



Issuance Date: April 16, 2015
Effective Date: May 16, 2015
Expiration Date: May 15, 2020

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTE DISCHARGE PERMIT NO. WA0039781**

State of Washington
DEPARTMENT OF ECOLOGY
Olympia, Washington 98504-7775

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)

**The Willapa Grays Harbor Oyster Growers Association
P.O. Box 3
Ocean Park, Washington 98640**

is authorized to discharge in accordance with the special and general conditions that follow.

Activity: This permit covers all *burrowing shrimp* management activities that result in a *discharge of aquatic pesticides* containing the *active ingredient* imidacloprid to treat *commercial oyster and clam beds* (excluding geoduck culture).

Location: The area treated under this permit must not exceed 1,500 acres annually in Willapa Bay and 500 acres annually in Grays Harbor. The permit is not applicable to "Indian Country" as defined in 18 USC Sec. 1151, or Federal lands.

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

Richard Doenges
Southwest Region Manager
Water Quality Program
Washington State Department of Ecology

TABLE OF CONTENTS

SUMMARY OF PERMIT REPORTS AND SUBMITTALS	4
SPECIAL CONDITIONS	5
S1. DISCHARGE LIMITS.....	5
A. Activities Covered Under this Permit	5
B. Temporary Exceedance of Water Quality Standards	5
C. Impaired Water Bodies.....	6
S2. PRODUCT USE.....	6
A. Pesticide Application Requirements	6
B. Treatment Buffers	7
C. Annual Operations Plan	7
D. Shoreline Posting	7
E. Spill Prevention.....	7
F. Spill Notification Requirements.....	8
G. Spill Cleanup Requirements.....	8
H. Experimental Use	8
S3. SEDIMENT IMPACT ZONE.....	8
S4. MONITORING	11
A. Water Quality Monitoring Schedule	12
B. Sediment Monitoring Schedule.....	12
C. Sampling Point Location.....	13
D. Sediment Sampling and Analysis Plan.....	13
E. Sediment Data Report	13
F. Sediment Persistence Monitoring.....	13
G. Sediment Benthic Invertebrate Monitoring.....	14
S5. RECORDS	15
A. Records Retention	15
S6. REPORTING	16
A. Annual Operations Plan	16
B. Annual Report	17
C. Noncompliance Notification	17
S7. APPENDICES.....	18
GENERAL CONDITIONS.....	19
G1. PROPER OPERATION AND MAINTENANCE	19
G2. RIGHT OF ENTRY	19
G3. PERMIT ACTIONS.....	19
G4. REPORTING A CAUSE FOR REVOCATION OF COVERAGE.....	20
G5. TOXIC POLLUTANTS.....	21
G6. OTHER REQUIREMENTS OF TITLE 40 CODE OF FEDERAL REGULATIONS.....	21
G7. COMPLIANCE WITH OTHER LAWS AND STATUTES	21

G8. ADDITIONAL MONITORING21

G9. PAYMENT OF FEES21

G10. TRANSFER OF THIS PERMIT21

G11. PENALTIES FOR VIOLATING PERMIT CONDITIONS22

G12. PENALTIES FOR TAMPERING22

G13. SIGNATORY REQUIREMENTS22

G14. DUTY TO REAPPLY23

APPENDIX A - DEFINITIONS24

APPENDIX B - POSTING TEMPLATE26

APPENDIX C - SIZ MAPS27

SUMMARY OF PERMIT REPORTS AND SUBMITTALS

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

Permit Section	Submittal	Frequency	Due Date(s)
S2.F.	Spill Notification	As Necessary	As Necessary
S6.A.	Annual Operations Plan	Annually	March 1st
S6.B.	Annual Report (post-treatment report)	Annually	December 31st
S6.C.	Noncompliance Notification	As Necessary	As Necessary
G3.	Permit Actions	As Necessary	Within 14 days of request
G10.	Transfer of this permit	As Necessary	As Necessary
G14.	Duty to Reapply	Once Per Permit Cycle	November 17, 2019

The text of this permit contains words or phrases in *bold and italics*. These words or phrases are the first usage in the permit and are defined in Appendix A.

