

Pier 70 2801 Alaskan Way, Suite 300 Seattle, Washington 98121

> OFFICE 206.624.8300 FAX 206.340.9599

Douglas J. Steding, Ph.D. doug.steding@millernash.com 206.777.7552 direct line

January 8, 2016

# Via Electronic and U.S. Mail

Rich Doenges Director, Water Quality Department of Ecology, Southwest Region P.O. Box 47775 Olympia, WA 98504-7775

Subject:

WGHOGA RE-Application for an NPDES Permit

Dear Mr. Doenges:

We are transmitting the enclosed application package on behalf of the Willapa-Grays Harbor Oyster Growers Association for the use of imidacloprid to control burrowing shrimp infestations on Association member tidelands.

Also, under separate cover, we are submitting a formal request to the Washington Department of Ecology to reinstate permit Number WA0039781, cancelled by Ecology on May 4, 2015. To be clear, this new application should not be construed as a waiver of any rights the Association may have with respect to that cancellation.

The Association greatly appreciates the hard work and time invested by Ecology staff in this permit and in helping the growers save their farms.

Very truly yours,

Douglas J. Steding, Ph.D.

cc:

Derek Rockett Lee Overton

Portland, OR Seattle, WA Vancouver, WA Bend, OR Long Beach, CA

MILLERNASH.COM

# Disclaimer

This is an updated WORD document that allows you to type your information directly into the form, print it, and save the completed form.

This form is not password protected. Use F11 to navigate through fields.

# Instructions:

- 1. Type in your information
- 2. Save file electronically
- 3. Print the completed form
- 4. Sign and date the printed copy
- 5. Mail it and an electronic copy to the directed Ecology contact.



United States Environmental Protection Agency Office of Enforcement Washington, D.C 20460

EPA Form 3510-1 Ecology Form #ECY 070-429 Ecology Revision 10/2011

Permits Division

# **Application Form 1 – General Information**

# Consolidated Permits Program

This form must be completed by all persons applying for a permit under EPA's Consolidated Permits Program. See the general instructions to Form 1 to determine which other application forms you will need.

# DESCRIPTION OF CONSOLIDATED PERMIT APPLICATION FORMS

The Consolidated Permit Application Forms are:

- Form 1 General Information (included in this part);
- Form 2 Discharges to Surface Water (NPDES Permits):
  - 2A. Publicly Owned Treatment Works,
  - 2B. Concentrated Animal Feeding Operations and Aquatic Animal Production Facilities.
  - 2C. Existing Manufacturing, Commercial, Mining, and Silvicultural Operations.
  - 2D. New Manufacturing, Commercial, Mining, and Silvicultural Operations,
  - 2F. Application for Permit to Discharge Storm Water Associated with Industrial Activity;
- Form 3 Hazardous Waste Application Form
- Form 4 Underground Injection of Fluids.

# FORM 1 PACKAGE TABLE OF CONTENTS

Section A. General Instructions

Section B. Instructions for Form 1

Section C. Activities Which do Not Require Permits

Section D. Glossary

Form 1

If you are submitting this form to the Washington State Department of Ecology, please submit it electronically (email or disk) in addition to the signed hard copy.

## **SECTION A - GENERAL INSTRUCTIONS**

# **Who Must Apply**

With the exceptions described in Section C of these instructions, Federal laws prohibit you from conducting any of the following activities without a permit.

NPDES (National Pollutant Discharge Elimination System Under the Clean Water Act, 33 U.S.C. 1251). Discharge of pollutants into the waters of the United States.

RCRA (Resource Conservation and Recovery Act, 42 U.S. C. 6901). Treatment, storage, or disposal of hazardous wastes.

UIC (Underground Injection Control Under the Safe Drinking Water Act, 42 U.S. C. 300f). Injection of fluids underground by gravity flow or pumping.

PSD (Prevention of Significant Deterioration Under the Clean Air Act, 72 U.S. C. 7401). Emission of an air pollutant by a new or modified facility in or near an area which has attained the National Ambient Air Quality Standards for that pollutant.

Each of the above permit programs is operated in any particular State by either the United States Environmental Protection Agency (EPA) or by an approved State agency. You must use this application form to apply for a permit for those programs administered by EPA. For those programs administered by approved States, contact the State environmental agency for the proper forms.

If you have any questions about whether you need a permit under any of the above programs, or if you need information as to whether a particular program is administered by EPA or a State agency, or if you need to obtain application forms, contact your EPA Regional office (see address opposite column).

Upon your request, and based upon information supplied by you, Ecology will determine whether you are required to obtain a permit for a particular facility. Be sure to contact Ecology if you have a question, because Federal and State laws provide that you may be heavily penalized if you do not apply for a permit when a permit is required.

Form 1 of the EPA consolidated application forms collects general information applying to all programs. You must fill out Form 1 regardless of which permit you are applying for. In addition, you must fill out one of the supplementary forms (Forms 2 - 5) for each permit needed under each of the above programs. Item II of Form 1 will guide you to the appropriate supplementary forms.

You should note that there are certain exclusions to the permit requirements listed above. The exclusions are described in detail in Section C of these instructions. If your activities are excluded from permit requirements then you do not need to complete and return any forms.

NOTE: Certain activities not listed above also are subject to EPA administered environmental permit requirements. These include permits for ocean dumping, dredged or fill material discharging, and certain types of air emissions. Contact your EPA Regional office for further information.

EPA REGION 10 (Federal and Tribal Facilities)

Permit Contact (M/S 521), U.S. Environmental Protection Agency 1200 6<sup>th</sup> Avenue, Seattle, WA 98101 (206) 442-7176 FTS 399-7176. Alaska, Idaho, Oregon, and Washington.

## Where to File

The application forms should be mailed to the appropriate Ecology Regional Office. See <a href="http://www.ecy.wa.gov/org.html">http://www.ecy.wa.gov/org.html</a>

#### When to File

Because of statutory requirements, the deadlines for filing applications vary according to the type of facility you operate, the type of permit you need and if your current permit specifies reapplication dates. The minimum deadlines are provided in Table 1.

#### Table 1. Filing Dates for Permits<sup>1</sup>

FORM (permit) WHEN TO FILE
2A(NPDES)
2B(NPDES)
2C(NPDES)
2D(NPDES)
2F (NPDES) 180 days prior to startup.
3(Hazardous Waste) Existing facility: Six months following publication of regulations listing hazardous wastes.  New facility: 180 days before commencing physical construction.
(UIC)

<sup>1</sup> Please note that some of these forms are not yet available for use and are listed as "Reserved" at the beginning of these instructions. Contact your EPA Regional office for information on current application requirements and forms.

