

AQUATIC and INVASIVE SPECIES CONTROL GENERAL PERMIT

Addendum to the Fact Sheet
Appendix C: Response to Comments

June 28, 2023



SUMMARY OF MAJOR PERMIT CHANGES

In finalizing this permit, the Washington State Department of Ecology (Ecology) considered all of the public comments received during the public comment period. Ecology received only written comments, as no comments were received during oral testimony at the public hearings held on January 24 and 25, 2023.

This is a summary of the significant changes made to the Aquatic and Invasive Species Control General Permit (permit) in response to the public comments received between December 21, 2022 and February 21, 2023.

- Updates to the monitoring and reporting requirements, improving clarity and specificity. This includes adding references to established state and federal drinking water standards, and a new requirement for analytical testing when rotenone treatments are done in waterbodies used as a drinking water source.
- Updates to the requirements and limitations on using rotenone. These include clarifying the role of WDFW as the only agency authorized to use rotenone under this permit, requiring the first test of sentinel fish after rotenone treatment at one week instead of 24 hours, and removing a restriction that liquid rotenone can only be used in areas in that are not practicably accessible by boat.
- Revisions to the section on Experimental Use Permits (EUP). Changes were made clarifying state and federal EUP requirements, and to ensure the permit language is consistent with how these are processed by the Washington State Department of Agriculture.
- Requirements around public notifications were also updated. These mainly affected shoreline signage, clarifying where they must be posted and that the sign template provided by Ecology is an example.
- Changes to several definitions used in the permit, shown in Appendix A. These revisions were done to improve clarity and consistency with definitions used in state law.

Additional minor changes to permit wording and punctuation have been made to correct formatting, grammar and improve clarity.

COMMENTS AND RESPONSES

Ecology published a draft Aquatic and Invasive Species Control General Permit on December 21, 2022 for public comment. The public comment period ended February 21, 2023 at 5PM. During the comment period, Ecology conducted two public hearings and workshop webinars. Ecology also accepted public comments via comment form on the permit website and email.

Ecology considered all comments in preparing the final permit. The response to comments document describes Ecology’s response to each commenter and any changes to the permit that resulted from the comment. Ecology received 79 comments during the public comment period. Each comment is numbered. The comment number that corresponds to each commenter is given in Table 1. These numbers allow the commenter to find Ecology’s response to their comments. Comments may be summarized; full text of all comments received by Ecology can be found at the [Aquatic and Invasive Species Control General Permit Public Comment Period](#)¹ web page.

The response to comments is organized in two sections:

[Section 1](#): Table of Commenters

[Section 2](#): Comments on the Permit and Related Documents

Section 1: Table of Commenters and Comment Numbers

Table 1: Commenters

Commenter Name	Affiliation	Comment Number(s)
Kenny Behen, Warm Water Program Manager	Washington State Department of Fish and Wildlife	1-37
George Tuttle, Agency Toxicologist	Washington State Department of Agriculture	38-50

¹ <https://wq.ecology.commentinput.com/comment/extra?id=E3uSi>

Section 2: Comments on the Permit

WDFW Comments and Responses

- 1. Permit, as written, doesn't allow use of rotenone for fish management (The permit includes new language directing WDFW in what species are allowed to be treated, new restrictions not present in prior permit iterations)**

Summary:

The permit language needs to be clarified to include all the types of fisheries management done by WDFW.

Response:

Ecology has made the recommended revisions to ensure that the final permit conditionally authorizes the use of rotenone for fish management.

- 2. Ecology overstep of statutory authority regarding which organisms or species can be managed (Preferred alternative, comments 2 and 3 address the same issue)**

Summary:

The scope of the permit needs clarification about what types of fish and animal species can be controlled.

Response:

In discussions with Ecology, WDFW staff agreed that if changes requested in comment 1 were made then the additional revisions described in Comment 2 would not be needed.

- 3. VOC Monitoring methodology may not be capable of detecting discharged VOCs.**

Summary:

The permit needs to provide more information about the analytes, methods, and detection limits used for monitoring of Volatile Organic Compounds (VOC) when potable water rights exist in areas treated with liquid rotenone.