SPECIAL CONDITIONS

S1. DISCHARGE LIMITS

A. Activities Covered Under this Permit

1. All discharges and activities authorized by this permit must be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than, or in excess of that identified and authorized by this permit, violates the terms and conditions of this permit. The discharge of imidacloprid authorized by this permit is limited to waters of the state of Washington within Willapa Bay and Grays Harbor. Nothing in this permit shall be construed as authorizing imidacloprid discharge to the Shoalwater Indian Reservation.
2. Beginning on the effective date of this permit and lasting through the expiration date, the Permittee is authorized to apply imidacloprid only at the times and locations approved in the Annual Operations Plan specified in S6.A.
3. This permit authorizes the establishment of two **Sediment Impact Zones (SIZ)** in accordance with chapter 173-204-410(4) and 173-204-415 Washington Administrative Code (WAC). Areas within a SIZ that may be treated under this permit are transient and delineated on an annual basis, in accordance with the Annual Operations Plan. The portions of the SIZ's subject to treatment in a calendar year will be only those areas proposed and approved for application of imidacloprid. Monitoring as discussed in S4. of this permit shall be reviewed by Ecology to determine compliance with the above cited regulations.
4. The application of imidacloprid must not cause or contribute to a violation of the Water Quality Standards for Surface Waters of the State of Washington (chapter 173-201A WAC) outside of the provisions of S1.B, Ground Water Quality Standards (chapter 173-200 WAC), Sediment Management Standards (chapter 173-204 WAC), and human health criteria in the National Toxics Rule [40 Code of Federal Regulations (CFR) 131.36].
5. Permittees must use *all known, available, and reasonable methods of prevention, control, and treatment (AKART)* when applying imidacloprid. Compliance with this permit, the *Washington Pesticide Control Act*, the *Washington Pesticide Application Act*, the requirements of the *Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)* label constitute AKART.

B. Temporary Exceedance of Water Quality Standards

Temporary exceedance of water quality standards are allowed under this permit provided the Permittee complies with the provisions of chapter 173-201A-410 WAC.

C. Impaired Water Bodies

The Permittee must ensure that treatment does not cause or contribute to further impairment of Willapa Bay and/or Grays Harbor for any parameter for which Willapa Bay and/or Grays Harbor is listed as impaired.

S2. PRODUCT USE

The Permittee must comply with all requirements on the FIFRA product label. Permit requirements do not limit the requirements on the FIFRA label.

This permit does not convey property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights.

A. Pesticide Application Requirements

The Permittee must ensure that:

1. *Direct supervision* of the application of imidacloprid is performed by an aquatic licensed pesticide applicator.
2. All pesticide applicators must have current training in the use of equipment necessary to apply pesticides correctly.
3. Appropriately trained personnel must calibrate the application equipment prior to each application.

The Permittee may:

1. Only apply imidacloprid to commercial oyster and clam beds, excluding geoduck beds.
2. Apply a pesticide other than imidacloprid only under an appropriate experimental use permit (special condition S2.H), to commercial oyster and clam beds, excluding geoduck beds.
3. Apply imidacloprid to commercial oyster and clam beds once burrowing shrimp levels meet or exceed the *action threshold(s)* based on at least one pre-treatment survey. No oyster or clam bed may be treated with imidacloprid unless the mean burrow count exceeds the determined action threshold of ten burrows per square meter. If the mean burrow count is less than ten burrows per square meter, a bed may be treated with imidacloprid provided justification is provided and approved by the Department of Ecology (Ecology) prior to treatment.
4. Apply imidacloprid only from April 15th through December 15th (dates inclusive).
5. Only treat any single commercial oyster or clam bed once per calendar year.
6. Apply aerial application of imidacloprid when wind speeds do not exceed 10 miles per hour.

B. Treatment Buffers

The Permittee must maintain a 100-foot buffer zone between the treatment area and the nearest shellfish to be harvested within 30 days when treatment is by aerial spray.

The Permittee must maintain a 25-foot buffer zone between the treatment area and the nearest shellfish to be harvested within 30 days when treatment is by hand spray.

When mixing and loading without the use of a containment pad, the Permittee must maintain a 25-foot buffer between mixing and loading areas and potential surface to groundwater conduits such as field sumps, uncased well heads, sinkholes, or field drains.

No discharge to surface water or groundwater from the mixing and/or loading areas is allowed.

C. Annual Operations Plan

The Permittee must submit to Ecology an Annual Operations Plan (special condition S6.A.) by **March 1st annually** thereafter. Ecology will post the approved Annual Operations Plan to the Control of Burrowing Shrimp using Imidacloprid on Commercial Oyster and Clam Beds in Willapa Bay and Grays Harbor website.

D. Shoreline Posting

The Permittee must:

1. Post signs at all public access areas within 1/4 mile and all public boat launches within 1/4 mile radius of any area scheduled for treatment, using the template provided in Appendix B. Public access areas must be posted at 500 foot intervals at those access areas more than 500 feet wide. The Permittee may add additional treatment-related information to the sign, but may not remove required information.
2. Post signs at least two days before treatment.
3. Signs must be posted so that they are secure from the normal effects of weather and water currents, but cause no damage to private or public property.
4. Ensure that the posted signs remain in place for at least 30 days after treatment.
5. Remove all signs by the end of the treatment season.
6. Post signs in English and the language, if other than English, commonly spoken by the community that uses the area.