Federal regulations provide that you may not begin to construct a new source in the NPDES program, a new hazardous waste management facility, a new injection well, or a facility covered by the PSD program before the issuance of a permit under the applicable program. Please note that if you are required to obtain a permit before beginning construction, as described above, you may need to submit your permit application well in advance of an applicable deadline listed in Table 2.

#### Fees

Ecology charges a fee for applications for new individual wastewater discharge permits.

# Availability of Information to the Public

Information contained in these application forms will, upon request, be made available to the public for inspection and copying. However, you may request confidential treatment for certain information which you submit on certain supplementary forms. The specific instructions for each supplementary form state what information on the form, if any, may be claimed as confidential and what procedures govern the claim. No information on Forms 1 and 2A through 2D may be claimed as confidential.

# Completion of Forms

Unless otherwise specified in instructions to the forms, each item in each form must be answered. To indicate that each item has been considered, enter "NA," for not applicable, if a particular item does not fit the circumstances or characteristics of your facility or activity.

If you have previously submitted information to EPA or to an approved state agency which answers a question, you may either repeat the information in the space provided or attach a copy of the previous submission. Some items in the form require narrative explanation. If more space is necessary to answer a question, attach a separate sheet entitled "Additional Information."

#### Financial Assistance for Pollution Control

There are a number of direct loans, loan guarantees, and grants available to firms and communities for pollution control expenditures. These are provided by the Small Business Administration, the Economic Development Administration, the Farmers Home Administration, and the Department of Housing and Urban Development. EPA Region 10 office has an economic assistance coordinator who can provide you with additional information. EPA's construction grants program under Title II of the Clean Water Act is an additional source of assistance to publicly owned treatment works. Contact your EPA Region 10 office for details.

<sup>&</sup>lt;sup>2</sup>Ecology recommends new facilities submit application at least one year before commencing operation. Application to renew an existing permit is usually required one year before expiration.

# SECTION B - FORM 1 LINE-BY-LINE INSTRUCTIONS

# This form must be completed by all applicants.

#### Item I

Space is provided at the upper right hand corner of Form 1 for insertion of your Identification Number. If you have an existing wastewater discharge permit, enter the permit number here. If your facility does not currently have a wastewater discharge permit, leave this item blank.

#### Item II

Answer each question to determine which supplementary forms you need to fill out. Be sure to check the glossary in Section D of these instructions for the legal definitions of the bold faced words. Check Section C of these instructions to determine whether your activity is excluded from permit requirements.

If you answer "no" to every question, then you do not need a permit, and you do not need to complete and return any of these forms.

If you answer "yes" to any question, then you must complete and file the supplementary form by the deadline listed in Table 1 along with this form. (The applicable form number follows each question and is enclosed in parentheses.) You need not submit a supplementary form if you already have a permit under the appropriate federal program, unless your permit is due to expire and you wish to renew your permit.

Questions (I) and (J) of Item II refer to major new or modified sources subject to Prevention of Significant Deterioration (PSD) requirements under the Clean Air Act. For the purpose of the PSD program, major sources are defined as: (A) Sources listed in Table 3 which have the potential to emit 100 tons or more per year emissions; and (B) All other sources with the potential to emit 250 tons or more per year. See Section C of these instructions for discussion of exclusions of certain modified sources.

Table 2. 28 Industrial Categories Listed in Section 169(1) of the Clean Air Act of 1977

Fossil fuel-fired steam generators of more than 250 million BTU per hour heat input;

Coal cleaning plants (with thermal dryers);
Kraft pulp mills;
Portland cement plants;
Primary zinc smelters;
Iron and steel mill plants;

Primary aluminum ore reduction plants;

Primary auminum ore reduction plants;
Primary copper smelters;
Municipal incinerators capable of charging more than 250 tons of refuse per day;
Hydrofluoric acid plants;
Nitric acid plants;
Sulfuric acid plants;
Petroleum refineries;

Lime plants;

Phosphate rock processing plants; Coke oven batteries;

Sulfur recovery plants; Carbon black plants (furnace process);

Primary lead smelters;

Fuel conversion plants; Sintering plants;

Secondary metal production plants;

Chemical process plants;
Fossil fuel boilers (or combination thereof) totaling more than 250 million BTU per hour heat input.

Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;

Taconite ore processing plants; Glass fiber processing plants; and Charcoal production plants.

#### Item III

Enter the facility's official or legal name. Do not use a colloquial name.

#### Item IV

Give the name, title, and work telephone number of a person who is thoroughly familiar with the operation of the facility and with the facts reported in this application and who can be contacted by reviewing offices if necessary.

#### Item V

Give the complete mailing address of the office where correspondence should be sent. This office is not the address used to designate the location of the facility.

#### Item VI

Give the address or location of the facility identified in Item III of this form. If the facility lacks a street name or route number, give the most accurate alternative geographic information (e.g. section number or quarter section number from the county records or at the intersection of Rts 425 and 22.)

Give the latitude and longitude using NAD83 (GCS North America 1983) or WGS84 datum reference. Use degree decimal format to 4 decimal places (e.g. N47.0123)

#### Item VII

List, in descending order of significance, the four 4-digit standard industrial classification (SIC) codes which best describe your facility in terms of the principal products or services you produce or provide. Also, specify each classification in words. These classifications may differ from the SIC codes describing the operation generating the discharge, air emissions, or hazardous wastes.

SIC code numbers are descriptions which may be found in the "Standard Industrial Classification Manual" prepared by the Executive Office of the President, Office of Management and Budget, which is available from the Government Printing Office. Washington, D.C. Use the current edition of the manual. See the website http://www.naics.com/search.htm for more information.

The Department of Licensing issues you a UB! number (Unified Business Identifier) with your business license. The Washington State Departments of Revenue, Licensing, Employment Security. Labor and Industry, and the Office of the Secretary of State use this number to identify your business. You can identify your UBI number at the following Department of Revenue website: http://dor.wa.gov/content/doingbusiness/registermybusiness/brd/

#### Item VIII-A

Give the name, as it is legally referred to, of the person, firm, public organization, or any other entity which operates the facility described in this application. This may or may not be the same name as the facility. The operator of the facility is the legal entity which controls the facility's operation rather than the plant or site manager. Do not use a colloquial name.

#### Item VIII-B

Indicate whether the entity which operates the facility also owns it by marking the appropriate box.

