Issuance Date: August 17, 2016
Effective Date: September 16, 2016
Expiration Date: September 15, 2021

AQUATIC INVASIVE SPECIES MANAGEMENT GENERAL PERMIT

National Pollutant Discharge Elimination System and
State Waste Discharge General Permit

State of Washington
Department of Ecology
Olympia, Washington 98504

In compliance with the provisions of
Chapter 90.48 Revised Code of Washington
(State of Washington Water Pollution Control Act)
and
Title 33 United States Code, Section 1251 et seq.
The Federal Water Pollution Control Act (The Clean Water Act)

Until this permit expires, is modified or revoked, Permittees that have properly obtained coverage under this general permit are authorized to discharge in accordance with the special and general conditions that follow.

Heather R. Bartlett
Water Quality Program Manager
Washington State Department of Ecology

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SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions of this permit for submittal requirements.

Permit Section	Submittal	Frequency	Submittal Date
S2.B	Application for Coverage	Once	At least 38 days prior to the start of discharge
S5	Adaptive Management Plans	As necessary	Within 18 months after first treatment for each organism or category of organisms
S7.A	Monitoring Plan	Annually	February 1
S9.A.2	Monitoring Report	Annually	February 1
S9.A.1	Treatment Report	Annually	February 1
S9.D	Reporting Permit Violations	As necessary	As necessary
G3	Permit Actions	As necessary	As necessary
G4	Reporting Planned Changes	As necessary	As necessary
G7	Transfer of Permit Coverage	As necessary	As necessary
G22	Duty to Reapply	Once per permit cycle	Within 180 days of permit expiration date

SPECIAL PERMIT CONDITIONS

S1. PERMIT COVERAGE

A. Activities Covered Under This Permit

This general permit covers management activities for ***nonnative invasive***[1] aquatic animals and nonnative invasive marine ***algae*** that result in the ***discharge*** of chemicals or ***control*** products into ***surface waters of the state of Washington***. Surface waters include fresh, brackish, marine, and estuarine waters. Products regulated under this permit include ***algaecides, herbicides, insecticides, molluscicides, piscicides*** and any other chemical or product appropriate for use in managing these ***organisms***.

Management activities are organized into two categories: Marine Projects and Freshwater Projects. The permit may have different requirements for each category and for the different chemicals or products allowed for use.

1. Marine Projects

   Marine projects occur in marine or estuarine waters and target nonnative invasive animals and nonnative invasive algal species.

   a. The Washington Department of Ecology (Ecology) only ***allows*** marine projects for:

      i. Animal species as identified in Washington Administrative Code (WAC) 220-12-090.

      ii. Animals or marine algae listed on the Washington Aquatic Nuisance Species Committee "watch list" of invasive species or on the Washington Invasive Species Council (WISC) management priority list.

      iii. Animals listed by the United States Fish and Wildlife Service (USFWS) as injurious wildlife under the Lacey Act (18 U.S.C. 42; 50 CFR 16).

      iv. Nonnative ***potentially invasive*** marine animals and algae not listed on the above lists, as determined by Ecology in consultation with the Washington Department of Fish and Wildlife (WDFW), or the Washington Department of Natural Resources (WDNR), or the Washington Department of Agriculture (WSDA), or the WISC, or the Washington Aquatic Nuisance Species (ANS) Committee, or applicable federal agencies such as the USFWS.

2. Freshwater Projects

   Freshwater projects occur in rivers, streams, lakes, ponds, brackish inland water bodies, ***wetlands***, or wet areas and target nonnative invasive freshwater animals. Ecology

[1] The text of this permit contains italicized and bolded words or phrases. These words or phrases are the first usage in this permit and are defined in the Glossary, Appendix A.

regulates chemicals and products allowed for freshwater algae and freshwater in-water macrophyte management under the Aquatic Plant and Algae Management National Pollutant Discharge Elimination System (NPDES) permit (WAG-994000) and any subsequent permits issued for this activity.

a. Ecology only allows freshwater projects for:

   i. Prohibited or unlisted freshwater animals as identified in WAC 220-12-090.

   ii. Freshwater animals listed on the Washington Aquatic Nuisance Species Committee "watch list" of invasive species or on the Washington Invasive Species Council (WISC) management priority list.

   iii. Freshwater animals listed by the USFWS as injurious wildlife under the Lacey Act (18 U.S.C. 42; 50 CFR 16).

   iv. Nonnative potentially invasive freshwater animals not listed on the above lists, as determined by Ecology in consultation with WDFW, or WDNR, or WSDA, or WISC, or the ANS Committee, or applicable federal agencies such as the USFWS.

B. Activities That May Not Need Coverage Under This Permit

The use of ***pesticides*** on the following sites may not require coverage under this permit:

1. Constructed detention or retention ponds designed specifically for wastewater or stormwater treatment that do not have an outlet to surface waters of the state, or ponds that do not discharge to other water bodies during or for two weeks after treatment.

2. Constructed detention and retention ponds where Ecology regulates its discharge under another permit and the permit allows chemical treatment.

3. Any ***constructed water body*** five acres or less in surface area with no discharge to other surface waters of the state during treatment and for two weeks after treatment.

4. ***Upland farm ponds*** with no discharge to other surface waters of the state during treatment and for two weeks after treatment.

5. Treatment conducted on ***seasonally dry land surfaces*** (including seasonally dry wetlands) as long as treatment occurs when the area is dry and the active ingredient is not biologically available when the water returns.

6. Research activities when applying chemicals or products to water bodies under a State ***Experimental Use permit*** (see S4.C).

C. Geographic Area Covered

This general permit covers the activities listed in S1.A throughout surface waters of the state of Washington and in marine waters up to twelve-miles offshore or to the international border when applicable.

This permit does not apply to:

1. Federal lands where a federal agency provided funding, made the decision to apply chemicals, or is the entity applying chemicals.

2. ***Indian Country*** and trust or restricted lands except portions of the Puyallup Reservation as noted below.

3. Puyallup Exception: Following the Puyallup Tribe of Indians Land Claims Settlement Act of 1989, 25 U.S.C. §1773; this permit does apply to land within the Puyallup Reservation except for discharges to surface water on land held in trust by the federal government.

S2. APPLICATION FOR COVERAGE

A. Who May Apply for Coverage

Any state government entity may apply for coverage. This permit covers activities outlined in S1.A performed by government entities, ***non-governmental organizations*** or ***private applicators***. ***Washington State government agencies*** holding permit coverage may, in turn, contract with other state or local government entities, non-governmental organizations, or private applicators or individuals to conduct activities outlined in S1.A of this permit. Contractors must agree to carry out treatments in a manner that complies with the permit. Either the ***Permittee*** or contractor (per individual agreement) may carry out notification, monitoring, reporting, documentation, planning, and other administrative permit tasks.

B. How to Obtain Coverage

Any state government entity seeking to obtain coverage for activities covered under this permit must:

1. Submit an application for coverage no later than 38 days prior to the planned discharge date. A complete application must include a completed and signed Notice of Intent (***NOI***).

2. Publish twice, one week apart, a public notice in a local newspaper of general circulation that an application for permit coverage has been made pursuant to WAC 173-226-130(5).

3. Publish the public notice only after Ecology has received the complete application for coverage.

4. Use the Public Notice Template provided in the NOI. The applicant may add additional information to the template provided that the required information remains as stated on the template.

5. Submit an original copy of the portion of the newspaper publication containing the Public Notice and newspaper date to Ecology for each week the Public Notice is published, or submit a signed, notarized affidavit of publication indicating what is included in the Public Notice and the dates that the Public Notice will be published.

6. At the end of the 30-day comment period, Ecology will consider comments about the applicability of this permit to the proposed discharge activity before deciding to issue permit coverage.

C. Permit Coverage Timeline

1. If the applicant does not receive notification from Ecology, permit coverage automatically commences on whichever of the following dates occurs last:

    a. The 31st day following receipt by Ecology of a completed application for coverage.

    b. The 31st day following the end of a 30-day public comment period.

    c. The effective date of the general permit.

