035, if any, shall:

(3) Control and prevent the spread of any dangerous, contagious or infectious diseases that may occur within his or her jurisdiction;

(5) Prevent, control or abate nuisances which are detrimental to the public health;”

Both RCW 70.05.060 and RCW 70.05.070 require control measures to be performed on “nuisances” if it is “detrimental” to public health. This includes mosquito control.

Page 19

“Malathion use as a larvicide is restricted under Ecology’s aquatic mosquito control permit. It is not permitted for use as an adulticide. Malathion may only be used for control of mosquito larvae with Ecology approval after consultation between Ecology and DOH in response to a public health emergency. This limits the amount and times that malathion may be discharged to surface waters to only times when human health becomes a priority.”

In the permit, S5. C. 2., “The Permittee may only use Malathion and Naled in case of documented *pyrethroid* resistance development in a specific vector mosquito population.”

The draft permit allows for the use of Malathion as an adulticide in case of *pyrethroid* resistance. The fact sheet should be consistent with the permit.

Product rotation is the most effective method of preventing pyrethroid resistance. If resistance is suspected, product rotation should be implemented on a broad scale to prevent large scale resistance. This is a basic premise of IPM.

The draft permit uses the phrase “human health threat” rather than “public health emergency.” The permit and fact sheet should be consistent. The term “public health emergency” may have legal connotations that unnecessarily restrict activities.

Page 20

“The Permit authorizes the incidental discharge of several adulticide active ingredients when an entity is working to control vector mosquitoes. Discharges are not allowed for nuisance mosquito applications.”

See comments above, The Washington State Department of Health does not differentiate between vector and nuisance mosquitoes. All mosquitoes affect public health. Mosquito control districts are charged with their control.

Page 22

“Naled use as an adulticide is restricted under Ecology’s Permit. It is not permitted for use as a larvicide. Naled may only be used for control of adult in response to pyrethroid resistance

development within a specific population of mosquitoes. An example of a specific population would be the population of mosquitoes that breed in a single waterbody. Ecology must approve the use of Naled after consultation between Ecology, DOH, WDFW and WSDA in response to a public health emergency or pesticide resistance. ”

See previous comments about pyrethroid resistance and public health emergencies.

Page 31

“Ecology has determined that adulticides, used in compliance with FIFRA, AKART, and that only generate incidental discharges during vector mosquito control do not have a reasonable potential to violate water quality standards.”

The same products are used in the same way to control all types of mosquitoes. If the control of “vector” mosquitoes will not violate water quality standards, neither will the control of “nuisance” mosquitoes.

Page 32

“Ecology removed the permit condition that authorized the use of new active ingredients not included in the issued permit for three reasons:

- Adding new active ingredients to an issued permit is a major modification of the permit conditions. Ecology must notify the public when it issues major modifications using a public involvement process (173-226-230 WAC).
- Since Ecology issued the first Permit in 2002, it has not added any active ingredients to the permit at the request of Permittees outside the permit development process. If Permittees request additional active ingredients after issuance of the 2010 Permit, they must request that Ecology re-open and modify the existing permit to include those active ingredients. Inclusion of new active ingredients will depend on Ecology review of the literature available about the specific active ingredient.
- Ecology does not currently have the resources to review risk assessments outside of the permit development process.

Ecology has retained the methoprene use restrictions in Permit Appendix B areas at the request of Washington State Department of Fish and Wildlife.”

Adding the regulation of adulticides to the permit is a major modification. These changes are already going through the “public involvement process.” Appendix A of the Fact Sheet states it, “Public Involvement Information”.

Prohibiting new ingredients is counterproductive to the goals of the permit. If new, lower toxicity products are registered, Ecology should be encouraging, rather than discouraging their use.

What data has WDFW provided to Ecology to justify the restrictions on methoprene? There must be defensible data to back up this restriction. How does WDFW’s data compare to Ecology’s data from the Grant County testing?

**“S5. Adulthood Use for Nuisance and Vector Control
Nuisance Mosquito Control**

The draft permit does not authorize the discharge of any adulticide for *nuisance mosquito control*.

FIFRA regulations define inert ingredients as chemicals included in a pesticide formulation to increase the effectiveness of the active ingredient. Therefore, they may have environmental effects, even if not a direct effect. Because these other ingredients are unknown due to their proprietary nature, Ecology cannot determine their effects in the environment for permitting purposes...

Ecology is concerned that inert/other ingredients contained in pesticide formulations could have unknown effects in the environment. Currently, EPA has assessed the risk of the active ingredient in pesticide formulations. This risk assessment does not take into account the “other” or “inert” ingredients that make up a pesticide formulation and the interactions these chemicals (alone or in combination) may have with the environment.