# SECTION B - FORM 1 LINE-BY-LINE INSTRUCTIONS (continued)

## Item VIII-C

Enter the appropriate letter to indicate the legal status of the operator of the facility. Indicate "public" for a facility solely owned by local government(s) such as a city, town, county, parish, etc.

#### Items VIII-D-H

Enter the telephone number and address of the operator identified in Item VIII-A.

#### Item IX

Indicate whether the facility is located on Indian Lands.

#### Item X

Give the number of each presently effective permit issued to the facility for each program or, if you have previously filed an application but have not yet received a permit, give the number of the application, if any. Fill in the unshaded area only. If you have more than one currently effective permit for your facility under a particular permit program, you may list additional permit numbers on a separate sheet of paper. List any relevant environmental Federal (e.g., permits under the Ocean Dumping Act, Section 404 of the Clean Water Act or the Surface Mining control and Reclamation Act), State (e.g., State permits for new air emission sources in nonattainment areas under Part D of the Clean Water Act), or local permits or applications under "other."

#### Item XI

Provide a topographic map or maps of the area extending at least one mile beyond the property boundaries of the facility, which clearly show the following:

The legal boundaries of the facility;

The location and serial number of each of your existing and proposed intake and discharge structures;

All hazardous waste management facilities;

Each well where you inject fluids underground; and

All springs and surface water bodies in the area, plus all drinking water wells within 1/4 mile of the facility which are identified in the public record or otherwise known to you.

If an intake or discharge structure, hazardous waste disposal site, or injection well associated with the facility is located more than one mile from the plant, include it on the map, if possible. If not, attach additional sheets describing the location of the structure, disposal site, or well, and identify the U.S. Geological Survey (or other) map corresponding to the location.

On each map, include the map scale, a meridian arrow showing north, and latitude and longitude to 4 decimal places. On all maps of rivers, show the direction of the current, and in tidal waters, show the direction of the ebb and flow tides. Use a 7-1/2 minute series map published by the U.S. Geological Survey, which may be obtained through the U.S. Geological Survey Offices listed below. If a 7-1/2 minute series map has not been published for your facility site, then you may use a 15 minute series map from the U.S. Geological Survey. If neither a 7-1/2 nor 15 minute series map has been published for your facility site, use a plat map or other appropriate map, including all the requested information; in this case, briefly describe land uses in the map area (e.g., residential, commercial).

You may trace your map from a geological survey chart, or other map meeting the above specifications. If you do, your map should bear a note showing the number or title of the map or chart it was traced from. Include the names of nearby towns, water bodies, and other prominent points. An example of an acceptable location map is shown in Figure 1-1 of these instructions. (NOTE: Figure 1-1 is provided for purposes of illustration only, and does not represent any actual facility.)

## **USGS OFFICE**

# **AREA SERVED**

Eastern Mapping Center National Cartographic Information Center U.S.G.S. 536 National Center Reston, VA 22092 Phone No. (703) 860-6336 AL, CT., DE., D.C., FL, GA, IN, KY, ME, MD, MA, NH, NJ, NY, NC, SC, OH, PA, Puerto Rico, RI, TN, VT, VA, WV, and U.S. Virgin Islands.

Mid Continent Mapping Center National Cartographic Information Center U.S.G.S. 1400 Independence Road

AR, IL, IA, KS, LA, MI, MN, MS, MO, ND, NE, OK, SD, and WI

1400 Independence Road Rolla, MO. 65401 Phone No. (314) 341-0851 Rocky Mountain Mapping Center

AK, CO, MT, NM, TX, UT, and WY

National Cartographic Information Center U.S.G.S.

Stop 504, Box 25046 Federal Center

Denver, CO 80225 Phone No. (303) 234-2326

Western Mapping Center National Cartographic Information Center U.S.G.S.

AZ, CA, HI, ID, NV, OR, WA, American Samoa, Guam, and Trust Territories

345 Middlefield Road Menlo Park, CA 94025 Phone No. (415) 323-8111

#### tem XII

Briefly describe the nature of your business (e.g., products produced or services provided).

#### item XIII

Federal statues authorize severe penalties for submitting false information on this application form.

18 U.S.C. Section 1001 provides that "Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both."

Section 309(c)(2) of the Clean Water Act and Section 113(c)(2) of the Clean Air Act each provide that "Any person knowingly makes any false statement, representation, or certification in any application, . . . shall upon conviction, be punished by a fine of no more than \$10,000 or by imprisonment for not more than six months, or both."

In addition, Section 3008(d)(3) of the Resource Conservation and Recovery Act provides for a fine up to \$25,000 per day or imprisonment up to one year, or both, for a first conviction for making a false statement in any application under the Act, and for double these penalties upon subsequent convictions.

# FEDERAL REGULATIONS REQUIRE THIS APPLICATION TO BE SIGNED AS FOLLOWS:

- A. For a corporation, by a principal executive officer of at least the level of vice president. However, if the only activity in Item II which is marked "yes" is Question G, the officer may authorize a person having responsibility for the overall operations of the well or well field to sign the certification. In that case, the authorization must be written and submitted to the permitting authority;
- B. For partnership or sole proprietorship, by a general partner or the proprietor, respectively; or For a municipality, state, Federal, or other public facility, by either a principal executive officer or ranking elected official (e.g. mayor).
- C. For a municipality, state, Federal, or other public facility, by either a principal executive officer or ranking elected official.

# SECTION C - ACTIVITIES WHICH DO NOT REQUIRE PERMITS

I. National Pollutant Discharge Elimination System Permits Under the Clean Water Act. You are not required to obtain a NPDES permit if your discharge is in one of the following categories, as provided by the Clean Water Act (CWA) and by the NPDES regulations (40 CFR Parts 122–125). However, under Section 510 of CWA a discharge exempt from the federal NPDES requirements may still be regulated by a state authority; contact Ecology to determine whether you need a state permit.

A. DREDGED OR FILL MATERIAL. Discharges of dredged or fill material into waters of the United States do not need NPDES permits if the dredging or filling is authorized by a permit issued by the U.S. Army Corps of Engineers or an EPA approved state under Section 404 of CWA.

B. DISCHARGES INTO PUBLICLY OWNED TREATMENT WORKS (POTW). The introduction of sewage, industrial wastes, or other pollutants into a POTW does not need an NPDES permit but may require a state permit. You must comply with all applicable pretreatment standards promulgated under Section 307(b) of CWA, which may be included in the permit issued to the POTW. If you have a plan or an agreement to switch to a POTW in the future, this does not relieve you of the obligation to apply for and receive an NPDES permit until you have stopped discharging pollutants into waters of the United States.