E. Spill Prevention

Permittees must:

1. Handle, store, and use all oil, fuel, chemicals, and products authorized under this permit in a manner that prevents spills.

2. Ensure all mobile equipment is maintained to prevent leaks or spills of petroleum products.
3. Have absorbent materials available for cleanup and the spill containment materials recommended in the Material Safety Data Sheet for imidacloprid.

F. Spill Notification Requirements

Permittees must immediately report spills to Ecology by calling 800-258-5990 and 800-424-8802. See <http://www.ecy.wa.gov/programs/spills/other/reportaspill.htm> for more environmental reporting information.

G. Spill Cleanup Requirements

1. In the event of a spill, Permittees must begin immediate containment and cleanup using appropriate materials. Cleanup takes precedent over normal work.
2. Cleanup includes proper disposal of any spilled materials and used cleanup materials.

H. Experimental Use

Experimental use of chemicals not listed in this permit may occur on a limited basis in the context of a research and development effort related to the chemical control of burrowing shrimp. Research and development efforts:

1. Shall be included in the Annual Operations Plan.
2. Must be conducted under a Washington State Experimental Use Permit (WSEUP) issued by the Washington State Department of Agriculture.
3. Must be limited to 1 acre or less for applications covered under this permit and a WSEUP only.
4. Which occur under this permit, a WSEUP, and a Federal Experimental Use Permit, can exceed 1 acre.
5. Are subject to all other conditions of this permit.

S3. SEDIMENT IMPACT ZONE

A. SIZ Authorization

As authorized under WAC 173-204-410(4), via this Permit, Ecology authorizes two Sediment Impact Zones (SIZ) for the National Pollutant Discharge Elimination System Waste Discharge Permit No. WA0039781, one for the Willapa Bay embayment and one for the Grays Harbor embayment. Ecology has determined that the Permittee's activity requiring SIZ authorization is in the public interest. Refer to the maps in Appendix C.

B. Imidacloprid Discharge

Beginning on the effective date of this permit, the Permittee is authorized to apply imidacloprid to commercial clam and oyster aquaculture plots in limited areas of Willapa Bay and Grays Harbor under authorization of two SIZ's, one for each embayment.

All imidacloprid discharges and activities authorized by the SIZ and permit must be consistent with the terms and conditions of this permit. The application of imidacloprid more frequently than, at a level in excess of, or which exceeds the maximum allowable biological effects criteria that are identified and authorized by this permit, violates the terms and conditions of this permit and the SIZ authorization.

Imidacloprid discharges and activities authorized by this permit may not result in a violation of the applicable sediment quality standards of WAC 173-204-320 through 173-204-340, outside the area limits of the established SIZ, without express permission from Ecology.

Due to the nature of the pesticide treatment and integrated pest management plan, areas within the SIZ that may be treated are transient and, delineated on an annual basis, and restricted to commercial clam and oyster aquaculture plots to be treated as identified in the Annual Operation Plan (S6.A.).

The boundaries of the allowable treatment areas within the SIZ coincide with the boundaries of the individual commercial clam and oyster aquaculture plots to be treated as identified in the Annual Operation Plan. Impacts to sediment quality outside the treatment plot boundaries as a result of imidacloprid application, without express permission from Ecology, violates the terms and conditions of this permit.

The SIZ in the Cedar River Area (northern Willapa Bay) and Grays Harbor are authorized under special conditions throughout the term of the permit. Ecology may modify or rescind the permit and SIZ authorization in these two areas dependant on results of field studies completed in calendar years 2015 and 2017. See Appendix C.

C. Maximum Biological Effects

The Sediment Impact Zone authorizes impacts to sediment quality on commercial clam and oyster aquaculture plots, which qualify to receive imidacloprid treatment under the conditions of this permit, allowing a temporary exceedance of the sediment quality standards (SQS) threshold of WAC 173-204-320 through 173-204-340 but not to exceed minor effects to the environment (SIZmax).

Minor effects, as pertaining to this permit, are defined as the maximum allowable biological effects within the SIZ and are exceeded if:

Any one of the following ecological metrics is reduced by more than 50 percent, at 14 days after imidacloprid application and the treatment metric mean is significantly less than the control using statistical comparisons.

