



STATE OF WASHINGTON

DEPARTMENT OF AGRICULTURE

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February 21, 2023

Attn: Shawn Ultican
Aquatic Pesticide Permit Specialist
Water Quality Program
Washington State Department of Ecology
P.O. Box 47600 Olympia WA 98504-7600

Re: Aquatic and Invasive Species Control General Permit Public Comment Period

Dear Mr. Ultican,

The Washington State Department of Agriculture (WSDA) has authority from the U.S. Environmental Protection Agency as the state lead agency to regulate the sale and use of pesticides in Washington State under federal regulation according to the amended Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and state regulation according to Washington Pesticide Control Act and Washington Pesticide Application Act. WSDA's Pesticide Management Division registers pesticides, licenses pesticide applicators, dealers, and consultants, investigates complaints, administers a waste pesticide collection program, and provides worker education and training.

With this letter, WSDA would like to provide comments to the Washington State Department of Ecology (ECY) on its Aquatic and Invasive Species Control Draft NPDES General Permit, referred to as the 'permit' for the purposes of this comment letter.

Regarding terminology used to refer to pesticides:

1. Throughout the text of the draft permit, the terms 'chemical', 'product', and 'active ingredient' have been used interchangeably to refer to pesticides. These terms should not be used when referring to pesticides. When referring to any registered pesticide we recommend only using the term pesticide throughout the final permit.
2. If ECY is using the terms 'chemical', 'product', or 'active ingredient' to refer to products that do not include pesticides, we recommend clearly defining these terms and distinguishing them from pesticides that require registration by WSDA to be legally used in Washington State to control pests. There were also instances in the draft where the terms 'chemicals' and 'products' have been used to refer to products that are not registered as pesticides in Washington State, but that might be available as bulk chemicals without a pesticide label. By definition, any chemical or product applied to control a pest is a pesticide. Use of the term 'chemical' could imply that pesticide registration and a product label is not required. In order to use a 'chemical' to control, repel, or mitigate a pest species, the product must be registered in WA and labeled for use as a pesticide. Bulk purchase of an unlabeled, unregistered active ingredient (e.g., sodium chloride) from a chemical supplier does not meet the definition of a registered and labeled pesticide. It should be clarified in the permit that

it is prohibited to use any products containing chemicals or bulk chemicals that are not registered by WSDA for control of a pest species.

3. Page seven of the draft permit lists several types of pesticides. We request that you add spray adjuvants as well as they are regulated and registered as pesticides in Washington State under RCW 15.58.030(31)¹. This important as many pesticides registered under (FIFRA) specifically recommend or require the addition of spray adjuvants to attain efficacy.

Regarding pesticides that are not currently registered in Washington:

1. No pesticides are currently registered in WA with sodium chloride as an active ingredient and therefore its use would be prohibited unless a registered product becomes available.
2. No pesticides are currently registered in WA with this potassium chloride as an active ingredient and therefore its use would be prohibited unless a registered product becomes available.
3. Tracer and marker dyes do not require registration as pesticides in Washington.
4. Although pesticides containing acetic acid are currently registered in Washington state, all registered products are labeled only for terrestrial use as herbicides; none of these products allow use in aquatic settings and are not labeled for control of non-plant pest species.
5. No pesticides containing calcium hydroxide/oxide (lime) are currently registered in therefore its use would be prohibited unless a registered product becomes available.

Regarding allowed use sites:

1. There are several pesticides containing chlorine dioxide, sodium chlorite, sodium hypochlorite, calcium hypochlorite that have various use sites listed on the labels. Not all products will be suitable for use in all settings. Please note that it is prohibited to use a pesticide at a use site that is not listed on the label.
2. Swimming pool pellets are labeled for use only in swimming pools and spas. They are not labeled for use in marine waters, ponds, streams, retention ponds, or any non-impounded waters and their use is strictly prohibited at these sites.
3. Some product labels do not allow use in marine or freshwater settings where invasive species are likely to occur. It is important to note that the use of these products in non-labeled sites would require a Special Local Needs registration or Emergency Use Exemption to be used at an alternative site.