(NOTE: Dischargers into privately owned treatment works do not have to apply for or obtain NPDES permits except as otherwise required by the EPA Regional Administrator but may require a state discharge permit. The owner or operator of the treatment works itself, however, must apply for a permit and identify all users in its application. Users so identified will receive public notice of actions taken on the permit for the treatment works.)

- C. DISCHARGES FROM AGRICULTURAL AND SILVICULTURAL ACTIVITIES. Most discharges from agricultural and silvicultural activities to waters of the United States do not require NPDES permits. These include runoff from orchards, cultivated crops, pastures, range lands, and forest lands. However, the discharges listed below do require NPDES permits. Definitions of the terms listed below are contained in the Glossary section of these instructions.
  - 1. Discharges from Concentrated Animal Feeding Operations. (See Glossary for definitions of "animal feeding operations" and "concentrated animal feeding operations." Only the latter require permits.)
  - 2. Discharges from Concentrated Aquatic Animal Production Facilities. (See Glossary for size cutoffs.)
  - 3. Discharges associated with approved Aquaculture Projects.
  - 4. Discharges from Silvicultural Point Sources. (See Glossary for the definition of "silvicultural point source.") Nonpoint source silvicultural activities are excluded from NPDES permit requirements. However, some of these activities, such as stream crossings for roads, may involve point source discharges of dredged or fill material which may require a Section 404 permit. See 33 CFR 209.120.
- D. DISCHARGES IN COMPLIANCE WITH AN ON-SCENE COORDINATOR'S INSTRUCTIONS.

II. Hazardous Waste Permits Under the Resource Conservation and Recovery Act. You may be excluded from the requirement to obtain a permit under this program if you fall into one of the following categories:

Generators who accumulate their own hazardous waste on-site for less than 90 days as provided in 40 CFR 262.34;

Farmers who dispose of hazardous waste pesticide from their own use as provided in 40 CFR 262.51;

Certain persons treating, storing, or disposing of small quantities of hazardous waste as provided in 40 CFR 261.4 or 261.5; and

Owners and operators of totally enclosed treatment facilities as defined in 40 CFR 20.10.

Check with your EPA or Ecology Regional office for details. Please note that even if you are excluded from permit requirements, you may be required by Federal regulations to handle your waste in a particular manner.

III. Underground Injection Control Permits Under the Safe Drinking Water Act. You are not required to obtain an NPDES permit under this program if you:

Inject into existing wells used to enhance recovery of oil and gas or to store hydrocarbons (note, however, that these underground injections are regulated by Federal and state rules); or

Inject into or above a stratum which contains, within 1/4 mile of the well bore, an underground source of drinking water (unless your injection is the type identified in Item II-H, for which you do need a permit). However, you must notify EPA of your injection and submit certain required information on forms supplied by the Agency, and your operation may be phased out if you are a generator of hazardous wastes or a hazardous waste management facility which uses wells or septic tanks to dispose of hazardous waste.

IV. Prevention of significant Deterioration Permits Under the Clean Air Act. The PSD program applies to newly constructed or modified facilities (both of which are referred to as "new sources") which increase air emissions. The Clean Air Act Amendments of 1977 exclude small new sources of air emissions from the PSD review program. Any new source in an industrial category listed in Table 2 of these instructions whose potential to emit is less than 100 tons per year is not required to get a PSD permit. In addition, any new source in an industrial category not listed in Table 2 whose potential to emit is less than 250 tons per year is exempted from the PSD requirements.

Modified sources which increase their net emissions (the difference between the total emission increases and total emission decreases at the source) less than the significant amount set forth in EPA regulations are also exempt from PSD requirements. Contact your EPA Regional office for further information.

# **SECTION D - GLOSSARY**

NOTE: This Glossary includes terms used in the instructions and in Forms 1, 2B, 2C, and 3. Additional terms will be included in the future when other forms are developed to reflect the requirements of other parts of the Consolidated Permits Program. If you have any questions concerning the meaning of any of these terms, please contact your EPA Regional office.

ALIQUOT means a sample of specified volume used to make up a total composite sample.

ANIMAL FEEDING OPERATION means a lot or facility (other than an aquatic animal production facility) where the following conditions are met:

- A. Animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12 month period; and
- B. Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

Two or more animal feeding operations under common ownership are a single animal feeding operation if the adjoin each other or if they use a common area or system for the disposal of wastes.

ANIMAL UNIT means a unit of measurement for any animal feeding operation calculated by adding the following numbers: The number of slaughter and feeder cattle multiplied by 1.0; Plus the number of mature dairy cattle multiplied by 1.4; Plus the number of swine weighing over 25 kilograms (approximately 55 pounds) multiplied by 0.4; Plus the number of sheep multiplied by 0.1; Plus the number of horses multiplied by 2.0.

APPLICATION means the EPA standard national forms for applying for a permit, including any additions, revisions, or modifications to the forms; or forms approved by EPA for use in approved States, including any approved modifications or revisions. For RCRA, "application" also means "Application, Part B."

APPLICATION, PART A means that part of the Consolidated Permit Applications forms which a RCRA permit applicant must complete to qualify for interim status under Section 3005(e) of RCRA and for consideration for a permit. Part A consists of Form 1 (General Information) and Form 3 (Hazardous Waste Application Form).

APPLICATION, PART B means that part of the application which a RCRA permit applicant must complete to be issued a permit. (NOTE: EPA is not developing a specific form for Part B of the permit application, but an instruction booklet explaining what information must be supplied is available from the EPA Regional office.)

APPROVED PROGRAM or APPROVED STATE means a State program which has been approved or authorized by EPA under 40 CFR Part 123.

AQUACULTURE PROJECT means a defined managed water area which uses discharges of pollutants into that designated area for the maintenance or production of harvestable freshwater, estuarine, or marine plants or animals. "Designated area" means the portions of waters of the United States within which the applicant plans to confine the cultivated species, using a method of plan or operation (including, but not limited to, physical confinement) which, on the basis of reliable scientific evidence, is expected to ensure the specific individual organisms comprising an aquaculture crop will enjoy increased

growth attributable to the discharge of pollutants and be harvested within a defined geographic area.

AQUIFER means a geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.

AREA OF REVIEW means the area surrounding an injection well which is described according to the criteria set forth in 40 CFR Section 146.06.

AREA PERMIT means a UIC permit applicable to all or certain wells within a geographic area, rather than to a specified well, under 40 CFR Section 122.37.