Response:

- A. Ecology has revised Special Condition S9.F.4.a. Based on data in a 2008 EPA report on rotenone staff from the Washington State Department of Health Office of Drinking Water recommended that if WDFW uses the 24 hour fish bioassay method to test for residual rotenone, they must also use an analytical chemistry test to demonstrate rotenone concentrations are below 40 ppb before determining that the water is safe to drink. Ecology has incorporated this as a requirement in the new AISC permit.
- B. Ecology has revised Special Condition S9.F.4.c to clarify the analytes and detection limits for monitoring VOC. This section of the permit now includes references for drinking water Maximum Contaminant Levels (MCL) for VOC in [WAC 246-290-310](https://app.leg.wa.gov/WAC/default.aspx?cite=246-290-310):²

² <https://app.leg.wa.gov/WAC/default.aspx?cite=246-290-310>

or the synthetic organic contaminants list in [40 C.F.R. 141.61\(c\)](#)³. We also added language explaining the option to modify coverage for a specific permittee as described in Special Condition S2.D. This provides a mechanism to adopt new analytical methods for VOC as they become available.

4. Any State agency or their selected contractor can apply rotenone.

Summary:

The document needs to specify that only WDFW is authorized to use rotenone for fisheries management under this permit.

Response:

Ecology has made some of the recommended revisions to address this issue.

5. Editorial correction of appropriate language

Summary:

The permit language needs to correctly describe Sensitive, Threatened, or Endangered Species.

Response:

Ecology has made the recommended revisions.

6. Experimental Use Permits also cover uses of registered pesticides not allowed by the product label.

Summary:

Clarify language describing the scope and purpose of Experimental Use Permits.

Response:

Ecology has updated several sections of the AISC permit based on recommendations from WSDA Registration Services staff to clarify the language related to Experimental Use Permits.

7. Deactivation Zone definition is inconsistent throughout the permit.

Summary:

The draft permit needs to be consistent in how it describes the deactivation zone downstream of rotenone treatments.

Response:

Ecology has made the recommended revisions since 30 minutes allows for more deactivation time within the limit of 1 mg/L of potassium permanganate, especially in colder streams. A deactivation period of 30 minutes is also recommended in the 2018 AFS Rotenone SOP, Section 7.1.A on page 94. We have also clarified that the 30-minute deactivation zone starts at the most downstream point of potassium permanganate application.

³ <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-141/subpart-G/section-141.61>

8. Written permission required to conduct rotenone treatments in waterbodies with municipal or community drinking water intakes.

Summary:

In addition to notification requirements, the draft permit contained a new provision that written permission be obtained from public water systems withdrawing surface water prior to treatment of the area with rotenone.

Response:

Ecology has revised the permit language in S5.B.3.g, removing the proposed requirement for public water systems to provide written consent prior to treatment. At least 14 days advance notice is still required.

9. Sensitive species are defined but no list or is guidance given regarding how to find out which species are listed as sensitive.

Response:

Ecology has revised the permit language to include a reference to WAC 220-200-100, which provides clarity and examples.

10. Refences to “commission” and “department” needs to be clarified.

Summary:

Although “commission” and “department” are referenced, they are not specifically identified. It should be clear that this language refers to the Washington Fish and Wildlife Commission and the Washington Department of Fish and Wildlife.

Response:

Ecology has made the recommended revision.

11. Additional chemicals are authorized, but none are listed.

Summary:

Ecology needs to clearly identify which chemicals are authorized for specific treatments.

Response:

Ecology has clarified the permit language in S4.B.1.

12. Timing listed in S4, Table 3 does not apply to stream rotenone treatments.

Summary:

The current permit language unnecessarily limits the months when rotenone treatments can be done.

Response:

Ecology has removed the reference to September or October.

13. Deactivation by dilution is not allowed for lake outflow in the DRAFT permit.

Summary:

Deactivation of rotenone by dilution is not allowed in the draft permit.