Regarding Table 3: Product Restrictions - Freshwater Applications:

1. For pesticides containing sodium chloride, potassium chloride, chlorine, acetic acid, calcium hydroxide (lime), and tracer and marker dyes, please see the comments above regarding pesticides that are not currently registered in Washington and allowed use sites.
2. Rotenone formulations registered in Washington are available in both a dry, and a liquid (emulsifiable concentrate).
3. There are no currently registered pesticide products containing potassium permanganate. The only use for this chemical would be as a deactivator for rotenone, as specified on the rotenone labels. Potassium permanganate is not registered or labeled for use as a pesticide.
4. Not all products containing Endothall, Sodium carbonate peroxyhydrate, and Methoprene that are currently registered in Washington will be appropriately labeled for use under this permit.

1

[https://app.leg.wa.gov/RCW/default.aspx?cite=15.58.030#:~:text=\(31\)%20%22Pesticide%22%20means%2C%20but%20is%20not%20limited%20to%3A](https://app.leg.wa.gov/RCW/default.aspx?cite=15.58.030#:~:text=(31)%20%22Pesticide%22%20means%2C%20but%20is%20not%20limited%20to%3A)

5. There are several copper formulations that are considered “chelated.” We recommend providing a list of ingredients which are considered “chelated copper” by ECY and that would be acceptable for use under this permit (e.g., copper gluconate, copper citrate, copper ethylenediamine complex, copper triethanolamine complex, and/or others).
6. *Pseudomonas fluorescens* strain CLO145: Correct the strain ID to “CL 145A”.

Regarding notification:

1. Please clarify what must be included in the notification. At minimum, the recommended information would be Product Name, EPA or WA Registration Number, and active ingredient(s). Specific concerns with this statement as currently worded include:
 - a. An EPA-registered pesticide will have an EPA Registration Number. Spray adjuvants and minimum-risk pesticides are not registered by EPA; however, they are regulated and registered as pesticides in Washington. They will have a WA Registration Number (not an EPA Reg. No.), but the WA Reg. No. is not required to be listed on the product label.
 - b. Pesticides are usually mixtures. CAS numbers should be available for most active ingredients but may not be available for all ingredients (or may not be disclosed because they are considered confidential business information). In particular, CAS numbers for principal functioning agents in spray adjuvants may not be readily available.
 - c. Per FIFRA, any product used to control pest organisms is considered a pesticide and must be registered and labeled appropriately. Purchase and application of an unregistered bulk chemical (such as sodium chloride) for pest control purposes may constitute a violation of FIFRA. WSDA does not recommend identification of a chemical or product by CAS number alone.

Regarding monitoring requirements for chlorine:

1. Please add additional language to clarify what form(s) of chlorine should be monitored and how to choose appropriate test kits.
 - a. Swimming pool test kits and other chlorine monitoring kits (either chemical kits or test strips) can be used to test for free chlorine and/or total chlorine. The permittee should understand which of these must be monitored.
 - b. Tests are available for a variety of concentration ranges; a user must select a kit or test strip with an appropriate detection range in order to get accurate results. Many are colorimetric tests which require good color vision.

Regarding invasive insect control:

1. It is our understanding that coverage under this permit is required only if control measures for quarantined agricultural pests (Chapter 16-470 WAC) are undertaken in such a way that they result in an indirect and/or inadvertent application to surface waters (fresh or marine). In that context, WSDA offers the following comments:
 - a. Pesticides for control of the invasive insect species currently listed in WAC are not likely to be labeled for direct aquatic application, nor would there be any need to control the currently-listed species via an aquatic pesticide application as they are all terrestrial species. It may be useful to explain under what conditions permit coverage would be required for listed species, while still allowing sufficient scope for control of invasive insect emergencies. For example, “permit coverage **may be required** if aerial applications for wide-area control

of a listed pest is expected to result in inadvertent overspray of streams which are not visible from the air” and/or “permit coverage is NOT required for control of terrestrial insect species if there is no direct or indirect application to aquatic sites AND the nature of the control product is such that no impact to surface waters via runoff, drift, or offsite movement is reasonably expected.”

- b. For non-aquatic insect pests controlled with products that are NOT labeled for aquatic use, it is not normally expected that a licensed applicator would have – or need – an aquatic pesticide endorsement. The current definition of **applicator** in the permit vocabulary specifies that an **applicator** must have an aquatic endorsement. We recommend rewording the definition of applicator to explain that the licensed applicator must hold the endorsement(s) appropriate to the application they are making; an aquatic endorsement should be specified in the permit text where appropriate.