1. Class Polychaeta Absolute Abundance
2. Class Polychaeta Taxonomic Richness
3. Phylum Mollusca Absolute Abundance

4. Phylum Mollusca Taxonomic Richness
5. Class Crustacea Absolute Abundance
6. Class Crustacea Taxonomic Richness

The SQS, as pertaining to this permit, is defined as the biological criteria at which no effects to the sediment quality or benthic fauna are expected to occur, and the criteria are exceeded if:

Any one of the following ecological metric means on the treatment plots are reduced by greater than 25 percent compared to a control.

1. Class Polychaeta Absolute Abundance
2. Class Polychaeta Taxonomic Richness
3. Phylum Mollusca Absolute Abundance
4. Phylum Mollusca Taxonomic Richness
5. Class Crustacea Absolute Abundance
6. Class Crustacea Taxonomic Richness

The Permittee must compare the treatment plot metrics to control plot metrics to determine compliance with SQS or minor effects criteria. The treatment plot metric mean must be compared to the control plot metric mean if the data are normally distributed. If the data are not normally distributed, the metric medians must be used. The Permittee is responsible for choosing control plots that are similar to the treatment plots in environmental characteristics and location so that they are likely to have similar benthic communities that may be statistically paired.

The Permittee must sample and monitor the SIZ (per S4.) and follow Ecology guidance in analyzing and interpreting the data collected. If after the biological data is collected and analyzed and it is determined by the Permittee or Ecology that the treatment plot and control plot are not statistically equivalent (within 25 percent of each other for each metric mean) prior to imidacloprid treatment, Ecology will perform a site-specific analysis and make a determination whether there was an effect on the treatment site.

D. SIZ Closure

In the final year of the permit, calendar year 2019, the SIZ must be closed after the annual imidacloprid treatment is completed in both Willapa Bay and Grays Harbor. No further imidacloprid treatment is authorized after SIZ closure monitoring commences. SIZ closure within Willapa Bay and Grays Harbor encompasses all plots treated with imidacloprid during the permit term not to exceed 7,500 acres in Willapa Bay and 2,500 acres in Grays Harbor. The SIZ must be closed by monitoring natural attenuation of residual imidacloprid and benthic invertebrate sampling. Year 2019 of the sediment monitoring schedule (S4.B.) further describes the SIZ closure monitoring requirements.

A SIZ closure plan must be included in the sampling and analysis plan (S4.D.) for calendar year 2019 and approved by Ecology.

During SIZ closure monitoring, in the final year of the permit term, the Permittee must conduct:

1. Monitoring of the natural attenuation of imidacloprid to the practical quantitation limit (PQL) on a representative treatment plot in both Willapa Bay and Grays Harbor per. The representative plot locations must be provided in the sediment sampling and analysis plan for that year and must be approved of by Ecology.
2. Benthic invertebrate sampling, per S4.G, to demonstrate that benthic organisms have recovered to 75% or greater than pretreatment metric values on a representative treatment plot in each estuary (Refer to S3.C.). The representative plot locations must be provided in the sediment sampling and analysis plan for that year and must be approved of by Ecology. Benthic monitoring during SIZ closure must occur at 14, 28, and 56 days after treatment.

If SIZ closure cannot be demonstrated, the SIZ will be ineligible for renewal.

S4. MONITORING

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 Environmental Protection Agency (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. Additionally, the following parameters, if analyzed, need not be analyzed by an accredited or registered laboratory:

- Flow.
- Temperature.
- Settleable solids.
- Conductivity, except that conductivity must be accredited if the laboratory must otherwise be registered or accredited.
- pH, except that pH must be accredited if the laboratory must otherwise be registered or accredited.
- Turbidity, except that turbidity must be accredited if the laboratory must otherwise be registered or accredited.
- Parameters which are used solely for internal process control.

Documentation of monitoring activities and results must include (if applicable):

- The date, exact place, and time of sampling.
- The dates analyses were performed.
- Who performed the analyses.
- The analytical techniques/methods used (if any).
- The results of such analyses.

Monitoring required by this section is intended to determine residual concentrations of imidacloprid in the area of application. Treatment locations vary each year and must be identified in the Annual Operations Plan required under S5.A. The Annual Operations Plan must specify the areas and timing of treatment, and identify appropriate corresponding sampling locations from those listed in S6.A.

A. Water Quality Monitoring Schedule

The Permittee must provide details in the sampling and analysis plan, located within the Annual Operations Plan, to evaluate the fate and transport of imidacloprid within the water column.

Samples for imidacloprid must be taken annually, on the largest bed treated, during the incoming tide immediately post-application of imidacloprid. Samples will be taken at 60, 120, 240, and 480 meters from the application site, following the predominant drainage. Samples will be prepared in accordance with EPA 3535A and must be evaluated under analysis method EPA 8321B.