Response:

Ecology has made the recommended revisions.

14. S5.A.2 appears to refer to the deactivation zone but uses undefined terminology.

Summary:

The term “neutralization area” is not defined. It needs to be defined or changed to a defined term.

Response:

Ecology has made the recommended revision.

15. S9.B is redundant with S3.D.

Summary:

S9.B. is effectively identical to S3.D. and these requirements do not need to be restated.

Response:

Ecology agrees and has deleted the duplicate language in S9.B.

16. Measuring organic demand in still water is unnecessary unless deactivation is required.

Summary:

Measuring organic demand is not part of standard operating procedure for still water treatments where no deactivation will occur and should not be required.

Response:

Ecology agrees and has revised the permit language in S9.F.2, Table 5.

17. Monitoring sample type is not consistently defined for the same parameters in Tables 5-9.

Summary:

Monitoring “Type” listed for organic demand and dissolved oxygen is inconsistent between tables (Grab vs. Measured).

Response:

Ecology agrees and has made these requested revisions.

18. Record retention requirements are inconsistent.

Summary:

Different sections require different retention schedules for the same records.

Response:

Ecology agrees and has made the recommended revisions.

19. Signal word “Danger” only used for powdered rotenone.

Summary:

The signal word “DANGER” is only in reference to the powdered formulation of rotenone. Liquid rotenone formulations have the signal word “CAUTION”.

Response:

Ecology has revised the permit language in S5.B.4, also incorporating input from WSDA on this section.

20. Report due dates require clarification.

Summary:

The language in this section refers to both the monitoring reports and treatment reports interchanging and leaves room for error in interpreting intent. Additionally, if a treatment did not occur the Permittee must notify the Department of Ecology, however submission of a report for a treatment that did not occur is inconsistent with reporting requirements.

Response:

Ecology has revised the permit language in S7.A, adding the county, acreage treated, and species targeted to be consistent with other reporting requirements. Annual reporting is still required when no treatment was done in the previous year, to document that no discharge occurred.

21. Permit for boat launch signage could be interpreted to apply to waterbodies that are not being treated.

Summary:

Current language does not limit signing to the waterbody being treated. There is no need to sign boat launches of a lake/stream not being treated that are within proximity listed (1 mile) to the treatment.

Response:

Ecology agrees and has made the recommended revision to clarify this section.

22. Signage requirements for Public Property are unclear and are listed in multiple locations within S5.

Summary:

S5.B.5. is labeled as requirements for Publicly-Owned Property but appears to be written only for publicly accessible areas. Additional requirements for posting public property are given in S5.B.7 and are not the same as requirements specified in S5.B.5.

Response:

Ecology has revised S5.B.5.a to make this section clearer.

23. Signage Requirements for posting private property are not clearly defined and as written, require trespass (which is not allowed).

Summary:

S5.B.7.a. currently applies to both privately and publicly owned shoreline areas. Separating requirements for publicly owned vs. privately owned is necessary, as access could be denied for private property. S5.B.3.c states that this permit does not authorize trespass. S5.B.7.a. allows the use of handbills or signs, but S5.B.7.c. states the Permittee must post signs, even on privately owned shorelines.

Response:

Ecology has revised S5.B.7 to address this issue.

24. Standard EPA testing protocols provides reporting limits.

Summary:

Standard EPA testing protocol provides reporting limits (RL) for rotenone and associated VOC analytes, not MDLs. MDLs are calculated via experiment. PQL is not appropriate here. Reporting limit is the most appropriate term. Replace “reporting units” with “unit of measure” or “appropriate unit of measure”.

Response:

Ecology has revised S7.B to address this issue, in combination with input from the DOH Office of Drinking Water.

25. Overly restrictive in which formulations are appropriate to apply.

Summary:

This language should be deleted. WDFW is the expert in applying rotenone and which formulation is appropriate for use is contingent on a host conditions. Currently language restricts our ability to properly treat still (Powdered and liquid formulations) and flowing waters (Only liquid). Additionally, justification for the restriction of liquid rotenone formulation use is unclear and conflicts with EPA approved use.