Regarding Integrated Pest Management (IPM) Plan for Aquatic Invasive Insect Control activities:

1. There are no aquatic insect species currently listed in the Quarantine list (Chapter 16-470 WAC). This statement is especially confusing in that no other text in the permit refers to “aquatic invasive insect” control. Should this be interpreted as “Invasive Insect Control activities which are expected to impact aquatic sites” or similar?
2. Is an IPM plan required for currently-listed quarantine insects (gypsy moth, hornets (*Vespa* spp.), apple maggot, etc.) which are entirely terrestrial, or would it only be required for invasive insects which spend part or all of their lifecycle in an aquatic environment?

Regarding treatment requirements:

1. “A period of three days between treatments is required prior to re-treating...” Retreatment intervals are often specified on product labels. A three-day interval may conflict with label requirements and, if followed, could result in an illegal pesticide application. Additionally, each pest species will have a life cycle and feeding habits that will determine the appropriate re-treatment interval for a given product/AI. This statement should be qualified; for example, “Follow label instructions for repeat applications and re-treatment timing. If the product label does not specify a re-treatment interval, consult with Extension personnel or other experts to determine an appropriate interval. If no appropriate interval can be determined, wait at least three days prior to re-treating a previously treated area.”
2. “Do not broadcast...when the wind speed...exceeds ten miles per hour.” Wind speed restrictions may be specified on pesticide labels, along with required downwind buffer distances. Rephrase this statement to clearly state that applicators **must** follow the most restrictive instructions for the application when the pesticide label specifies wind speed, buffer zone, drift management, or other applicable requirements or restrictions.

Regarding Active ingredients:

1. Cyfluthrin: There are significant concerns for use of cyfluthrin and other synthetic pyrethroids where they may enter water due to their toxicity to aquatic organisms. In general, the labels limit application sites to structural surfaces or vegetation only; although some labels allow application to vegetation adjacent to aquatic sites, direct application to water is prohibited. Depending on the listed use sites, labels may also have specific buffer requirements which would preclude use in or near aquatic sites.

2. Leafroller/fruitworm pheromone: Correct chemical name to (E)-11-tetradecen-1-ol acetate.
3. European grapevine moth pheromone: No products registered in Washington.
4. Gypchek gypsy moth virus: No products registered in Washington; please correct product name spelling.
5. Imidacloprid: Correct chemical name to 1[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine.
6. Japanese beetle nematode: WSDA does not register biological control organisms. No registration required.
7. Adjuvants/Stickers a. Micro-Tac: This product is no longer registered in Washington. There are currently no sticker adjuvants approved for use in aquatic sites. Please reach out to WSDA Registration Services for assistance.

Regarding annual reports:

1. Page 56 of the draft permit says, “c. Total amount of product and active ingredient used.” Does the reporting requirement *include* or *exclude* adjuvants included in the application? By definition, adjuvants contain only inert ingredients, so this statement currently means “Report the total amount of the insecticide [or other pesticide type] product(s) applied, along with the total amount of each active ingredient(s) applied.” Better wording might be something like “total amount of active ingredient(s) applied and total amount of each product used, including adjuvants” or similar language as appropriate.

Regarding definitions:

4. We recommend defining ‘indirect application to water’ in context of the permit.
5. Active ingredient is missing from Appendix A. Please use definition from [RCW 15.58.030](#).
6. Adjuvant (spray adjuvant) is missing from Appendix A. Please use either the ASTM definition or language from [RCW 15.58.030](#).
7. Applicator and Aquatic licensed pesticide applicator: An applicator is any person licensed to purchase and apply restricted use pesticides, provided they have the appropriate endorsements on their license. An aquatic endorsement is required to apply aquatic pesticides, but that endorsement is not required in order to make non-aquatic applications. WSDA Pesticide Licensing Program is the best resource for accurate wording of the definitions, but better language might be:
 - a. Applicator: Any individual who is licensed to apply pesticides by Washington State Department of Agriculture under Chapter 17.21 RCW and Chapter 16-228 WAC as a commercial pesticide operator, public operator, private-commercial applicator, demonstration and research applicator, or certified private applicator, or any other individual who is certified by the director of WSDA to use or supervise the use of any pesticide which is classified by the EPA as a restricted use pesticide or by the state as restricted to use by certified applicators only.
 - b. Aquatic licensed pesticide applicator: Any licensed applicator (as defined above) with an aquatic pest control endorsement appropriate to the pest control work being performed.
 - c. Although the definition of applicator for this permit specifies “an individual licensed to apply aquatic pesticides” as described on page seven, the requirement for an aquatic pesticide endorsement may not be applicable for applicators involved in control of terrestrial invasive insects. The definition of *applicator* on page 67 should be amended to remove the aquatic requirement (see comments on the definitions section later in this document). Otherwise,