2. Ecology may need additional time to review the application:

    a. If the application is incomplete.

    b. If it requires additional site-specific information.

    c. If the public requests a public hearing.

    d. If members of the public file comments.

    e. When more information is necessary to determine whether coverage under the general permit is appropriate.

3. When Ecology needs additional time:

    a. Ecology will notify the applicant in writing before the 31st day following the end of the 30 day public comment period and identify the issues that the applicant must resolve before a decision can be reached.

b. Ecology will submit the final decision to the applicant in writing. If Ecology approves the application for coverage, coverage begins the 31st day following approval, or the date the approval letter is issued, whichever is later.

D. How to Modify Permit Coverage

Entities that propose changes to the aquatic plant and algae control activities authorized by their original permit coverage, such as expanding the area covered, must revise and re-submit permit application materials in accordance with Special Condition S2.B.

E. How to Transfer Permit Coverage

A Permittee may transfer coverage to a new Permittee, in accordance with General Condition G7 of this permit, using the Transfer of Coverage Form found here: https://fortress.wa.gov/ecy/publications/SummaryPages/ECY070348.html.

Both the original Permittee and the new Permittee must sign the form and provide the date that the new Permittee will take responsibility for permit coverage. Once both parties have signed the form, the new Permittee becomes responsible for permit compliance and permit fees on the date indicated on the form. The original Permittee remains responsible for, and subject to, all permit conditions and permit fees until the transfer is effective.

F. How to Terminate Permit Coverage

A Permittee may request termination of permit coverage by submitting a Notice of Termination form (NOT) to Ecology. The Permittee will continue to incur an annual permit fee unless it submits a NOT.

S3. DISCHARGE LIMITS

A. Short-term Modification of Water Quality Standards

WAC 173-201A-410 allows short-term exceedance of the criteria and classifications established by this regulation when certain conditions are met. Such activities must be conditioned, timed, and restricted in a manner that will minimize water quality degradation to existing and characteristic uses.

Activities covered under this permit are allocated a temporary zone of impact on beneficial uses, but the impact must be transient (hours or days), and must allow for full restoration of water quality and protection of beneficial uses upon project completion. The conditions of this permit constitute the requirements of a short-term water quality modification (WAC 173-201A-410).

B. Impaired Water Bodies

1. The Permittee must not cause further impairment of any ***303(d)-listed water body*** for any parameter. Phosphorus (in freshwater), dissolved oxygen, copper, temperature, and pH are specific parameters of concern.

2. The Permittee must consider and apply one or more of the following mitigation measures to prevent further impairment (outside of the confines of the short-term modification of water quality standards allowed under this permit) when treating a 303(d)-listed water body (listed for the parameter), when the treatment has the potential to impact phosphorus, dissolved oxygen, temperature, or pH:

    a. ***Limiting*** the area treated at any one time.

    b. Timing treatment (early treatment versus late season treatment).

    c. Chemical/product choice.

    d. Manual removal of dead organisms (e.g. fish, tunicates).

    e. Aeration.

S4. RESTRICTIONS ON THE APPLICATION OF PRODUCTS

A. Authorized Discharges

1. Beginning on the effective date of this permit and until Ecology replaces or revokes this permit; the permit authorizes the Permittee to discharge the chemicals or products listed in this permit into surface waters of the state.

2. The Permittee may apply chemicals or products under this permit only for the management of aquatic invasive animals or invasive marine algae that meet the criteria outlined in S1.A. Temporary and limited impacts on non-target organisms are acceptable only to the extent needed to control the targeted organisms.

3. This permit does not cover activities that Ecology regulates under other NPDES permits, such as routine fish management using rotenone.

4. All discharges must comply with all applicable local, state, and federal laws, rules, and ordinances (see G6), and any additional requirements as specified in this permit.

5. The Permittee must coordinate with WSDA to ensure pesticide label approval prior to beginning any discharge activities. Authorization of pesticide discharge under this permit does not indicate registration approval under the Federal Insecticide Fungicide Rodenticide Act (FIFRA).

6. The Permittee must ensure the treatment as described in the permit application complies the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.), and does not cause a take, as set out in Section 9 of the Act to an individual of a species listed as ***threatened*** or ***endangered*** unless that take is exempted under section 10 of the Act by the U.S. Fish and Wildlife Service or the National Oceanic and Atmospheric Administration. The list of endangered or threatened species is presented in 50 CFR 17.11(h).

7. The Permittee must ensure the treatment as described in the permit application complies with RCW 77.15.120 and 77.15.130 and does not cause a take of a state endangered or protected fish or wildlife unless take has been authorized by a rule of the commission, a permit issued by the department, or a permit issued pursuant to the federal endangered species act. The list of state endangered wildlife species is presented in WAC 232-12-014. The list of protected ("threatened" and "sensitive") species is presented in WAC 232-12-011.

B. Chemicals and Products Authorized For Use under this Permit

1. Ecology identifies specific restrictions on the use of each chemical or product in Tables 1 and 2. Not all chemicals or products can be used in both marine and freshwaters.

2. Ecology allows application of the following listed chemicals or products so long as the Permittee makes the application in compliance with all the terms and conditions of this permit:

    a. Sodium chloride for marine and freshwater application.

    b. Potassium chloride for marine and freshwater application.

    c. Chlorine compounds including chlorine dioxide, sodium chlorite, sodium hypochlorite, and calcium hypochlorite for marine and freshwater application.

    d. Acetic acid for marine and freshwater application

    e. Calcium hydroxide/oxide (lime) and carbon dioxide for marine and freshwater application.

    f. Rotenone for freshwater application.

    g. Potassium permanganate (KMnO4) for freshwater application.

    h. Endothall (e.g., Hydrothol 191™): mono(N,N-dimethylalkyalmine) salt of 7-oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid for freshwater application.

    i. Sodium carbonate peroxyhydrate for freshwater application.

    j. Methoprene for freshwater application.

    k. Chelated copper compounds for freshwater application.

l. *Pseudomonas fluorescens* strain CLO145 for freshwater application.

m. Heating/cooling (temperature alteration) for marine and freshwater application.

C. Experimental Use Permits

1. Permittees may apply other chemicals not listed in this permit on a limited basis in the context of a research and development effort under the jurisdictions of the Environmental Protection Agency (EPA) and WSDA through the issuance of a federal Experimental Use Permit (40 CFR 172). Permittees must also obtain coverage under this general permit for any aquatic invasive species control project conducted under a federal Experimental Use Permit (EUP).

2. For projects of one acre or less in size, the applicant must obtain coverage under a State EUP (issued by WSDA) and coverage under this general permit is not required.

D. Specific Restrictions on the Application of Products

1. Except for ***emergencies***, the Permittee must limit treatments that restrict public water use during weekends in ***high use areas*** or ***highly populated areas***.

2. Except for emergencies, the Permittee must make every effort to avoid pesticide applications that restrict public water use during the opening week of fishing season (freshwater treatments only), Memorial Day weekend, Independence Day weekend, and Labor Day weekend.

3. Permittees must comply with the specific application restrictions for each product as identified in Tables 1 and 2 and all Federal Insecticide, Fungicide, Rodenticide Act (FIFRA) label requirements. Requirements in this permit do not reduce the requirements on the FIFRA label.

4. The Permittee must comply with WDFW timing windows referenced in Tables 1 and 2 to protect salmon, steelhead, and bull trout populations and WDFW priority habitats and species. WDFW may periodically update this table as new information becomes available or on request from Ecology. The timing table is available at: http://www.ecy.wa.gov/programs/wq/pesticides/final_pesticide_permits/aquatic_plants/permitdocs/wdfwtiming.pdf.

   Permittees may consult with Ecology and WDFW to develop alternate timing windows if necessary so long as the new treatment windows do not adversely impact priority species and habitats. Contact Keith Folkerts of WDFW at Keith.Folkerts@dfw.wa.gov and apampreposttreat@ecy.wa.gov to request development of alternative timing windows. In the event that the email contacts become out-of-date, Ecology will provide updated contact information.