Response:

Ecology has not deleted the language in S9.B.1.C, but has modified it to be more flexible. The language in S9.B.1.e has been modified to be consistent with the 2018 AFS Rotenone SOP (SOP 7.1, Page 96, fourth paragraph).

26. Reporting Limit for VOC's should be used instead of a blanket mg/l (ppb)

Summary:

Reporting Levels may vary by VOC and so it is more appropriate to cite RLs than a universal application of 0.5ppb for VOCs.

Response:

Ecology has revised S7.B to address this issue, and those described in comment #24, in combination with input from the DOH Office of Drinking Water. The revised permit language does not specify a minimum detection limit for all methods.

27. Unnecessary section / verbiage

Summary:

Unnecessary section/verbiage. There are numerous times in the document (including in S9) that cite the Product Label must be followed. Per the product label and SOP, powdered rotenone can only be applied via semi-closed aspirator or gelatin/sand mixture. We don't need section specifically stating this.

Response:

Ecology will maintain the current permit language, which is consistent with the product label requirements.

28. Application equipment cannot be calibrated but are manually adjusted.

Summary:

Potassium permanganate/rotenone application equipment cannot be calibrated in the same sense a YSI water quality meter or laboratory instrument can be calibrated against a “standard” or “standard scale of reading”. Potassium permanganate dispensing equipment can adjusted/metered to apply the correct concentration.

Response:

Ecology has made the requested revision on this issue.

29. Additional reporting requirement for chain of lakes

Summary:

This is an additional and unnecessary reporting requirement. The lake chain monitoring design can be included in the pre-treatment plan. Results can be included in the post-treatment monitoring plan due February 1 of the following year.

Response:

Ecology has revised the permit language to clarify the monitoring and reporting requirements for a chain of connected lakes.

30. GPS coordinate requirements incomplete and / or redundant

Summary:

The permit needs to include language about lake chains, avoid redundancy in the requirement to report TRS and GPS, and should include “top” and “bottom” of the treatment area and deactivation zones.

Response:

Ecology has made some of the recommended revisions to improve clarity but has decided to retain the reporting requirements for both latitude and longitude in decimal degrees, and section, township, range to be consistent with federal reporting requirements.

31. Piscicide should be replaced with “rotenone.”

Summary:

“Piscicide” should be replaced with “rotenone” as the SOP and application methods are for rotenone at the moment. Piscicides infer there are more than just rotenone available/authorized for use.

Response:

Ecology agrees this would be a helpful clarification and has made the recommended revisions.

32. Clarify additional testing requirement as a subset of conditions per formulation used.

Summary:

The second paragraph should be a sub bullet to for potable surface water rights because it' an additional testing requirement to testing for rotenone concentration. As formatted it looks like it's a separate bullet/subsection. Reporting Levels may vary by VOC and so it is more appropriate to cite RLs than a universal application of 0.5ppb for VOCs.

Response:

Ecology has revised S7.B to address this issue, and those described in comments #24 and #26, in combination with input from the DOH Office of Drinking Water. The revised permit language in this section is now structured differently.

33. S4. Table 3 Edits

Summary:

Revised this section to remove redundant restrictions and improve editorial consistency.

Response:

Ecology has made some of the revisions requested in the detailed comments from WDFW. Some of the changes recommended in Comment 33 are not consistent with WDFW comments 7, 12, and 13.

34. Sign templates require dates for return to safe use, which cannot be accurately predicted following rotenone treatments.

Summary:

The provision stipulated in S5.B.4.a, precludes the Permittee's ability to provide useful information via signage, as no modifications to the sign template are allowed. Also, the pictograph of a person drinking lake water: "Do not drink lake water until...[Date]". The WDFW does not regulate drinking water and cannot guarantee safe drinking water from a lake.

Response:

Ecology has revised the permit language, so it allows modification of the sign templates. Permittees must still provide information on water use restrictions as required on the product label, and in the 2018 AFS Rotenone SOP.