all uses of the term “applicator” in the permit document should note when an aquatic endorsement is required (or not required).

- a. It is unclear whether an aquatic pest control endorsement would be required for terrestrial pesticide applications which may result in unintended or indirect contact with water from or drift or runoff. Please contact for Pesticide Licensing or Pesticide Compliance at WSDA for clarification.
- b. It is not entirely clear if, and when, coverage under this permit would be required for terrestrial applications to control invasive insect species such as northern giant hornet or Japanese beetles if no direct or indirect water exposure is expected and how that determination is made. Additional clarification is requested.

Section S9.B.1. Pesticide Application Requirements (page 38): Requirements listed in this section are similar but not identical to those specified in Table 3 (page 20) for use of rotenone. It is not clear if this section speaks to any/all piscicides which may be used or if it is specific only for rotenone. The information in Section S9.B.2. discusses only rotenone, so it may be less confusing to specify rotenone in B.1. (or “rotenone or other piscicides”).

Marker dyes: “...therefore such dyes are not registered as pesticides by EPA or by WSDA.”

8. Pesticide: The current definition includes the FIFRA definition of a pesticide, but omits spray adjuvants. See RCW 17.21.020(36)², which defines a “Pesticide” as follows: (a) Any substance or mixture of substances intended to prevent, destroy, control, repel, or mitigate any pest; (b) Any substance or mixture of substances intended to be used as a plant regulator, defoliant or desiccant; and (c) Any spray adjuvant as defined in RCW 15.58.030³.
9. Tracer dyes “...therefore such dyes are not registered as pesticides by EPA or by WSDA.”
10. The following definitions should be revised for accurate and consistent usage throughout the document. The terms chemical or chemical compound in these definitions should be replaced with pesticide.
 - a. Algaecide: A pesticide that kills or reduces the growth of algae (page 67).
 - b. Herbicide: A pesticide designed to control or kill plants (page 68).
 - c. Insecticide: A pesticide used to prevent, repel, control, or kill insects (page 69).
 - d. Molluscicides: Pesticides used to kill mollusks (such as snails) (page 69).
 - e. Piscicides: Pesticides used to kill fish (page 70).

Regarding typographical errors:

1. There is a typographical error on page 12 of the draft permit. ‘CRF’ should be corrected to CFR.
2. We were not able to locate an applicable RCW 79.09.060(8). Should this citation refer to RCW 76.09, Forest Practices or another section of Title 76 RCW?
3. The in-text link and link in the footnotes to the 2018 AFS Rotenone SOP Manual provided (page 39 and page 46) appear to be broken. Several options exist for accessing this SOP online, including here: <https://units.fisheries.org/rotenone-stewardship/>.

²[https://app.leg.wa.gov/RCW/default.aspx?cite=17.21.020#:~:text=\(36\)%20%22Pesticide%22%20means%2C%20but%20is%20not%20limited%20to](https://app.leg.wa.gov/RCW/default.aspx?cite=17.21.020#:~:text=(36)%20%22Pesticide%22%20means%2C%20but%20is%20not%20limited%20to)

³ <https://app.leg.wa.gov/RCW/default.aspx?cite=15.58.030>

We greatly appreciate the opportunity to share our feedback with ECY on the Aquatic & Invasive Species Control general permit. Please feel free to reach out to us as we welcome any questions ECY may have regarding our comments or further discussion prior to the issuance of the final permit.

Appreciatively,



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