Where Permittees are directed to consult with WDFW in the timing window table, they must provide Ecology with a consultation letter from WDFW indicating the approved timing window for the treatment.

5. Restrictions/Advisories identified in Tables 1 and 2: ***Recreational restrictions*** apply to swimming, boating, water skiing, etc. Swimming restrictions apply to primary contact activities such as swimming, wading, and water skiing.

6. Application of certain pesticides in Tables 1 and 2 require the use of tarpaulins or impermeable covers. Installation of tarpaulins or impermeable covers may require the Permittee to obtain a Hydraulic Project Approval Permit from WDFW.

Table 1: Marine Applications
Specific Restrictions on the Application of Chemicals for Managing Nonnative Invasive Marine Animals and Algae

Chemical or Control Measure	Subject to Timing Windows	Restrictions/ Advisories	Treatment Limitations
Sodium chloride & Potassium chloride	No, but check with WDFW before treatment to determine critical habitat areas.	None	➢ Limit treatments to the lowest effective concentration or amount of these salts necessary to kill the targeted organism. ➢ Limit treatment to docks, boat hulls, and fixed objects or defined areas. ➢ Spray or apply directly on target organisms when they are out of water (apply at low tide). ➢ The Permittee may treat defined areas, such as marinas or coves, if the Permittee can limit water exchange behind impermeable barriers.
Chlorine	No, but check with WDFW before treatment to determine critical habitat areas.	If treating in an area accessible by the public, post buoys around the ***treatment area*****.**	➢ Limit treatments to the lowest effective concentration or amount (e.g. if using swimming pool pellets) to kill the targeted organism. ➢ Where practicable, use chlorine dioxide/sodium chlorite instead of sodium hypochlorite or calcium hypochlorite. ➢ Use under tarpaulins or impermeable covers secured over the invasive organisms. Seal edges to the substrate as thoroughly as possible. ➢ Limit treatment to docks, boat hulls, and fixed objects or defined areas where the Permittee can secure impermeable covers. ➢ Leave tarpaulins on for at least one day before removing. If this is not possible, test for chlorine using a swimming pool test kit and neutralize any residual chlorine using ascorbic acid (vitamin C) before removing the cover.
Acetic Acid	No, but check with WDFW before treatment to determine critical habitat areas.	➢ If treating in an area accessible by the public, post buoys around the treatment area. ➢ Restrict swimming for 12 hours in the treatment area if spraying directly on organisms. ➢ Restrict ***public access*** to area when diluting concentrated acid.	➢ Limit treatments to the lowest effective concentration to kill the targeted organism (vinegar concentrations – 5-10% are reported to be effective for soft-bodied marine organisms). ➢ Use under tarpaulins or impermeable covers secured over the invasive organisms. Seal the edges to the substrate as thoroughly as possible. ➢ Limit treatment to docks, boat hulls, and fixed objects or defined areas where the Permittee can secure impermeable covers. ➢ Remove covers as soon as the target organisms are dead. ➢ Spray directly on target organisms if they are out of water (tidal). ➢ The Permittee may treat defined areas, such as marinas, if the Permittee can limit water exchange behind impermeable barriers.

Chemical or Control Measure	Subject to Timing Windows	Restrictions/ Advisories	Treatment Limitations
Calcium hydroxide /oxide (lime)	No, but check with WDFW before treatment to determine critical habitat areas.	If in an area accessible by the public, post buoys around the treatment area.	➢ Limit treatments to the lowest effective concentration or amount necessary to kill the targeted organism. ➢ Use under tarpaulins or impermeable covers secured over the invasive organisms and limit treatment to docks, boat hulls, and fixed objects or defined areas where the Permittee can secure impermeable covers. ➢ Remove covers as soon as the target organism is dead. ➢ For direct applications, apply only to target organisms (e.g. invasive echinoderms). Do not treat uninfested areas.
Heat/Freezing	No, but check with WDFW before treatment to determine critical habitat areas.	None	➢ Limit treatment to docks, boat hulls, and fixed objects or defined areas. ➢ May use in conjunction with pressure washing to remove invasive organisms from docks and infrastructure.

Table 2: Freshwater Applications
Specific Restrictions on the Application of Chemicals for Managing Nonnative Invasive Freshwater Animals

Chemical	Subject to Timing Windows	Restrictions/ Advisories	Treatment Limitations
Sodium chloride & Potassium chloride	No, but check with WDFW before treatment to determine critical habitat areas.	None	➢ Use under tarpaulins or impermeable covers secured over the invasive organisms. ➢ Limit treatment to docks, boat hulls, and fixed objects or defined areas where the Permittee can secure impermeable covers. ➢ The Permittee may treat defined areas, such as coves or marinas, if the Permittee can limit water exchange behind impermeable barriers. **Whole Lake** ➢ The Permittee may treat ***small water bodies*** with potassium chloride where the threat of the invasive species outweighs other environmental damage and where water can be contained. ➢ For nonnative mussel eradication projects with potassium chloride, the Permittee must take steps to restore native mussel populations in the treated water body, when practicable.

Chemical	Subject to Timing Windows	Restrictions/ Advisories	Treatment Limitations
Chlorine	Yes, also check with WDFW before treatment to determine critical habitat areas.	Advise no swimming in area when placing chemicals under covers and removing covers.	➢ Limit treatments to the lowest effective concentration or amount (e.g. if using swimming pool pellets) necessary to kill the targeted organism. ➢ Where practicable, use chlorine dioxide/sodium chlorite instead of sodium hypochlorite or calcium hypochlorite. ➢ Use under tarpaulins or impermeable covers secured over the invasive organisms. Seal edges to the substrate as thoroughly as possible. ➢ Limit treatment to docks, boat hulls, and fixed objects or defined areas where the Permittee can secure impermeable covers. ➢ Leave tarpaulins on for at least one day before removing. If this is not possible, test for chlorine using a swimming pool test kit and neutralize any residual chlorine using ascorbic acid (vitamin C) before removing the cover.
Acetic Acid	No, but check with WDFW before treatment to determine critical habitat areas.	Advise no swimming in area when placing chemicals under covers and removing covers.	➢ Limit treatments to the lowest effective concentration to kill the targeted organism (vinegar concentrations – 5-10% are reported to be effective for soft-bodied organisms). ➢ Use under tarpaulins or impermeable covers secured over the invasive organisms. Seal the edges to the substrate as thoroughly as possible. ➢ Limit treatment to docks, boat hulls, and fixed objects or defined areas where the Permittee can secure impermeable covers. ➢ Remove covers as soon as the target organisms are dead.
Calcium hydroxide/ oxide (lime)	No	No	➢ Whole water body applications permitted. ➢ The pH of the receiving water must remain between 6 and 9. Stop treatment if pH goes above 9.0.
Rotenone	Yes, also check with WDFW before treatment to determine critical habitat areas.	Follow EPA label restrictions and Rotenone SOP Manual	➢ Whole water body applications permitted. ➢ Endangered Species Act (ESA) listed fish species must not be present at the time of treatment and for three months following treatment, unless the state and federal fish agencies approve a treatment. ➢ Except for emergencies or when in situations where invasive species may move out of water body if treatment is delayed, limit treatment to periods of low water, usually September or October, unless the water body has a closed basin. ➢ Use liquid rotenone for spot applications only in areas that are not practicably accessible by boat. ➢ Unless the outlet is being treated for invasive species, in water bodies with flowing outlets, rotenone must be deactivated to eliminate downstream impacts. Below the deactivation zone (distance the water travels in 20 minutes), the rotenone must be totally neutralized using