35. Editorial Comments and Consistency in Section 9.

Summary:

WDFW requested a variety of changes to permit language in S9.B.1.a, S9.B.1.b, and S9.B.1.c.

Response:

Ecology deleted S9.B.1 as requested in Comment 15. The requested revisions to S9.B.1 are no longer needed.

36. Housekeeping Edits (typos, format, consistency, etc.)

Summary:

WDFW pointed out errors, omissions, and punctuation in permit language.

Response:

Ecology appreciates the thorough review by WDFW staff.

37. Appendix A – Definitions (recommended amendments and rewrites of definitions)

Summary:

WDFW requested revisions to numerous definitions provided in Appendix A.

Response:

Ecology has revised several definitions based on input from WDFW and WSDA. Most definitions in the final AISC permit remain the same.

WSDA Comments and Responses

38. Regarding terminology used to refer to pesticides:

A. 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.

Response:

Not all the products or active ingredients authorized for use under the AISC permit are pesticides. Ecology will review the document and revise where appropriate. Also see Comment A.2 below.

B. 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.

Response:

Ecology revised Special Condition S4 to address this issue. We described the word “chemical” is used in the AISC permit to refer to both pesticides and other products.

- C. 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 RCW15.58.030(31)¹. This important as many pesticides registered under (FIFRA) specifically recommend or require the addition of spray adjuvants to attain efficacy.

Response:

Ecology agrees and has added adjuvants to the permit language and definitions.

39. Regarding pesticides that are not currently registered in Washington:

- A. 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.
- B. 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.
- C. Tracer and marker dyes do not require registration as pesticides in Washington.
- D. 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.
- E. No pesticides containing calcium hydroxide/oxide (lime) are currently registered in therefore its use would be prohibited unless a registered product becomes available.

Response:

Ecology has included language in the AISC permit which explains that any products used as a pesticide must be registered and approved prior to use in Washington state.

40. Regarding allowed use sites:

- A. 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.

Response:

Ecology revised permit language in S4.A.5 to address this comment.

- B. 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.

Response:

Ecology agrees and has removed references to swimming pool pellets from the permit.

- C. 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.

Response:

Ecology revised permit language in S4.A.5 to address this comment.

41. Regarding Table 3: Product Restrictions - Freshwater Applications:

- A. 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.

Response:

The permit language requires registration and labelling prior to pesticides use. These requirements do not apply to tracer and marker dyes, since they are not used as pesticides under the AISC permit.

- B. Rotenone formulations registered in Washington are available in both a dry, and a liquid (emulsifiable concentrate).

Response:

The AISC permit conditionally authorizes the use of both dry and liquid formulations of rotenone.

- C. 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.

Response:

Within the context of the AISC permit potassium permanganate is being use only to deactivate rotenone, not as a pesticide.

- D. 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.

Response:

The AISC permit requires that permittees follow requirements of each product label. In addition, General Condition G5 of the AISC permit specifically states that permittees are not excused "from compliance with any applicable federal, state, or local statutes, ordinances, or regulations." Use of a pesticide without the required registration, or in a manner that does not comply with the product label requirements, would also be a violation of the AISC permit.

- E. 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).

Response:

Ecology consulted with WDFW AIS staff, who reported that copper sulfate is what they will be most likely to use. For more details about chelated copper compounds, please see this 2011 [Environmental Impact Statement](#)⁴.

- F. *Pseudomonas fluorescens* strain CLO145: Correct the strain ID to “CL 145A”.

Response:

Ecology has made the recommended correction.

42. Regarding notification:

- G. 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.

Response:

Ecology has revised permit language in S5.B.3.e based on this comment.

⁴ <https://apps.ecology.wa.gov/publications/documents/1010010.pdf>

43. Regarding monitoring requirements for chlorine:

- H. 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.

Response:

Ecology has clarified in the permit that testing must be for total residual chlorine using a colorimetric test kit. Swimming pool test kits use Standard Methods 4500-Cl G. DPD Colorimetric Method. Demonstrating a TRC concentration of <0.5 mg/l would be "sufficiently sensitive" per NPDES rules.