B. Sediment Monitoring Schedule

The Permittee must collect sediment monitoring data annually per the sediment monitoring schedule below. Details pertaining to sediment persistence monitoring and benthic invertebrate monitoring are shown in S4.F and S4.G, respectively.

Sample Area	Sample Year				
	2015	2016	2017	2018	2019 (SIZ Closure)
Cedar River (Willapa Bay)	Benthic Invertebrate, Sediment Persistence	Sediment Persistence	Benthic Invertebrate, Sediment Persistence	--	--
Willapa Bay (Central)	Benthic Invertebrate, Sediment Persistence	--	--	Sediment Persistence	Benthic Invertebrate, Sediment Persistence

Sample Area	Sample Year				
	2015	2016	2017	2018	2019 (SIZ Closure)
Grays Harbor	Benthic Invertebrate, Sediment Persistence	Sediment Persistence	Benthic Invertebrate, Sediment Persistence	Sediment Persistence	Benthic Invertebrate, Sediment Persistence

C. Sampling Point Location

Specific sampling dates, locations for treatment sites and corresponding control site locations, will be dependent on the spray schedule and must be identified in the Annual Operations Plan S6.A each year. The number of sampling locations are required to be sufficient to meet compliance requirements as specified in section S4.G.

D. Sampling and Analysis Plan

The Permittee must submit to Ecology for review and approval a sampling and analysis plan by **March 1st annually**. The sampling and analysis plan must be included within the Annual Operations Plan. The purpose of the monitoring is to characterize potential impacts to sediments in the SIZ areas of Willapa Bay and Grays Harbor.

E. Sediment Data Report

The Permittee must collect annual sediment monitoring data per the sediment monitoring schedule (S4.B). Sediment monitoring includes annual imidacloprid persistence monitoring in whole sediment (S4.F) and benthic monitoring (S4.G) in 2015, 2017, and 2019. The Permittee must submit to Ecology a Sediment Data Report containing the results of the sediment sampling and analysis no later than **December 31** of the sampling year and must be included in the Annual Report of that year. If data is collected after this date, as may be the case with persistence data, results must be submitted as an addendum to the Sediment Data Report within 30 days of receipt of analytical data. The Permittee must submit two paper copies and an electronic copy (preferably as a PDF). The Sediment Data Report must conform to the approved Sampling and Analysis Plan. All benthic data must be tabulated and submitted to Ecology in an Excel spreadsheet along with the Sediment Data Report.

In addition to a Sediment Data Report, the sediment chemical and biological data, as applicable, must be submitted to Ecology's Environmental Information Management (EIM) database (<http://www.ecy.wa.gov/eim/>). Ecology's MyEIM tools must be used to confirm the accuracy of the submitted data (<http://www.ecy.wa.gov/eim/MyEIM.htm>).

F. Sediment Persistence Monitoring

Sediment persistence sampling for residual imidacloprid must consist of whole sediment samples monitored in accordance with the sediment sampling schedule (S4.B). The treatment plots to be sampled must be identified in the annual Sampling and Analysis Plan. Four sediment samples, representative of the treatment plot, must be collected post

treatment for whole sediment at low tide on days 14, 28, 56 and 112 after imidacloprid application. If imidacloprid is detected above the practical quantitation limit (PQL) 112 days after treatment in any of the four samples collected on any treatment plot, subsequent imidacloprid application will not be authorized until results are provided to Ecology which are below the PQL.

Four sediment samples, representative of each treatment plot, must be collected for whole sediment and total organic carbon one day prior to treatment.

Parameter	Preparation Method	Analysis Method
Conventionals		
Total Organic Carbon	--	EPA 9060
Imidacloprid		
Whole Sediment	EPA 3540C	EPA 8321B

Sediment samples must be collected from the entire biologically active zone, defined as the top 10 cm. Samples must be placed in 1-L, wide-mouth HDPE bottles and in a cooler on ice, and then transported to the laboratory under conditions and in a timeframe specified by the diagnostic laboratory.

Sediment samples must not be frozen. In the laboratory, each sediment sample must be homogenized. All whole sediment samples must be analyzed within the EPA method holding time. All sediment samples that are collected must be analyzed and the data reported to Ecology in the Sediment Data Report (S4.E). The results must include the locations where the samples were taken, time and date the samples were collected, and the measured imidacloprid concentration, or where not detected, the PQL for the laboratory tests.

G. Sediment Benthic Invertebrate Monitoring

Benthic invertebrate samples must be collected from Willapa Bay and Grays Harbor in accordance with the sediment sampling schedule (S4.B). Sediment samples for benthic analysis must also be collected from a control site. A minimum of 16 samples for benthic invertebrate analysis must be collected from the monitoring plot and control plot.