Chemical	Subject to Timing Windows	Restrictions/ Advisories	Treatment Limitations
			potassium permanganate. Residual potassium permanganate, not to exceed 2 mg/L past the deactivation zone. ➢ Follow monitoring requirements in Tables 4, 5, 6, 7 and 8. ➢ Restock the water body with appropriate fish species after eradication of the target species.
Potassium permanganate	Yes, also check with WDFW before treatment to determine critical habitat areas.		➢ Use under tarpaulins or impermeable covers secured over the invasive organisms. ➢ Limit treatment to docks, boat hulls, and fixed objects or defined areas where the Permittee can secure impermeable covers. ➢ The Permittee may treat defined areas, such as marinas, if the Permittee can limit water exchange behind impermeable barriers. ➢ The Permittee may treat enclosed, small water bodies where the threat of the invasive species outweighs other environmental damage. ➢ When used to deactivate rotenone treated waters – use calibrated equipment to achieve the minimum effective concentration of potassium permanganate necessary to oxidize the rotenone within the deactivation zone.
Endothall (Hydrothol 191™)	Yes	Contact recreational restriction during and 24-hours after treatment (in the entire water body)	➢ Treatment shall occur from the ***shoreline*** outward into the waterbody. ➢ Juvenile salmon species and ESA-listed species must not be present at the time of treatment.
Sodium carbonate peroxyhydrate	No	Swimming advisory during treatment, and 2-hour post-treatment (in the treatment area)	None
Methoprene	No	None	Do not apply in state-listed Areas of Restricted Larvicide and Adulticide Use identified in Ecology's mosquito NPDES permit without consulting with WDFW habitat biologists. http://www.ecy.wa.gov/programs/wq/pesticides/final_pesticide_permits/mosquito/index.html

Chemical	Subject to Timing Windows	Restrictions/ Advisories	Treatment Limitations
Chelated Copper	Yes	None	➢ Use lowest effective concentration to kill targeted organism. ➢ Sediment copper concentrations in the treatment area must be less than 110 mg/kg (emergency exception for zebra or quagga mussel treatment, if there are no other suitable controls available). ➢ Do not apply copper if the water hardness is less than 50 mg/L expressed as calcium carbonate (emergency exception for zebra or quagga mussel treatment). ➢ Do not apply copper if the pH is less than 6.0 (emergency exception for zebra or quagga mussel treatment). ➢ Juvenile salmon species and Endangered Species Act listed species must not be present at the time of treatment, unless the state and federal fish agencies approve the treatment.
***Pseudomonas fluorescens* strain CLO145**	No	None	None
Heating/ cooling	No, but check with WDFW before treatment to determine critical habitat areas.	None	➢ Limit treatment to docks, boat hulls, and fixed objects or defined areas. ➢ Direct heat or cold only at target organisms. ➢ May use in conjunction with pressure washing to remove invasive organisms from docks and infrastructure.

S5. PLANNING REQUIREMENTS

A. The Permittee must develop or ***adopt*** an Ecology-approved adaptive management plan (plan) that incorporates integrated pest management principles for ***organisms*** managed under this permit. Plans may be written to cover specific species such as the marine alga *Caulerpa taxifolia* or categories of organisms such as nonnative invasive marine tunicates. Two or more Permittees may collaborate to submit a single plan that covers the activities of more than one Permittee or their contractors.

B. The Permittee must submit a copy of the plan(s) to Ecology no later than eighteen months after starting initial treatment for each organism or category of organisms. Permittees must notify Ecology in writing prior to starting the first treatment for each organism or category of organisms.

C. The Permittee must consult with Ecology before finalizing the plan, consider and incorporate Ecology comments to the plan, and resubmit the plan according to the direction of Ecology no later than six months after written notification of a need for revision from Ecology. The Permittee and any contractors must implement the approved plan in all appropriate aquatic pest control activities.

D. If any discrete treatment will exceed the Water Quality Standards criteria for longer than ***hours or days***, then the plan covering the management activity must also comply with the requirements in S3.A.

S6. POSTING AND NOTIFICATION REQUIREMENTS

A. Internet Notification

Each treatment season, the Permittee must post information on its website about the locations of planned treatments, timing of treatments, chemicals or products proposed for use, and information about the organism(s) to be treated.

B. Residential and Business Notification

1. The Permittee must provide Residential and Business Notice to all waterfront residences and businesses within one-quarter mile in each direction along the shoreline or across the water from the proposed treatment areas. The Permittee must use the Residential and Business Notice template (notice) on the permit website. The Permittee must not modify the template, except that, if desired, it may add additional information about the project, including a treatment map.

2. The Permittee may provide the notice by mail, newsletter, or handbills delivered directly to the residences or businesses.

3. This permit does not authorize trespass or damage to property as a result of providing business and residential notices.

4. The Permittee must provide the notice to residences and businesses 7 to 45 days prior to initial treatment, except for emergencies. During an emergency, the Permittee may provide same day notice to residences and businesses. Even during emergencies, the Permittee must strive to provide as much advance notice as possible to the affected residents and businesses.

5. If the notice explains the ***application schedule*** for the entire annual treatment season and there is no deviation from that schedule, Ecology requires no further notice for the rest of the season (unless a resident or business specifically requests further notification about project treatment dates).

6. The Permittee must provide a copy of the notice including the date of distribution, to Ecology headquarters and appropriate regional office contacts no later than one business day following public distribution.

7. The Permittee must maintain a copy of the notice and a list of locations or addresses to which they were delivered for seven years. Upon request, the Permittee must provide a copy of the notice and list of recipients to Ecology within five business days.

8. For freshwater projects only: When the chemical or product's label or the permit has restrictions and/or precautions for potable or domestic water use, irrigation use, or livestock watering, the Permittee must notify those who withdraw surface waters for such uses. This notification must identify the chemicals(s) or product(s) it plans to use, the date(s) of expected treatment, and all water use restrictions and precautions, including information about who the water user can contact to obtain an alternate water supply during treatment. The Permittee must not treat an area until it has notified people who withdraw water and it has provided an alternative water supply, if requested by the affected water user(s).

C. Shoreline Posting Requirements

1. General Requirements for Posting Shoreline Treatment Notification Signs

    a. The Permittee must post shoreline treatment notification signs (signs) no more than 72 hours prior to the application of any chemical or product covered under this permit.

    b. The Permittee must post signs so that they are secure from the normal effects of weather and water currents, but cause minimal damage to property.

    c. The Permittee must make best efforts to ensure that the signs remain in place until the end of the period of any water use restrictions.

d. The Permittee must remove all old signs before a new treatment begins or before the end of the treatment season, whichever comes first.

e. The Permittee must post warning signs in English and if the majority of the affected community speaks a language other than English, the Permittee may use online translation websites or other translation services to make signs for public areas in these communities.

2. Posting ***Privately or Publicly-Owned Shoreline*** Areas (Excluding Public Access Areas) with 8½ by 11 Inch Signs

   a. The Permittee must post signs at each private residence or business property within 400 feet of the treatment area. The Permittee must post the signs to face the shore and site them where they are most visible to residents. The Permittee must post one sign for approximately every 100 feet of shoreline.

   b. If a shoreline is only accessible by entering through a gate, the Permittee must post a sign at each gate that allows access to the treated area or is within 400 feet of a treated area. In these situations the Permittee does not need to post additional signs along the shoreline or at individual docks or moorages.

   c. The Permittee must use the sign template provided on the permit website. Ecology does not allow modifications of templates, except that the Permittee must fill in label or other restrictions about the chemical or product to be used. If desired, the Permittee may provide additional information about the project on the sign, including a treatment map. In the event that the Permittee applies more than one chemical or product, the Permittee may include information about all chemicals/products on one sign.