ATTAINMENT AREA means, for any air pollutant, an area which has been designated under Section 107 of the Clean Air Act as having ambient air quality levels better than any national primary or secondary ambient air quality standard for that pollutant. Standards have been set for sulfur oxides, particulate matter, nitrogen dioxide, carbon monoxide, ozone, lead, and hydrocarbons. For purposes of the Glossary, "attainment area" also refers to "unclassifiable area," which means for any pollutants, an area designated under Section 107 as unclassifiable with respect to that pollutant due to insufficient information.

BEST MANAGEMENT PRACTICES (BMP) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMP's include treatment requirements, operation procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

BIOLOGICAL MONITORING TEST means any test which includes the use of aquatic algal, invertebrate, or vertebrate species to measure acute or chronic toxicity, and any biological or chemical measure of bioaccumulation.

BYPASS means the intentional diversion of wastes from any portion of a treatment facility.

CONCENTRATED ANIMAL FEEDING OPERATION means an animal feeding operation which meets the criteria set forth in either (A) or (B) below or which the Director designates as such on a case-by-case basis:

- A. More than the numbers of animals specified in any of the following categories are confined:
  - 1. 1,000 slaughter or feeder cattle,
  - 2. 700 mature dairy cattle (whether milked or dry cows),
  - 3. 2500 swine each weighing over 25 kilograms (approximately 55 pounds),
  - 4. 500 horses,
  - 5. 10,000 sheep or lambs,
  - 6. 55,000 turkeys,
  - 7. 100,000 laying hens or broilers (if the facility has a continuous overflow watering),

- 8. 30,000 laying hens or broilers (if the facility has a liquid manure handling system),
- 9. 5,000 ducks, or
- 10. 1,000 animal units; or
- B. More than the following numbers and types of animals are confined:
  - 1. 300 slaughter or feeder cattle
  - 2. 200 mature dairy cattle (whether milked or dry cows),
  - 3. 750 swine each weighing over 25 kilograms (approximately 55 pounds),
  - 4. 150 horses
  - 5. 3,000 sheep or lambs,
  - 6. 16,500 turkeys,
  - 7. 30,000 laying hens or broilers (if the facility has continuous overflow watering),
  - 8. 9,000 laying hens or broilers (if the facility has a liquid manure handling system),
  - 9. 1,500 ducks, or
  - 10. 300 animal units; AND

Either one of the following conditions are met: Pollutants are discharged into waters of the United States through a manmade, ditch flushing system or other similar manmade devise ("manmade" means constructed by man and used for the purpose of transporting wastes); or Pollutants are discharged directly into waters of the United States which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.

Provided, however, that no animal feeding operation is a concentrated animal feeding operation as defined above if such animal feeding operation discharges only in the event of a 25 year, 24 hour storm event.

CONCENTRATED AQUATIC ANIMAL PRODUCTION FACILITY means a hatchery, fish farm, or other facility which contains, grows or holds aquatic animals in either of the following categories, or which the Director designates as such on a case-by-case basis:

A. Cold water fish species or other cold water aquatic animals including, but not limited to, the Salmonidae family of fish (e.g., trout and salmon) in ponds, raceways or other similar structures which discharge at least 30 days per year but does not include:

- 1. Facility which produce less than 9,090 harvest weight kilograms (approximately 20,000 pounds) of aquatic animals per year; and
- 2. Facilities which feed less than 2,272 kilograms (approximately 5,000 pounds) of food during the calendar month of maximum feeding.

- B. Warm water fish species or other warm water aquatic animals including, but not limited to, the Ameiuridae, Cetrachidae, and Cyprinidae families of fish (e.g., respectively, catfish, sunfish, and minnows) in ponds, raceways, or other similar structures which discharge at least 30 days per year, but does not include:
  - 1. Closed ponds which discharge only during periods of excess runoff; or
  - 2. Facilities which produce less than 45,454 harvest weight kilograms (approximately 100,000 pounds) of aquatic animals per year.

CONTACT COOLING WATER means water used to reduce temperature which comes into contact with a raw material, intermediate product, waste product other than heat, or finished product.

CONTAINER means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

CONTIGUOUS ZONE means the entire zone established by the United States under article 24 of the convention of the Territorial Sea and the Contiguous Zone.

CWA means the Clean Water Act (formerly referred to the Federal Water Pollution Control Act) pub. L. 92–500, as amended by Pub. L. 95–217 and Pub. L. 95–576, 33 U.S.C. 1251 et seq.

DIKE means any embankment or ridge of either natural or manmade materials used to prevent the movement of liquids, sludges, solids, or other materials.

DIRECT DISCHARGE means the discharge of a pollutant as defined below.

DIRECTOR means the EPA Regional Administrator or the State Director as the context requires.

# DISCHARGE (OF A POLLUTANT) means:

- A. Any addition of any pollutant or combination of pollutants to waters of the United States from any point source; or
- B. Any addition of any pollutant or combination of pollutants to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes discharges into waters of the United States from: Surface runoff which is collected or channeled by man; Discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to POTW's; and Discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any indirect discharger.

DISPOSAL (in the RCRA program) means the discharge, deposit, injection, jumping, spilling, leaking, or placing of any hazardous waste into or on any land or water so that the hazardous waste or any constituent of it may enter the environment or be emitted into the air or discharged into any waters, including ground water.

DISPOSAL FACILITY means a facility or part of a facility at which hazardous waste is intentionally placed into or on land or water, and at which hazardous waste will remain after closure.

EFFLUENT LIMITATION means any restriction imposed by the Director on quantities, discharge rates, and concentrations of pollutants which are discharged from point sources into waters of the United States, the waters of the contiguous zone, or the ocean.

EFFLUENT LIMITATION GUIDELINE means a regulation published by the Administrator under Section 304(b) of the Clean Water Act to adopt or revise effluent limitations.

ENVIRONMENTAL PROTECTION AGENCY (EPA) means the United States Environmental Protection Agency.

EPA IDENTIFICATION NUMBER means the number assigned by EPA to each generator, transporter, and facility.

EXEMPTED AQUIFER means an aquifer or its portion the meets the criteria in the definition of USDW, but which has been exempted according to the procedures in 40 CFR Section 122.35(b).

EXISTING SOURCE or EXISTING DISCHARGER (in the NPDES program) means any source which is not a new source or a new discharger

EXISTING INJECTION WELL means an injection well other than a new injection well.

FACILITY means any HWM facility, UIC underground injection well, NPDES point source, PSD stationary source, or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the RCRA, UIC, NPDES, or PSD programs.