The draft permit requires discharges to comply with water quality standards. Because of the unknowns in adulticide formulations, Ecology cannot determine with reasonable certainty that regular applications of adulticides to control nuisance mosquitoes will not cause violations of water quality standards.”

All inert ingredients are evaluated and approved by EPA for their respective uses in pesticide products. Pesticide registrants can select only from a list of approved inert ingredients, and that list is available to the public. The safety criteria applied to approval of inert ingredients are even more conservative than for active ingredients. Inert ingredients are generally present in low levels in the formulation compared to the active ingredient. The complete formula is fully disclosed to EPA and the Washington State Department of Agriculture. The details are maintained as confidential only to protect that information from competitors. EPA knows exactly what ingredients are in each product and has approved their safety per label directions.

The products used to control mosquitoes are the same regardless of mosquito type. Considering that most adulticide applications are ULV and dissipate before they hit the earth, and there is no data detecting adulticides in waters of the state, this section is overly conservative to the point of being irrational. The permit is written so applications will not violate the water quality standards for any species of mosquito control. This section should be deleted.

“If other entities choose to pursue a risk assessment, for each pesticide product formulation, they must:

1. Prepare an assessment independent of the risk assessment conducted by EPA on the **active ingredient** during the registration process.
2. Address risks and concerns specific to Washington State.
3. Address the acute and chronic toxicity in the environment from the entire pesticide product formulation on the most sensitive organisms.

4. Include all formulation ingredients in the product, such as:
 - a. Active ingredients;
 - b. Inert ingredients;
 - c. Other ingredients;
 - d. Synergists;
 - e. Solvents;
 - f. All other additives
5. Take into account the ambient or background levels of pesticides in sediments and waters of the state from human activities.
6. Include toxicity testing and an intended use plan explaining how toxic threshold concentrations will be avoided in waters of the state. The toxicity testing and intended use plan must be generally based upon Appendix G of *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, Ecology Publication No. WQ-R-95-80.
7. Include any other information Ecology determines is necessary to evaluate the risk associated with the use of a pesticide product formulation.
8. Use a qualified toxicologist with experience in environmental toxicology.
9. Obtain Ecology approval.”

While we understand Ecology’s financial limitations, this list of requirements appears to be intended to prevent anyone from attempting gain approval for additional products. Ecology should be encouraging new products as newer products are nearly always less toxic. In addition, prior to including a product in the permit, it must already be registered with the Department of Agriculture. In the interest of good government, Ecology should work with WSDA’s pesticide registration division so that Ecology’s process is consistent with WSDA’s process. Ecology must consider federal law with respect to proprietary information.

Page 35

“MCDs have the knowledge and experience with mosquito control in their district that allows it to best factor in all the variables to determine when adult vector mosquito control is necessary. The Permit requirements take this knowledge and experience into account, and allow relative autonomy for the MCD to make application decisions based on mosquito surveillance, monitoring of disease indicators in the environment (such as through the vector-borne disease notifications lists through DOH) and within the requirements of the permit.”

Prior to the development of the draft permit, Ecology discussed with DOH how to determine when it should allow application of adulticides.”

These statements contradict each other and much of the permit. If MCDs have the “knowledge and experience...to best factor in all variables to determine when adult vector mosquito control is necessary” then their expertise should be used to determine when and how to best control all of the mosquito species they are responsible for. In addition, Ecology should have gone to the MCD’s rather than DOH to determine when to allow application of adulticides. DOH is a valuable educational resource; however, it is the MCD’s who actually monitor mosquitoes on a daily basis perform the tasks required for control thus, they are in the best position to determine effective practices.

Page 36

“Ecology suggests that applicators also post notices at sites that are not directly accessible to the public (e.g. catch basins, storm drains, utility and transportation vaults, etc).”

The term “suggests” is vague. It is prohibitively expensive and time consuming to post hundreds of small sites and unreasonable to expect posting of sites not accessible to the public. This language is not included in the permit, please delete it from the fact sheet.

Page 37

“Depending on the results from annual reporting, Ecology may require the Permittees to conduct a study to determine effects on the environment from pesticides used in mosquito control that addresses Washington specific issues (such as endangered salmonids). One factor that might cause Ecology to consider requiring a study is if actual adulticide use is much higher than the usage estimated by MCDs, or if adulticides use increases significantly without a public health reason.”

This draft permit changes the permittee from the State Department of Health to MCD’s or other local jurisdictions. While it may be reasonable to require a state agency to conduct a study, it is not reasonable to require a MCD to do so. Most do not have the resources to conduct such studies. The amount of adulticides used may be more closely related to weather than to permit related factors. Any required studies should be conducted by state agencies.

Page 39

“**Adulticide:** A pesticide product designed to target adult mosquitoes and applied using ultra-low volume techniques.”

Not all “adulticides” require the use of ULV equipment.