3. Posting Public Access Areas with Two Foot by Three Foot Signs

   Public access areas include public or community-provided swimming beaches, picnic areas, docks, marinas, and boat launches at state or local parks and private resorts.

   a. The Permittee must post signs at all public access areas on the water body within one-quarter mile of the treatment site and at all public boat launches on the water body within one mile of the treatment site.

   b. The Permittee must place the signs so that they are clearly readable to people using the public access areas, spacing the signs approximately every 100 feet of shoreline. Signs must face both the water and the shore. At public boat launches, signs need only face the shore.

   c. If a public shoreline is only accessible by entering through a gate, the Permittee must post a sign at each gate that allows access to the treated area or is within 400 feet of a treated area. In these situations the Permittee does not need to post additional signs

along the shoreline or at individual docks or moorages.

d. Signs must be a minimum size of two feet by three feet and constructed of durable weather-resistant material. The Permittee must attach an 8½ by 11 inch weather resistant map detailing the treatment sites for each chemical or product used. The map must identify the location(s) of the treatment site(s), identify addresses or parcels that represent the start and end points of the treatment area or provide gps coordinates that represents the corners of the treatment area polygon or identify a whole waterbody treatment and mark the reader's location. In the event that the Permittee uses more than one chemical or product, each treatment area and the chemical/product used must be marked on the map.

Signs must:

1). Include the signal word "CAUTION" in bold black type at least two inches high. When the discharge is for rotenone include the signal word "DANGER".

2). Use a font at least ½ inch high for all other words.

4. Posting ***Public Pathways*** Along a Treated Water Body

a. The Permittee must post two foot by three foot signs at ***public entrances*** to public pathways that allow reasonable direct access to the water body and that are within a quarter mile of the treatment area (see S6.C.1 and S6.C.3.d for sign specifications).

b. The Permittee must post 8½ by 11 inch signs (use the Template on the permit website for sign specifications) at approximately100-foot intervals along the pathway and within 400 feet of the treatment site.

S7. MONITORING REQUIREMENTS

Sampling and analytical methods used to meet the monitoring requirements specified in this permit must conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136 (or as applicable in 40 CFR subchapters N [Parts 400–471] or O [Parts 501-503]) unless otherwise specified in this permit. Ecology may only specify alternative methods for parameters without limits and for those parameters without an EPA approved test method in 40 CFR Part 136.

All samples must be analyzed by a laboratory registered or accredited under the provisions of Accreditation of Environmental Laboratories, Chapter 173-50 WAC. The following parameters need not be accredited or registered:

1. Flow.
2. Temperature.
3. Settleable solids.
4. Conductivity, except that conductivity must be accredited if the laboratory must otherwise be registered or accredited.

5. pH, except that pH must be accredited if the laboratory must otherwise be registered or accredited.
6. Turbidity, except that turbidity must be accredited if the laboratory must otherwise be registered or accredited.
7. Parameters which are used solely for internal process control

Documentation of monitoring activities and results must include (if applicable):
1. The date, exact place, and time of sampling.
2. The date analyses were performed.
3. Who performed the analyses.
4. The analytical techniques/methods used (if any).
5. The results of such analyses.

The Permittee must take representative samples and measurements to meet the requirements of this permit (i.e., representative of the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including spills, upsets, and maintenance-related conditions affecting water quality).

A. Monitoring Plans

1. The Permittee must submit an annual monitoring plan to Ecology by February 1 of each year. If two or more Permittees are working together on the same management activity, they may coordinate their monitoring efforts and submit an annual joint monitoring plan to Ecology. Monitoring plans for a Permittee responding to an invasive species emergency, not able to meet the February 1 deadline, consists of conducting the minimum monitoring requirements given in tables 3, 4, 5, 6, 7, and 8.

2. The Permittee must monitor a subset of treated locations each year of treatment. The monitoring plan must provide specific monitoring locations, information on the parameters to be measured, and the rationale for their selection. At a minimum, the Permittee(s) must conduct treatment effectiveness monitoring for the target organism and any monitoring required in Tables 3, 4, 5, 6, 7 and 8.

3. The Permittee must post all monitoring plans on its website after approval by Ecology.

B. Monitoring for Specific Chemicals

The Permittee must monitor for specific chemicals/products as identified in Tables 3, 4, 5, 6, 7 and 8.

Table 3: Monitoring requirements

Chemical or Control Measures	Specific Monitoring Requirements
Sodium Chloride & Potassium Chloride	➢ For whole lake treatments or treatments of areas sequestered behind barriers within a larger fresh water body, the Permittee must at a minimum measure potassium or sodium chloride concentrations at one or more representative sampling locations pre-treatment, one, and five days post-treatment to determine actual water body concentrations.
Chlorine	➢ The Permittee must monitor for chlorine concentrations under impermeable covers on a representative number of sites before removing the covers. Permittee may use swimming pool test kits for this purpose. ➢ If monitoring demonstrates that undercover chlorine concentrations are always under 0.5 mg/L before removal (at a representative number of sites and for the same chlorine formulation), the Permittee may suspend monitoring upon Ecology approval.
Acetic Acid	➢ When removing impermeable covers, monitor pH levels in the receiving water before and immediately after cover removal. ➢ When directly spraying the organisms, monitor the pH of receiving waters directly adjacent to the organisms immediately before and after treatment.
Calcium Hydroxide /Oxide (lime)	**For Freshwater Treatments Only** ➢ Measure pH once a day before treatment; once in the morning and once in the afternoon during treatment; and for ten days following treatment at a representative site within the water body. ➢ For applications using continuous injection systems, measure pH once in the morning and once in the afternoon
Rotenone	See Special Condition S8- Rotenone Monitoring for specific monitoring requirements for rotenone.
Chelated Copper	➢ Before applying copper, measure sediment copper concentrations in a composite sample of sediment from a representative treatment area (composite sample from 5 areas with sediment taken from the top 5 cm of sediment and homogenized). ➢ Two weeks after completion of copper treatment, resample the treated area for copper using the sampling protocol above. ➢ Measure pH and hardness prior to treatment.
Heat/Freezing	➢ If used in conjunction with pressure washing to remove invasive organisms from docks and infrastructure, measure the temperature of the receiving water immediately before and immediately after the activity.

S8. ROTENONE MONITORING

A. Monitoring Schedule *Still Water*

TABLE 4. PRE-TREATMENT MONITORING

Monitoring to occur within 48hours prior to treatment

Parameters	Units	Minimum Sampling Frequency	Type	Sampling Point
pH	Standard	Once pre-treatment	Grab	Representative
Temperature	°C or °F	Once pre-treatment	Grab	Representative
Alkalinity	mg/L CaCO3	Once pre-treatment	Grab	Representative
Organic demand[1]	Standard[2]	Once pre-treatment[1]	Grab	Representative
Dissolved Oxygen	mg/L	Once pre-treatment	Grab	Representative
[1]WDFW must use the guidelines provided in Engstrom-Heg (1971) to determine organic demand for $KMnO_4$.				

TABLE 5. POST-TREATMENT MONITORING

Monitoring to occur immediately after treatment event but must not exceed 24 hours post-treatment event unless specified otherwise in the table.

Parameters	Units	Minimum Sampling Frequency	Type	Sampling Point
pH	Standard	Once post-treatment	Grab	Representative
Temperature	°C or °F	Once post-treatment	Grab	Representative
Dissolved Oxygen	mg/L	Once post-treatment	Grab	Representative
Trout Toxicity Bioassay: 48-hr live box test (5 trout); 60% trout survival[1]	% trout survival	14 days after treatment and weekly until 60% trout survival	Observation (No lab accreditation required)	***Worst-case scenario***
[1] WDFW may use the analytical method given in SOP:16.0 II.A (Finlayson, B., R. Schnick, D. Skaar, J. Anderson, L. Demong, D. Duffield, W. Horton, and J. Steinkjer. 2010. Planning and Standard Operating Procedures for Use of Rotenone in Fish Management. American Fisheries Society, Bethesda, MD) in place of the trout toxicity bioassay. WDFW, when using this analytical method, must demonstrate that rotenone concentrations are at or below 3.75 µg/L.				

TABLE 6. MONITORING OF DOWNSTREAM AND DEACTIVATED WATERS

Pre-treatment sampling to occur within 48 hours prior to treatment event unless specifically stated. Post-treatment monitoring to occur immediately after treatment but not to exceed 24 hours after the treatment event unless specified otherwise in the table.