The Permittee must evaluate six ecological metrics:

1. Class Polychaeta Absolute Abundance
2. Class Polychaeta Taxonomic Richness
3. Phylum Mollusca Absolute Abundance
4. Phylum Mollusca Taxonomic Richness
5. Class Crustacea Absolute Abundance

6. Class Crustacea Taxonomic Richness

Benthic invertebrate samples must be taken using a gridded distribution pattern, representing the entire treatment plot, and incorporating the plot's variation and ecological features. A control plot, where no pesticide has been applied in the previous five years, must be chosen that incorporates as many of the treatment plot variables as possible, such as, but not limited to, substrate composition, eelgrass density, and elevation. The Permittee must make every practicable effort to identify a control plot which matches the treatment plot with similar characteristics to minimize the potential that the data will not be suitable for comparison.

The control plot must be sampled for imidacloprid in whole sediment per S4.F, to verify no detectable (PQL) imidacloprid is present in the sediment.

Benthic invertebrate samples must be taken from the treatment and control plot 1 day prior to the application of imidacloprid and at 14 days after treatment to verify the application did not exceed minor effects criteria. During SIZ closure in 2019, benthic invertebrate samples must be collected 1 day prior to the application of imidacloprid and at 14, 28, and 56 days after treatment to verify benthic recovery of the SIZ, relative to the control site, to SQS criteria.

A sub-plot, no smaller than 10 acres, may be positioned within the treatment plot if it is demonstrated that it is infeasible to sample a larger treatment plot within a single low tide interval. The 10 acre sub-plot must encompass as many of the overall treatment plot's ecological features as possible to ensure it is representative of the overall treatment plot. The sub-plot, if selected, must be identified in the sediment sampling and analysis plan and approved by Ecology.

Benthic invertebrates must be sampled using a minimum of a 10-cm internal diameter corer to a depth of 10 cm. Cores must be immediately sieved through a 0.5-millimeter (mm) mesh sieve using salt water. The sieved material which is retained on the screen must then be placed in a 10 percent buffered formalin solution. Sample jars must be labeled according to a specific sample station, replicate number, and sample date on the inside and outside. Samples must then be re-sieved through a 100-micrometer (μm) mesh sieve using freshwater. The non-passing sieve material (benthic organisms) must then be transferred to a 70 percent isopropyl alcohol solution, stained with rose Bengal, and stored at room temperature until identified and counted.

All Crustaceans, Mollusks, and Polychaetes animal groups from each sample must be counted and identified to the lowest practicable taxonomic level as determined by the lab doing the identification.

S5. RECORDS

A. Records Retention

1. The Permittee must retain records of all permitting and monitoring information for a minimum of five years. Such information must include copies of all reports required by this permit and records of all data used to complete the application for coverage.

2. The Permittee must keep records longer in the event of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology.
3. The Permittee must make the records, reports, surveys, plans, public notices, and other information required by this permit available to Ecology on request.

S6. REPORTING

The Permittee must use the Water Quality Permitting Portal – Permit Submittals application (unless otherwise specified in the permit) to submit all written permit-required reports by the date specified in the permit.

When another permit condition requires submittal of a paper (hard-copy) report, the Permittee must ensure that it is postmarked or received by Ecology no later than the dates specified by this permit. Send these paper reports to Ecology at:

Department of Ecology
Water Quality Program
Attn: Imidacloprid Permit Manager
P.O. Box 47775
Olympia, WA 98504-7775

A. Annual Operations Plan

The Permittee must submit an Annual Operations Plan for applying imidacloprid to selected oyster and clam beds by **March 1st** of each year. Ecology must approve the Annual Operations Plan before the Permittee may apply imidacloprid.

The area to be treated under this permit must not exceed 1,500 acres annually in Willapa Bay and 500 acres annually in Grays Harbor. The same oyster and clam beds do not have to be treated annually, although the total acres treated annually must not exceed the above limits.

No applications shall take place outside the areas identified in the approved Annual Operations Plan. Applications may only take place from **April 15th through December 15th (dates inclusive)**.

1. Annual Operations Plan Requirements:
 - a. The treatment schedule showing the days, times, number of acres, oyster and clam bed designations, and burrow counts for each oyster and clam bed; no oyster bed may be treated with imidacloprid unless the mean burrow count exceeds the determined action threshold of ten burrows per square meter. If the mean burrow count is less than ten burrows per square meter, a bed may be treated with imidacloprid provided justification is provided and approved by Ecology.
 - b. Locations of acreage planned for treatment, including GPS coordinates.
 - c. Maps delineating the locations of the areas planned for treatment.