FLUID means material or substance which flows or moves whether in a semisolid, liquid, sludge, gas, or any other form or state.

GENERATOR means any person by site, whose act or process produces hazardous waste identified or listed in 40 CFR Part 261.

GROUNDWATER means water below the land surface in a zone of saturation.

HAZARDOUS SUBSTANCE means any of the substances designated under 40 CFR Part 116 pursuant to Section 311 of CWA. (NOTE: These substances are listed in Table 2c-4 of the instructions to Form 2C).

HAZARDOUS WASTE means a hazardous waste as defined in 40 CFR Section 261.3 published May 19, 1980.

HAZARDOUS WASTE MANAGEMENT FACILITY (HWM facility) means all contiguous land, structures, appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous wastes. A facility may consist of several treatment, storage, or disposal operational units (for example, one or more landfills, surface impoundments, or combinations of them).

IN OPERATION means a facility which is treating, storing, or disposing of hazardous waste.

INCINERATOR (in the RCRA program) means an enclosed device using controlled flame combustion, the primary purpose of which is to thermally break down hazardous waste. Examples of incinerators are rotary kiln, fluidized bed, and liquid injection incinerators.

INDIRECT DISCHARGER means a non-domestic discharger introducing pollutants to a publicly owned treatment works.

INJECTION WELL means a well into which fluids are being injected.

INTERIM AUTHORIZATION means approval by EPA of a State hazardous waste program which has met the requirements of Section 3006(c) of RCRA and applicable requirements of 40 CFR Part 124, Subparts A, B, and F.

LANDFILL means a disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a land treatment facility, a surface impoundment, or an injection well.

LAND TREATMENT FACILITY (in the RCRA program) means a facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface; such facilities are disposal facilities if the waste will remain after closure.

LISTED STATE means a State listed by the Administrator under Section 1422 of SDWA as needing a State UIC program.

MGD means millions of gallons per day.

MUNICIPALITY means a city, village, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of CWA.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of CWA. The term includes an approved program.

NEW DISCHARGER means any building, structure, facility, or installation: (A) From which there is or may be a new or additional discharge of pollutants at a site at which on October 18, 1972, it had never discharged pollutants; (B) Which has never received a finally effective NPDES permit for discharges at the site; and (C) Which is not a "new source." This definition includes an indirect discharger which commences discharging into waters of the United States. It also includes any existing mobile point source, such as an offshore oil drilling rig, seafood processing vessel, or aggregate plant that begins discharging at a location for which it does not have an existing permit.

NEW HWM FACILITY means a Hazardous Waste Management facility which began operation or for which construction commenced after October 21, 1976.

NEW INJECTION WELL means a well which begins injection after a UIC program for the State in which the well is located is approved.

NEW SOURCE (in the NPDES program) means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

A. After promulgation of standards of performance under Section 306 of CWA which are applicable to such source; or

B. After proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.

EXISTING INJECTION WELL means an injection well other than a new injection well.

FACILITY means any HWM facility, UIC underground injection well, NPDES point source, PSD stationary source, or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the RCRA, UIC, NPDES, or PSD programs.

FLUID means material or substance which flows or moves whether in a semisolid, liquid, sludge, gas, or any other form or state.

GENERATOR means any person by site, whose act or process produces hazardous waste identified or listed in 40 CFR Part 261.

GROUNDWATER means water below the land surface in a zone of saturation.

HAZARDOUS SUBSTANCE means any of the substances designated under 40 CFR Part 116 pursuant to Section 311 of CWA. (NOTE: These substances are listed in Table 2c-4 of the instructions to Form 2C).

HAZARDOUS WASTE means a hazardous waste as defined in 40 CFR Section 261.3 published May 19, 1980.

HAZARDOUS WASTE MANAGEMENT FACILITY (HWM facility) means all contiguous land, structures, appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous wastes. A facility may consist of several treatment, storage, or disposal operational units (for example, one or more landfills, surface impoundments, or combinations of them).

IN OPERATION means a facility which is treating, storing, or disposing of hazardous waste.

INCINERATOR (in the RCRA program) means an enclosed device using controlled flame combustion, the primary purpose of which is to thermally break down hazardous waste. Examples of incinerators are rotary kiln, fluidized bed, and liquid injection incinerators.

INDIRECT DISCHARGER means a non-domestic discharger introducing pollutants to a publicly owned treatment works.

INJECTION WELL means a well into which fluids are being injected.

INTERIM AUTHORIZATION means approval by EPA of a State hazardous waste program which has met the requirements of Section 3006(c) of RCRA and applicable requirements of 40 CFR Part 124, Subparts A, B, and F.

LANDFILL means a disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a land treatment facility, a surface impoundment, or an injection well.

LAND TREATMENT FACILITY (in the RCRA program) means a facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface; such facilities are disposal facilities if the waste will remain after closure.

LISTED STATE means a State listed by the Administrator under Section 1422 of SDWA as needing a State UIC program.

MGD means millions of gallons per day.

MUNICIPALITY means a city, village, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of CWA.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of CWA. The term includes an approved program.

NEW DISCHARGER means any building, structure, facility, or installation: (A) From which there is or may be a new or additional discharge of pollutants at a site at which on October 18, 1972, it had never discharged pollutants; (B) Which has never received a finally effective NPDES permit for discharges at the site; and (C) Which is not a "new source." This definition includes an indirect discharger which commences discharging into waters of the United States. It also includes any existing mobile point source, such as an offshore oil drilling rig, seafood processing vessel, or aggregate plant that begins discharging at a location for which it does not have an existing permit.

NEW HWM FACILITY means a Hazardous Waste Management facility which began operation or for which construction commenced after October 21, 1976.

NEW INJECTION WELL means a well which begins injection after a UIC program for the State in which the well is located is approved.

NEW SOURCE (in the NPDES program) means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

A/ After promulgation of standards of performance under Section 306 of CWA which are applicable to such source; or

B/ After proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.

NON-CONTACT COOLING WATER means water used to reduce temperature which does not come into direct contact with any raw material, intermediate product, waste product (other than heat), or finished product.

OFF-SITE means any site which is not "on-site."

ON-SITE means on the same or geographically contiguous property which may be divided by public or private right(s)-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along, the right(s)-of-way. Non-contiguous properties owned by the same person, but connected by a right-of-way which the person controls and to which the public does not have access, is also considered on-site property

OPEN BURNING means the combustion of any material without the following characteristics:

- A. Control of combustion air to maintain adequate temperature for efficient combustion;
- B. Containment of the combustion-reaction in an enclosed device to provide sufficient residence the time and mixing for complete combustion; and
- C. Control of emission of the gaseous combustion products.