Parameters	Units	Minimum Sampling Frequency	Type	Sampling Point
pH	Standard	Twice: once pre-treatment and once post-treatment	Grab	Representative

Temperature	°C or °F	Twice: once pre-treatment and once post-treatment	Grab	Representative
Dissolved Oxygen	mg/L	Twice: once pre-treatment and once post-treatment	Grab	Representative
Alkalinity	mg/L CaCO3	Once pre-treatment	Grab	Representative
Organic demand[1,]	Standard[2]	Once pre-treatment[1]	Grab	Worst-case scenario
Potassium Permanganate[2]	mg/L	Hourly during the period of deactivation	Grab	Downstream of Deactivation Zone
Trout Toxicity Bioassay: 24-hr live box test (5 trout) 60% trout survival	% trout survival	Every 2-4 hours until 60% of trout survive	Observation (No lab accreditation required)	Upstream and Downstream of Deactivation Zone
[1] Must use the guidelines provided in Engstrom-Heg (1971) to determine organic demand for $KMnO_4$.				
[2] Must measure $KMnO_4$ in waters downstream of the deactivation zone using one of the two techniques given in Finlayson (2010). *				

*Finlayson, B., R. Schnick, D. Skaar, J. Anderson, L. Demong, D. Duffield, W. Horton, and J. Steinkjer. 2010. Planning and Standard Operating Procedures for Use of Rotenone in Fish Management. American Fisheries Society, Bethesda, MD.

B. Monitoring Schedule for Treated Flowing Water

TABLE 7. PRE-TREATMENT MONITORING OF TREATED WATER

Pre-treatment sampling to occur within 24 hours prior to treatment event unless specified otherwise in the table.

Parameters	**Units**	**Minimum Sampling Frequency**	**Type**	**Sampling Point**
pH	Standard	Once pre-treatment	Grab	Representative
Temperature	°C or °F	Once pre-treatment	Grab	Representative
Dissolved Oxygen	mg/L	Once pre-treatment	Grab	Representative
Alkalinity	mg/L CaCO3	Once pre-treatment	Grab	Representative
Organic demand[1]	Standard[2]	Once pre-treatment[1]	Grab	Representative
[1] Must use the guidelines provided in Engstrom-Heg (1971) to determine organic demand for $KMnO_4$.				

TABLE 8. POST TREATMENT MONITORING OF TREATED AND DEACTIVATED WATERS

Post-treatment monitoring to occur immediately after treatment but not to exceed 24 hours post-treatment event unless specified otherwise in the table.

Parameters	**Units**	**Minimum Sampling Frequency**	**Type**	**Sampling Point**
pH	Standard	Once post-treatment	Grab	Representative
Temperature	°C or °F	Once post-treatment	Grab	Representative
Dissolved Oxygen	mg/L	Once post-treatment	Grab	Representative
Potassium Permanganate[1]	mg/L	Hourly during the period of deactivation	Grab	Downstream of Deactivation Zone
Trout Toxicity Bioassay: 24-hr live box test (5 trout) 60% trout survival	% trout survival	Every 2-4 hours until 60% of trout survive	Observation (No lab accreditation required)	Upstream and Downstream of Deactivation Zone
[1] Must measure $KMnO_4$ in waters downstream of the deactivation zone using one of the two techniques given in Finlayson (2010).*				

*Finlayson,, B., R. Schnick, D. Skaar, J. Anderson, L. Demong, D. Duffield, W. Horton, and J. Steinkjer. 2010. Planning and Standard Operating Procedures for Use of Rotenone in Fish Management. American Fisheries Society, Bethesda, MD.

C. Monitoring For Water Bodies with Potable Water Users or With Surface Water Rights

When the chemical or product's label has a restriction and/or precautions for potable or domestic water use, irrigation use, or livestock watering the following monitoring must be completed prior to the Permittee notifying people who withdraw surface water that they may resume withdrawal (See Special Condition S6.B.8).

1. For potable water rights:

   a. Permittees must test the treated water body until it is shown to be below the EPA estimated drinking water level of concern of 40 ppb for rotenone. Permittees must use one of the methods given in SOP: 16 in the Rotenone SOP Manual*. The Permittee must test either three locations or test a number of locations equivalent to 20% of the potable water intakes on the water body, whichever is greater. Testing must occur in locations that are representative of the potable water intakes located on the water body.

   b. For treatments using liquid rotenone formulations that contain ***volatile organic compounds*** (VOC's): Permittees must demonstrate that the treated water body has returned to pre-treatment levels or is below 0.5 ppb for any VOC identified by the ***Material Safety Data Sheet (MSDS)*** or label for the product used. Permittees must conduct pre-treatment VOC testing to determine if VOC's are present in the water body prior to treatment (background levels of VOC's). Permittees are responsible for ensuring VOC's discharged to the water body from treatments

have dissipated to background levels or dropped below 0.5 ppb before surface water withdrawal can resume. Analytical methods used for VOC monitoring must have a 0.5 ppb lower detection limit.

2. For irrigation and livestock watering rights: Permittees must demonstrate that the treated water body meets the standards applicable to crop irrigation and livestock watering required by the FIFRA label for the rotenone product used.

*Finlayson, B., R. Schnick, D. Skaar, J. Anderson, L. Demong, D. Duffield, W. Horton, and J. Steinkjer. 2010. Planning and Standard Operating Procedures for Use of Rotenone in Fish Management. American Fisheries Society, Bethesda, MD.

S9. REPORTING AND RECORDKEEPING REQUIREMENTS

The falsification of information submitted to Ecology constitutes a violation of the terms and conditions of this permit. The Permittee must submit chemical application information in accordance with the following conditions:

A. Annual Reports

The annual treatment report and annual monitoring report may be combined and submitted as a single report.

1. Annual Treatment Report

a) The Permittee must submit its annual treatment report by **February 1** of each year. A signed and dated copy of the report must be mailed to:

Department of Ecology
Water Quality Program
Attn: Aquatic Invasive Species Management Permit Manager
P.O. Box 47600
Olympia, WA 98504-7600

b) The annual treatment report must include:

i. Permit number
ii. Permittee name
iii. Treatment dates
iv. Location(s) treated (water bodies treated and the treatment location within the water body)
v. Active ingredient(s) applied
vi. Pounds or gallons of product applied to each location.

2. Annual Monitoring Reports

a) The Permittee must submit its annual monitoring report by **February 1** of each year. The Permittee must submit an annual monitoring report whether or not Ecology required monitoring. A signed and dated copy of the report must be mailed to the address in S9.A.1.a.

b) All laboratory results for chemical concentrations must include the following information:

i. Sampling date
ii. Sample location (water body name and location within the water body)
iii. Date of analysis
iv. Parameter name
v. Chemical Abstract Service (CAS) number
vi. Analytical method number
vii. Method detection limit (MDL)
viii. Laboratory practical quantitation limit (PQL)
ix. Reporting units
x. Concentration detected

B. Recording of Results

For each measurement or sample taken, the Permittee must record the following information:

1. The date of sample collection, the name of the water body, the sampling location(s) within the water body, and the sampling methodology
2. The name of the individual who performed the sampling or measurement
3. The dates the laboratory performed the analyses
4. The laboratory or the name of the individual who performed the analyses
5. The analytical techniques or methods used
6. The results of all analyses

C. Records Retention

1. The Permittee must retain records of all monitoring information for a minimum of five (5) years. Such information must include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit.

2. The Permittee must extend this period of retention during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee, or when requested by Ecology.

3. The records, reports, and other information required by this permit must be made available to Ecology upon request.

D. Reporting Permit Violations

The Permittee must take the following actions when it violates or is unable to comply with any permit condition:

1. Immediately take action to stop, contain, and clean up unauthorized discharges or otherwise stop the noncompliance and correct the problem.