- d. The name and telephone number of the person(s) responsible for the management of the treatment program
- e. Documentation and locations of all postings signs at public and privately-owned access points.
- f. Written permission from the landowners of the proposed imidacloprid application sites for access by Ecology employees as described in General Condition G2.
- g. An annual Sampling and Analysis Plan.
- h. A list of proposed sampling sites and a sampling schedule based on the anticipated spray locations. The sampling plan must meet the requirements described in condition S3 and be performed according to the conditions in S4.
- i. Identification of measuring device to be used for monitoring wind velocity during application.

B. Annual Report

Permittees must submit an annual report to Ecology by **December 31st** of each year regardless of whether or not treatment or monitoring occurred.

1. The annual report must include:
 - a. Locations of acreage treated, including GPS coordinates of each corner of the area.
 - b. The size, in acres, of each treated area.
 - c. Date treatment occurred on each area treated.
 - d. The amount of active ingredient applied to the treated area.
 - e. The results of the monitoring required in special condition S4.
 - f. Sediment Data Report as required in S4.E.

C. Noncompliance Notification

In the event a Permittee is unable to comply with any of the terms and conditions of this permit, which may endanger health or the environment, the Permittee must immediately stop the activity causing the noncompliance, correct the problem, orally notify the permit manager at Ecology within 24 hours of the failure to comply, and return to compliance as quickly as possible.

A written submission shall also be provided within five days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is

expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

S7. APPENDICES

The attached appendices are incorporated by reference into this permit.

APPENDIX A – DEFINITIONS

APPENDIX B – SIGN TEMPLATE

APPENDIX C – SIZ MAPS

GENERAL CONDITIONS

G1. PROPER OPERATION AND MAINTENANCE

The Permittee must at all times properly operate and maintain all systems of treatment and control to achieve compliance with the terms and conditions of the individual permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary systems which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of this permit. The Permittee must not allow concentrations of imidacloprid to exceed FIFRA label requirements.

G2. RIGHT OF ENTRY

The Permittee must allow an authorized representative of Ecology, upon the presentation of credentials and such other documents as may be required by law, at reasonable times:

- A. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this individual permit;
- B. To have access to and to copy any records that must be kept under the terms and conditions of the permit;
- C. To inspect any posting, monitoring equipment, or method of monitoring required in this permit;
- D. To inspect any collection, treatment, pollution management, or discharge facilities; and
- E. To sample any discharge of pollutants.

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 this permit 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.

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.
 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 pretreatment program into a municipality's permit.
- C. The following are causes for modification or alternatively revocation and reissuance:
1. When cause exists for termination for reasons listed in 1.a through 1.g of this section, and Ecology determines that modification or revocation and reissuance is appropriate.
 2. When 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 (General Condition G10) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new Permittee.

G4. REPORTING A CAUSE FOR REVOCATION OF COVERAGE

A Permittee who knows or has reason to believe that any activity has occurred or will occur which would constitute cause for revocation under condition G3 above or 40 CFR 122.62 must report such information to Ecology so that a decision can be made on whether action to revoke coverage under this individual permit will be required.

G5. TOXIC POLLUTANTS

Permittees 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.

G6. OTHER REQUIREMENTS OF TITLE 40 CODE OF FEDERAL REGULATIONS

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

G7. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit excuses a Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G8. ADDITIONAL MONITORING

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

G9. PAYMENT OF FEES

Permittees must submit payment of fees associated with this permit as assessed by Ecology.

G10. 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.

A. Transfers by Modification

Except as provided in paragraph (2) below, this permit may be transferred by the Permittee to a new owner or operator only if this permit has been modified or revoked and reissued under 40 CFR 122.62(b)(2), or a minor modification made under 40 CFR 122.63(d), to identify the new Permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

B. Automatic Transfers

This permit may be automatically transferred to a new Permittee if:

1. The Permittee notifies Ecology at least 30 days in advance of the proposed transfer date.
2. The notice includes a written agreement between the existing and new Permittees containing a specific date transfer of permit responsibility, coverage, and liability between them.

3. Ecology does not notify the existing Permittee and the proposed new Permittee of its intent to modify or revoke and reissue this permit. A modification under this subparagraph may also be minor modification under 40 CFR 122.63. If this notice is not received, the transfer is effective on the date specified in the written agreement.

G11. 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 shall be punished by a fine of up to \$10,000 and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit will incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to \$10,000 for every such violation. Each and every violation is a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

G12. 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 shall, 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 shall be a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or by both.