(See also "incinerator" and "thermal treatment")

OPERATOR means the person responsible for the overall operation of a facility.

OUTFALL means a point source.

OWNER means the person who owns a facility or part of a facility.

PERMIT means an authorization, license, or equivalent control document issued by EPA or an approved State to implement the requirements of 40 CFR Parts 122, 123, and 124.

PHYSICAL CONSTRUCTION (in the RCRA program) means excavation, movement of earth, erection of forms or structures, or similar activity to prepare a HWM facility to accept hazardous waste.

PILE means any noncontainerized accumulation of solid, nonflowing hazardous waste that is used for treatment or storage.

POLLUTANT means dredge spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewer sludge, munitions, chemical waste, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended [42 U.S.C. Section 2011 et seq.]), heat, wrecked or discarded equipment, rocks, sand, cellar dirt and industrial, municipal, and agriculture waste discharge into water. It does not mean:

Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

(NOTE: Radioactive materials covered by the Atomic Energy Act are those encompassed in its definition of source, byproduct, or special nuclear materials. Examples of materials not covered include radium and accelerator produced isotopes. See Train v. Colorado Public Interest Research Group, Inc., 426 U.S. 1 [1976].)

PREVENTION NOF SIGNIFICANT DETERIORATION (PSD) means the national permitting program under 40 CFR 52.21 to prevent emissions of certain pollutants regulated under the Clean Air Act from significantly deteriorating air quality in attainment areas.

PRIMARY INDUSTRY CATEGORY means any industry category listed in the NRDC Settlement Agreement (Natural Resources Defense Council v. Train, 8 ERC 2120 [D.D.C. 1976], modified 12 ERC 1833 [D.D.C. 1979]).

PRIVATELY OWNED TREATMENT WORKS means any device or system which is: (A) Used to treat waste from any facility whose operator is not the operator of the treatment works; and (B) Not a POTW.

PROCESS WASTEWATER means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

PUBLICLY OWNED TREATMENT WORKS or POTW means any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a state or municipality. This definition includes any sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

RENT means use of another's property in return for regular payment.

RCRA means the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976 (*Pub. L. 94–580, as amended by Pub. L. 95-609, 42 U.S.C. Section 6901 et seq.*).

ROCK CRUSHING AND GRAVEL WASHING FACILITIES are facilities which process crushed and broken stone, gravel, and riprap (see 40 CFR Part 436, Subpart B, and the effluent limitations guidelines for these facilities).

SDWA means the Safe Drinking Water Act (Pub. L. 95–523, as amended by Pub. L. 95–1900, 42 U.S.C. Section 300[f] et seq.).

SECONDARY INDUSTRY CATEGORY means any industry category which is not a primary industry category.

SEWAGE FROM VESSELS means human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes that are discharged from vessels and regulated under Section 312 of CWA, except that with respect to commercial vessels on the Great Lakes this term includes graywater. For the purpose of this definition, "graywater" means galley, bath, and shower water.

SEWAGE SLUDGE means the solids, residues, and precipitate separated from or created in sewage by the unit processes of a POTW. "Sewage" as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and storm water runoff, that are discharged to or otherwise enter a publicly owned treatment works.

SILVICULTURAL POINT SOURCE means any discernable, confined, and discrete conveyance related to rock crushing, gravel washing, log sorting, or log storage facilities which are operated in connection with silvicultural activities and from which pollutants are discharged into waters of the United States. This term does not include nonpoint source silvicultural activities such as nursery operations, site preparation, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, or road construction and maintenance from which there is natural runoff. However, some of these activities (such as stream crossing for roads) may involve point source discharges of dredged or fill material which may require a CWA Section 404 permit. "Log sorting and log storage facilities" are facilities whose discharges result from the holding of unprocessed wood, e.g., logs or roundwood with bark or after removal of bark in self-contained bodies of water (mill ponds or log ponds) or stored on land where water is applied intentionally on the logs (wet decking). (See 40 CFR Part 429, Subpart J, and the effluent limitations guidelines for these facilities).

STATE means any of the 50 States, the district of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Trust Territory of the Pacific Islands (except in the case of RCRA), and the Commonwealth of the Northern Mariana Islands (except in the case of CWA).

STATIONARY SOURCE (in the PSD program) means any building, structure, facility, or installation which emits or may emit any air pollutant regulated under the Clean Air Act. "Building, structure, facility, or installation" means any grouping of pollutant-emitting activities which are located on one or more contiguous or adjacent properties and which are owned or operated by the same person (or by person under common control).

STORAGE (in the RCRA program) means the holding of hazardous waste for a temporary period at the end of which the hazardous waste is treated, disposed, or stored elsewhere.

STORM WATER RUNOFF means water discharged as a result of rain, snow, or other precipitation.

SURFACE IMPOUNDMENT or IMPOUNDMENT means a facility or part of a facility which is a natural topographic depression, manmade excavation, or diked area formed primarily of earthen materials (although it may be lined with manmade materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons.

TOXIC POLLUTANT means any pollutant listed as toxic under Section 307(a)(1) of CWA.

TANK (in the RCRA program) means a stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support.

THERMAL TREATMENT (in the RCRA program) means the treatment of hazardous waste in a device which uses elevated temperature as the primary means to change the chemical, physical, or biological character or composition of the hazardous waste. Examples of thermal treatment processes are incineration, molten salt, pyrolysis, calcination, wet air oxidation, and microwave discharge. (See also "incinerator" and "open burning").

TOTALLY ENCLOSED TREATMENT FACILITY (in the RCRA program) means a facility for the treatment of hazardous waste which is directly connected to an industrial production process and which is constructed and operated in a manner which prevents the release of any hazardous waste or any constituent thereof into the environment during treatment. An example is a pipe in which waste acid is neutralized.

TOXIC POLLUTANT means any pollutant listed as toxic under Section 307(a)(1) of CWA.

TRANSPORTER (in the RCRA program) means a person engaged in the off-site transportation of hazardous waste by air, rail, highway, or water.

TREATMENT (in the RCRA program) means any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste non-hazardous, or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume.

UNDERGROUND INJECTION means well injection.

UNDERGROUND SOURCE OF DRINKING WATER or USDW means an aquifer or its portion which is not an exempted aquifer and:

- A. Which supplies drinking water for human consumption; or
- B. In which the ground water contains fewer than 10,000 mg/l total dissolved solids.

UPSET means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations 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.