2. The Permittee must report any noncompliance that may endanger health or the environment by telephone to Ecology at the regional spills hotline and the aquatic pesticides permit manager, within 24 hours from the time the Permittee becomes aware of the noncompliance.

    a. **Southwest Regional Office: 1-360-407-6300**
    (Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, and Wahkiakum counties).
    b. **Northwest Regional Office: 1-425-649-7000**
    (Island, King, Kitsap, San Juan, Skagit, Snohomish, and Whatcom counties).
    c. **Central Regional Office: 1-509-575-2490**
    (Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, and Yakima counties).
    d. **Eastern Regional Office: 1-509-329-3400**
    (Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, and Whitman counties).
    e. **Aquatic Invasive Species Management Permit Manager: 1-360-407-6600**

3. The Permittee must also provide a written submission within **five days** of the time that the Permittee becomes aware of any event required to be reported under 1 or 2 above. The written submission must contain:

    a. A description of the noncompliance and its cause.
    b. The period of noncompliance, including exact dates and times.
    c. The estimated time noncompliance is expected to continue if it has not been corrected.
    d. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
    e. Updates that will be included in the Permittee's Adaptive Management Plan (Special Condition S5) to address the issue and prevent future noncompliance.

4. Ecology may waive the written report required in part three, above, on a case-by-case basis upon written request if it has received a timely oral report.
5. The Permittee must submit noncompliance reports to:

Department of Ecology
Water Quality Program
Attn: Aquatic Invasive Species Management Permit Manager
P.O. Box 47600
Olympia, WA 98504-7600

S10. APPENDICES

The attached appendices are incorporated by reference into this permit and are subject to enforcement.

APPENDIX A: Glossary

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to Ecology must be signed and certified.

A. In the case of corporations, by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

1. A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision making functions for the corporation, or

2. The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility 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 where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

B. In the case of a partnership, by a general partner.

C. In the case of sole proprietorship, by the proprietor.

D. In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.

E. All reports required by this permit and other information requested by Ecology must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by the person described above and is submitted to Ecology at the time of authorization, and

2. The authorization specifies either a named individual or any individual occupying a named position.

F. Changes to authorization. If an authorization under paragraph E above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.

G. Any person signing a document under this section must make the following certification:

"I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

G2. RIGHT OF ENTRY AND INSPECTION

Representatives of Ecology must have the right to enter at all reasonable times in or upon any property, public or private, for the purpose of inspecting and investigating conditions relating to the pollution or the possible pollution of any waters of the state.

Reasonable times include normal business hours; hours during which production, treatment, or discharge occurs; or times when Ecology suspects a violation requiring immediate inspection.

Representatives of Ecology must be allowed to have access to, and copy at reasonable cost, any records required to be kept under terms and conditions of the permit; to inspect any monitoring equipment or method required in the permit; and to sample any discharge, waste treatment processes, or internal waste streams.

G3. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated either at the request of any interested person (including the Permittee) or upon Ecology's initiative. However, the permit may only be modified, revoked and reissued, or terminated for the reasons specified in 40 CFR 122.62, 122.64 or WAC 173-220-150 according to the procedures of 40 CFR 124.5.

A. The following are causes for terminating permit coverage during its term, or for denying a permit renewal application:

1. Violation of any permit term or condition.

2. Obtaining a permit by misrepresentation or failure to disclose all relevant facts.

3. A material change in quantity or type of waste disposal.

4. A determination that the permitted activity endangers human health or the environment or contributes to water quality standards violations and can only be

regulated to acceptable levels by permit modification or termination [40 CFR part 122.64(3)].

5. A change in any condition that requires either a temporary or permanent reduction or elimination of any discharge or sludge use or disposal practice controlled by the permit [40 CFR part 122.64(4)].

6. Nonpayment of fees assessed pursuant to RCW 90.48.465.

7. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.

B. The following are causes for modification but not revocation and reissuance except when the Permittee requests or agrees:

1. A material change in the condition of the waters of the state.

2. New information not available at the time of permit issuance that would have justified the application of different permit conditions.

3. Material and substantial alterations or additions to the permitted facility or activities which occurred after this permit issuance.

4. Promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision.

5. The Permittee has requested a modification based on other rationale meeting the criteria of 40 CFR Part 122.62.

6. Ecology has determined that good cause exists for modification of a compliance schedule, and the modification will not violate statutory deadlines.

7. Incorporation of an approved local pre-treatment program into a municipality's permit.

C. The following are causes for modification or alternatively revocation and reissuance:

1. Cause exists for termination for reasons listed in A1 through A7, of this section, and Ecology determines that modification or revocation and reissuance is appropriate.

2. Ecology has received notification of a proposed transfer of the permit. A permit may also be modified to reflect a transfer after the effective date of an automatic transfer but will not be revoked and reissued after the effective date of the transfer except upon the request of the new Permittee.

G4. REPORTING PLANNED CHANGES, CAUSE FOR MODIFICATION

The Permittee must, as soon as possible, but no later than sixty (60) days prior to the proposed changes, give notice to Ecology of planned physical alterations or additions to the permitted facility, production increases, or process modification which will result in:

A. The permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b).

B. A significant change in the nature or an increase in quantity of pollutants discharged.

C. A significant change in the Permittee's sludge use or disposal practices.

Following such notice, and the submittal of a new application or supplement to the existing application, along with required engineering plans and reports, this permit may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.

G5. PLAN REVIEW REQUIRED

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications must be submitted to Ecology for approval in accordance with WAC 173-240. Engineering reports, plans, and specifications must be submitted at least one hundred eighty (180) days prior to the planned start of construction unless a shorter time is approved by Ecology. Facilities must be constructed and operated in accordance with the approved plans.

G6. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit must be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G7. TRANSFER OF THIS PERMIT

In the event of any change in control or ownership of facilities from which the authorized discharge emanate, the Permittee must notify the succeeding owner or controller of the existence of this permit by letter, a copy of which must be forwarded to Ecology. This permit is automatically transferred to a new owner or operator if:

A. A written agreement between the old and new owner or operator containing a specific date for transfer of permit responsibility, coverage, and liability is submitted to Ecology;

B. A copy of the permit is provided to the new owner and;

C. Ecology does not notify the Permittee of the need to modify the permit.

Unless this permit is automatically transferred according to section A. above, this permit may be transferred only if it is modified to identify the new Permittee and to incorporate such other requirements as determined necessary by Ecology.

G8. REDUCED PRODUCTION FOR COMPLIANCE

The Permittee, in order to maintain compliance with its permit, must control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

G9. REMOVED SUBSTANCES

Collected screenings, grit, solids, sludge, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters must not be resuspended or reintroduced to the final effluent stream for discharge to state waters.

G10. DUTY TO PROVIDE INFORMATION

The Permittee must submit to Ecology, within a reasonable time, all information which Ecology may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee must also submit to Ecology upon request, copies of records required to be kept by this permit.

G11. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

G12. ADDITIONAL MONITORING

Ecology may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G13. PAYMENT OF FEES

The Permittee must submit payment of fees associated with this permit as assessed by Ecology. Ecology may revoke this permit if the permit fees established under WAC 173-224 are not paid.

G14. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit is deemed guilty of a crime, and upon conviction thereof will be punished by a fine of up to ten thousand dollars ($10,000) and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs is a separate and additional violation. Any person who violates the terms and conditions of a waste discharge permit incurs, in addition to any other penalty as provided by law, a civil

penalty in the amount of up to ten thousand dollars ($10,000) for every such violation. Each and every such violation is a separate and distinct offense, and in case of a continuing violation, every day's continuance is deemed to be a separate and distinct violation.

G15. UPSET

Definition – "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limits because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limits if the requirements of the following paragraph are met. A Permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that: 1) an upset occurred and that the Permittee can identify the cause(s) of the upset; 2) the permitted facility was being properly operated at the time of the upset; 3) the Permittee submitted notice of the upset as required in condition S9.D; and 4) the Permittee complied with any remedial measures required under S9.D of this permit. In any enforcement proceedings the Permittee seeking to establish the occurrence of an upset has the burden of proof.

G16. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

G17. DUTY TO COMPLY

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G18. TOXIC POLLUTANTS

The Permittee must comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G19. PENALTIES FOR TAMPERING

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit will, upon conviction, be punished by a fine of not more than $10,000 per

violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this Condition, punishment will be a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four (4) years, or by both.