G13. SIGNATORY REQUIREMENTS

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

- A. In the case of a municipal, state, or public facility, all permit applications must be signed by a principal executive officer or ranking elected official. In the case of a corporation, partnership, or sole proprietorship, all permit applications must be signed by either a principal executive officer of at least the level of vice president of a corporation, a general partner of a partnership, or the proprietor of a sole proprietorship.
- B. All reports required by this permit and other information requested by Ecology shall 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 a person described above and submitted to Ecology.
 2. The authorization specifies either an individual or a position having responsibility for the overall operation of a regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A

duly authorized representative may thus be either a named individual or any individual occupying a named position.)

- C. Changes to authorization. If an authorization under paragraph B.2 above is no longer accurate because a different individual or position has responsibility for environmental matters, a new authorization satisfying the requirements of paragraph B.2 must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.
- D. Certification. 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 inquiries 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 fines and imprisonment for knowing violations.

G14. DUTY TO REAPPLY

The Permittee must submit an application for renewal of this permit by **October 31, 2018**.

APPENDIX A - DEFINITIONS

Action threshold: The density of, or number of individuals in, a pest population that triggers management activities.

All known, available, and reasonable methods of prevention, control, and treatment: (AKART): A technology-based approach to limiting pollution from discharges. Described in chapters 90.48 and 90.54 RCW and chapters 173-201A, 173-204, 173-216 and 173-220 WAC.

Applicant: The Willapa/Grays Harbor Oyster Growers Association (WGHOGA).

Aquatic License: As defined in WAC 16-228-1545(3)(u).

Commercial clam beds: Marine or estuarine areas where clams (excluding geoduck and oysters) are raised and harvested for commercial sale under a current Washington State business license.

Direct Supervision: As defined in RCW 17.21.020(13).

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

Discharge Management Plan: A plan that documents intended pest management strategies based on action thresholds using the principles of *integrated pest management*.

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA): A set of EPA regulations that establishes uniform pesticide product labeling, use restrictions, and review and labeling of new pesticides.

Integrated Pest Management: A pest management strategy that incorporates pest population monitoring, multiple control methodologies including the possibility of no control, and setting action thresholds to determine when pest control will be most effective.

Notice of Intent (NOI): The application form that Ecology specifies the applicant must use to apply for permit coverage.

Permittee: Any aquatic licensed pesticide applicator with coverage under this permit.

Pesticide: Means as defined in RCW's 15.58.030(31) and 17.21.020(36)

Pesticide Applicator: An individual licensed by Washington Department of Agriculture under chapters 17.21 RCW and chapter 16-228 WAC to apply pesticides.

Sediment Impact Zone (SIZ): The Sediment Impact Zone authorizes impacts to sediment quality on commercial clam and oyster aquaculture plots, which qualify to receive imidacloprid treatment under the conditions of this permit, allowing a temporary exceedance of the sediment quality standards (SQS) threshold of WAC 173-204-320 through 173-204-340 but not to exceed minor effects to the environment (SIZmax).

Sensitive, threatened, or endangered:

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

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

State Environmental Policy Act (SEPA): Chapter 43.21C RCW and Chapter 197-11 WAC.

State experimental use permit: A permit issued by WSDA that allows the use of pesticides that are not registered or labeled for a particular use pattern for the purposes of research and development.

Surface waters of the state of Washington: All waters within the geographic boundaries of the State of Washington defined as "waters of the United States" in 40 CFR 122.2, and all waters defined as "waters of the state" in RCW 90.48.020 excluding underground waters. These include lakes, rivers, ponds, streams, inland waters, wetlands, marine waters, estuaries, and all other fresh or brackish waters and water courses, within the jurisdiction of the State of Washington, plus drainages to those surface waters.

Treatment: Applying an insecticide to burrowing shrimp populations (*Upogebia pugettensis*; *Neotrypaea californiensis*).

Washington Pesticide Application Act: Chapter 17.21 RCW.

Washington Pesticide Control Act: Chapter 15.58 RCW.

In the absence of other definitions set forth herein, the definitions set forth in 40 CFR Part 403.3 or in chapter 90.48 RCW apply.

APPENDIX B - POSTING TEMPLATE

Warning

Imidacloprid will be applied for burrowing shrimp control on (date) on commercial shellfish beds at the following locations:

Do not Fish, Crab, or Clam within one-quarter mile of the treated area.

For more information about this treatment, contact: _____

Phone number: ____ - _____. (Permittee to list a phone number for a contact that can explain the treatment and treatment location(s) to the caller).

Or the permitting agency Department of Ecology at ____ - _____

APPENDIX C – SIZ MAPS