44. Regarding invasive insect control:

- I. 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."

Response:

Ecology revised the permit language in S1.A. It was already explained in S10.

- 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.

Response:

Ecology revised the permit language in S3.D to clarify when an aquatic endorsement is required and edited the definition of “Licensed applicator” removing the aquatic endorsement.

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

- A. 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?

Response:

Ecology has revised the language in permit section S10.A.1 in response to this comment.

- B. 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?

Response:

This permit requirement is based on Chapter 17.15.020 RCW, which states “Each of the following state agencies or institutions or county agencies shall implement integrated pest management practices when carrying out the agency's or institution's duties related to pest control: (1) The department of agriculture;”. The RCW does not limit this requirement to aquatic insects.

46. Regarding treatment requirements:

- A. “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.”

Response:

Ecology has revised permit language in Special Condition S10.A.2.b.

- B. "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.

Response:

Ecology has revised the permit language in S10.A.2.f.

47. Regarding Active ingredients:

- A. 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.

Response:

Ecology notes that direct application to water is prohibited. Indirect discharge to water will depend on the product label restrictions.

- B. Leafroller/fruitworm pheromone: Correct chemical name to (E)-11-tetradecen-1-ol acetate.

Response:

Ecology has made the recommended correction.

- C. European grapevine moth pheromone: No products registered in Washington.

Response:

Thank you for your comment. WSDA requested this product remains in the AISC permit. WSDA will need to follow applicable laws and regulations prior to using this product.

- D. Gypchek gypsy moth virus: No products registered in Washington; please correct product name spelling.

Response:

Ecology has made the recommended correction.

- E. Imidacloprid: Correct chemical name to 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine.

Response:

Ecology has made the recommended correction.

- F. Japanese beetle nematode: WSDA does not register biological control organisms. No registration required.

Response:

Thank you for your comment. No change to the AISC permit language is required.

- G. 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.

Response:

Ecology has revised the permit language based on this comment.

48. Regarding annual reports:

- A. 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.

Response:

Ecology has revised the permit language based on this comment.

49. Regarding definitions:

- A. We recommend defining ‘indirect application to water’ in context of the permit.

Response:

Ecology has replaced the phrase ‘indirect application’ with ‘indirect discharge’ and added a definition of this adapted from the Aquatic Mosquito Control NPDES permit.

- B. Active ingredient is missing from Appendix A. Please use definition from RCW 15.58.030.

Response:

Ecology has revised the permit language based on this comment.

- C. Adjuvant (spray adjuvant) is missing from Appendix A. Please use either the ASTM definition or language from RCW 15.58.030.

Response:

Ecology has revised the permit language based on this comment, adding the definition of “adjuvant” used in the Aquatic Plant and Algae Management general permit.

- D. **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).
- d. 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.
- e. 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.

Response:

Ecology has revised the permit language in several sections to clarify issues raised in comments 4.a-e above.

- E. 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”).

Response:

Ecology has deleted the section described above to avoid duplication.

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

Response:

Ecology has added “or by WSDA” to this definition.

- G. 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.

Response:

Ecology has updated the definition of Pesticide to be consistent with [RCW 15.58.030 \(31\)](#)

- H. Tracer dyes “...therefore such dyes are not registered as pesticides by EPA or by WSDA.”

Response:

Ecology has added “or by WSDA” to this definition.

- I. 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).

Response:

Ecology has updated the definitions listed above based on this comment.

50. Regarding typographical errors:

- A. There is a typographical error on page 12 of the draft permit. 'CRF' should be corrected to CFR.

Response:

Ecology has made the recommended revision.

- B. 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?

Response:

This reference should be to RCW 76.09.060(8), and Ecology has revised the permit language.

- C. 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 the: [Rotenone Stewardship Program](#)⁵.

Response:

These links have been restored to: [Rotenone SOP Manual, 2nd Edition](#)⁶

⁵ <https://units.fisheries.org/rotenone-stewardship/>

⁶ <https://apps.ecology.wa.gov/publications/documents/2210026.pdf>