G20. COMPLIANCE SCHEDULES

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than fourteen (14) days following each schedule date.

G21. REPORTING ANTICIPATED NON-COMPLIANCE

The Permittee shall give advance notice to Ecology by submission of a new application, or supplement to the existing application, at least 45 days prior to commencement of such discharges, of any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility or activity which may result in noncompliance with permit limits or conditions. Any maintenance of facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, shall be scheduled during non-critical water quality periods and carried out in a manner approved by Ecology.

G22. DUTY TO REAPPLY

The Permittee must reapply for coverage under this general permit at least one hundred and eighty (180) days prior to the specified expiration date of this general permit. An expired general permit and coverage under the permit continues in force and effect until Ecology issues a new general permit or until Ecology cancels it. Only those Permittees that reapply for coverage are covered under the continued permit.

APPENDIX A - GLOSSARY

All definitions listed below are for use in the context of this permit only.

303(d)-listed water body: Section 303(d) of the federal CWA requires states to develop a list of polluted water bodies every two years. For each of those water bodies, the law requires states to develop Total Maximum Daily Loads (TMDLs). A TMDL is the amount of pollutant loading that can occur in a given water body (river, marine water, wetland, stream, or lake) and still meet water quality standards.

Adopt: Permittees may choose to use an existing adaptive management plan for organisms treated under this permit as long as Ecology has approved and accepted the plan. For example, if WDFW has an Ecology-approved adaptive management plan for tunicate treatment, WDNR may choose to follow this plan rather than developing a new plan. The adopted plan must include the treatment proposed by WDNR.

Algae: Primitive, chiefly aquatic, one-celled or multicellular plant-like organisms that lack true stems, roots, and leaves but usually contain chlorophyll.

Algaecide: A chemical compound that kills or reduces the growth of algae

Allows: Permitted in compliance with the terms and conditions of this permit.

Application schedule: The proposed treatment date(s) for a specific water body during one treatment season.

Constructed water body: An artificial water body excavated in an area that is not part of a previously existing watercourse (such as a pond, stream, or wetland, etc.).

Control: Any type of chemical treatment intended to remove nonnative invasive organisms from a water body or area of a water body.

Discharge: The addition of any pollutant to a water of the state.

Emergencies: A situation where an immediate response (i.e. same day response) is needed to prevent reproduction or the rapid spread of an invasive species (example: zebra mussels). Incidents where rapid and early intervention is crucial to a successful management effort constitute an emergency. Examples include, but are not limited to, needing to treat species immediately to preclude or limit spawning or reproduction (tunicates). Timing is critical in these situations.

Endangered Species: Any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man.

Experimental Use Permit: Federal and state permits that allow the use of unregistered pesticides in the context of research and development for registration of the pesticide under FIFRA Section 3, or in the context of research and development for registration of a new use of a currently registered pesticide under FIFRA Section 3. See 40 CFR 172, 15.58.405 RCW, and WAC 16-228-1460.

Herbicide: A chemical designed to control or kill plants.

Highly populated area: An area where many people live or recreate.

High use area: An area heavily used by the public or the community. Examples include: A popular picnic area, boat launch, or a public or community swimming beach.

Hours or days: As related to the short-term modification section of Washington's *Water Quality Standards for Surface Waters of the State of Washington*. Hours or days means up to 13.9 days (see also WAC 173-201A-410).

Indian Country: Means as defined in 18 USC 1151: "Except as otherwise provided in sections 1154 and 1156 of this title, the term ''Indian country'', as used in this chapter, means (a) all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation, (b) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a state, and (c) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same."

Insecticide: A chemical used to prevent, repel, control, or kill insects.

Limiting: Restricting - treating only what is necessary to remove an invasive species or restricting treatment to times when the public is least impacted (e.g. weekdays).

Material safety data sheet (MSDS): Information sheet that contains details of the hazards associated with a chemical and gives information on its safe use.

Molluscicides: Chemicals used to kill mollusks (such as snails).

NOI: Notice of Intent (to apply for coverage). This is a term used to describe the completed application form.

Non-governmental organizations: Entities such as the Nature Conservancy that may have a role in managing nonnative invasive species. Many non-governmental organizations are non-profit.

Nonnative invasive: An organism outside of its natural or historical range of distribution that tends to spread and dominate new areas. Organisms considered to be nonnative were not present in Washington prior to European settlement. Many nonnative organisms are not invasive or problematic.

Organisms: Any life form considered as an entity; an animal, plant, fungus, protistan, or moneran.

Permittee: Any state government entity that applies for and gains coverage under this permit and has control of, or causes a discharge under coverage of this permit.

Pesticide: "Pesticide" means, but is not limited to: Any substance or mixture of substances intended to prevent, destroy, control, repel, or mitigate any insect, rodent, snail, slug, fungus, weed, and any other form of plant or animal life or virus, except virus on or in a living person or other animal which is normally considered to be a pest or which the director (of Agriculture) may declare to be a pest (RCW 17.21.020).

Piscicides: Chemicals used to kill fish.

Potentially invasive: A nonnative organism that has a possibility of spreading and dominating new areas, displacing native species.

Private applicators: Individuals applying pesticides. Licensed applicators hold a license from the Washington Department of Agriculture. Aquatic applications for some chemicals or products require a state-licensed applicator.

Privately or publicly-owned shorelines: Any shoreline area without public access, owned by either an individual or a public entity.

Public access: Identified legal passage to any of the public waters of the state, assuring that members of the public have access to and use of public waters.

Public Entrances: Areas such as public parking lots where numerous people can access public pathways. Although the public may be able to access public pathways at multiple locations, the Permittee must post two foot by three foot signs only in the areas where many people routinely access the pathway.

Public pathways: Identified legal passage along the shoreline of a water body. Public pathways may include walkways along the shorelines of lakes or rivers.

Recreational restriction: A recreational restriction limits direct water contact (e.g. swimming, water skiing, wading, etc.) for a specified time period in the treated area or for the entire lake, depending on the chemical or product used.

Seasonally dry land surfaces: An area that may be wet or contain standing water in the rainy season, but is dry during other times of the year. When dry, there must be no standing water present in the treatment area and the soils must not be saturated. Tidal lands do not meet the definition of seasonally dry land surfaces.

Sensitive, threatened, or endangered species – Washington State-Species of Concern:

Sensitive: Any taxon that is vulnerable or declining and could become endangered or threatened in the state without active management or removal of threats.

Threatened: Any taxon likely to become endangered in Washington within the foreseeable future if factors contributing to its population decline or habitat degradation or loss continue.

Endangered: Any taxon in danger of becoming extinct or extirpated from Washington within the foreseeable future if factors contributing to its decline continue. Populations of these taxa are at critically low levels or their habitats have been degraded or depleted to a significant degree.

Shoreline: The area where water and land meet.

Surface waters of the state of Washington: Freshwaters (lakes, rivers, ponds, streams, inland waters), brackish waters, marine waters, estuarine waters, and all other above ground waters and water courses within the jurisdiction of the state of Washington.

Take: Per Section 3 of the Endangered Species Act means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

Threatened Species: Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Treatment area: The area where the chemical is applied and the concentration of the chemical is adequate to cause the intended effect on targeted organisms.

Upland farm pond: Private farm ponds created from upland sites that did not incorporate natural water bodies (WAC 173-201A-260(3)(f)).

Volatile Organic Compound (VOC): EPA defines any volatile compound of carbon as a VOC for regulatory purposes, unless it appears on a list of compounds that have been specifically exempted. EPA periodically exempts compounds. *See* 40 CFR 51.100 (s).

Washington State government agencies: Washington state government agencies such as Washington Departments of Fish and Wildlife, Natural Resources, Agriculture, etc. Does not include local governments.

Wetland: Any area inundated with water sometime during the growing season and identified as a wetland by a local, state, or federal agency.

In the absence of other definitions set forth herein, the definition as set forth in 40 CFR Part 403.3 or in chapter 90.48 RCW shall be used for circumstances concerning discharges.