#### WATERS OF THE UNITED STATES means:

- A. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- B. All interstate waters, including interstate wetlands;

- C. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, and natural ponds, the use degradation, or destruction of which would or could affect interstate or foreign commerce including any such waters:
  - 1. Which are or could be used by interstate or foreign travelers for recreational or other purposes,
  - 2. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce,
  - 3. Which are used or could be used for industrial purposes by industries in interstate commerce;
- D. All impoundments of waters otherwise defined as waters of the United States under this definition;
- E. Tributaries of waters identified in paragraphs (A) (D) above; The territorial sea; and
- F. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (A) (F) of this definition.

Waste treatment systems, including treatment ponds or lagoons designated to meet requirement of CWA (other than cooling ponds as defined in 40 CFR Section 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as a disposal area in wetlands) nor resulted from the impoundments of waters of the United States.

WELL INJECTION or UNDERGROUND INJECTION means the subsurface emplacement of fluids through a bored, drilled, or driven well; or through a dug well, where the depth of the dug well is greater than the largest surface dimension.

WETLANDS means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

TRANSPORTER (in the RCRA program) means a person engaged in the off-site transportation of hazardous waste by air, rail, highway, or water.

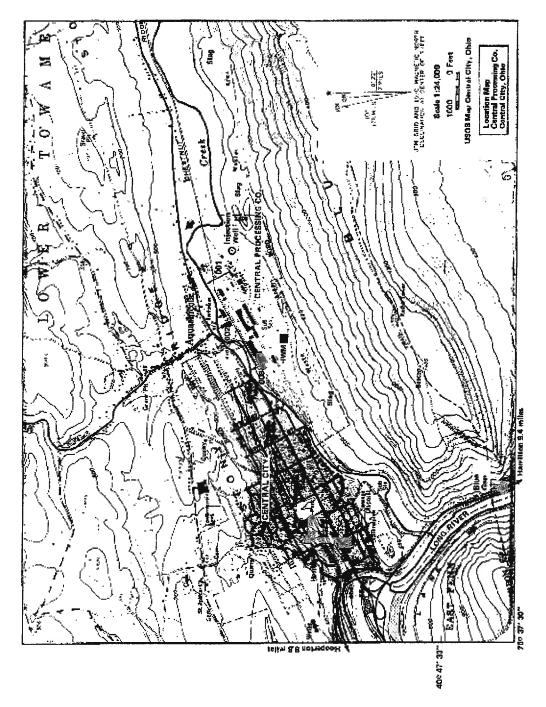


FIGURE 1-1

Please print or type in the unshaded areas only (fill-in areas are spaced for elite type, i.e., 12 characters/inch).

FORM O COA				CTION AGENC		1. Current per	mit I.E	).		Hills
DEPARTMENT OF		GENERAL INFORMATION WA							T/A	D
FCOLOGY		Consolidated Permits Program I the "General Instructions" before starting.)								
	ad the	"Gen	eral Instru	ctions" befo	re starting.)			-	14	15
II. POLLUTANT CHARACTERISTICS	mine w	hether	you need to	submit a NPDI	ES nemit apolic	ation forms to Ecolo	av If vo	ui ane	ver "ve	s" to
INSTRUCTIONS: Complete A through J to determine whether you need to submit a NPDES permit application forms to Ecology. If you answer "yes" to any questions, you must submit this form and the supplemental from listed in the parenthesis following the question. Mark "X" in the box in the third										
column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced										
terms.				odono. Doc ale	o, becaon b of	are monactions for	GCIIIIIIC			ocu.
		MAR	K "X" T FORM					MAR	( "X"	hA.
	YES	NO	ATTACHED				YES	NO	ATTAC	
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		⊠		proposed) feeding production	include a co operation or	sults in a discharge		$\boxtimes$		]
C. Is this facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)				in A or B	posal facility (other above) which will i of the U.S.? (FOR	than those described esult in a discharge M 2D)				]
Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)		$\boxtimes$		municipal	effluent below the within one quar lerground sources	is facility industrial or a lowermost stratum ter mile of the well of drinking water?		$\boxtimes$		J
G. Do you or will you inject at this facility any produced water other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)				special pro Frasch pro situ combu	will you inject at thi ocesses such as mi ocess, solution mini ustion of fossil fuel, al energy? (FORM	ning of sulfer by the ng of minerals, in or recovery of		$\boxtimes$		l
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		⊠		which is N listed in th emit 250 regulated in	IOT one of the 28 le instructions and tons per year ounder the Clean A	stationary source industrial categories which will potentially of any air pollutant r Act and may affect it area? (FORM 5)		$\boxtimes$		
III. NAME OF FACILITY	<b>进</b> 。					A STATE OF F	hotel	THE STATE OF	Sled	
SKIP Willapa/Grays Harbor Oys	ster G	rowe	rs Associ	ation						
IV. FACILITY CONTACT	e ii w	C) TIK	RIVINA S	S. VX SV	NETT THE		N-1	i all	ovo za	
A. NAME & TITLE (las	t. first. (	& title)			B. PHO	NE (area code & no.				
© Wiegardt Ken President	M. S.				360	244 30				
V. FACILITY MAILING ADDRESS		1100	V	STUDIO CONTRA			(ETS	100	111110	restor
A. STREET OR F	O BO	K	0.00		THE RESERVOIRS			-		
C PO Box 3		3	······································							
B. CITY OR TOWN				C. STATE	D. ZIP CODE					
C Ocean Park				WA	98640					
4							10 150	- N		S 600
VI. FACILITY LOCATION  A. STREET, ROUTE NO. OR OTHE	D ODE	CIEIC	IDENTIFIED					Market N		
C Willana Ray & Grave Harbor	IN OFE	CIFIC	IDENTIFIEN							
5 , , , , , , , , , , , , , , , , , , ,			,		告 基金 信生。					
B. COUNTY NAME	410									
Pacific County & Grays Harbor Count  C. CITY OR TOWN	У.			D. STAT	E EZIP	CODE   F. COUNT	Y COD	Ē		
C N/A				WA		*****				
6 7 D. LATITUDE/LONGITUDE (NA	D 83 D/	TILIMA						-		
LATITUDE AS DECIMAL DEGREES- N4 4										

LONGITUDE AS DECIMAL DEGREES - W1 123.85-124.03

CONTINUED FROM THE FRONT					
VII. SIC, NAICS CODES (in order of					
priority)AND UBI NUMBER Place additional on	Latin State				
an attachment.					
SIC FIRST			SIC. SECO	OND	
	7	(spe	ecify)		
<sup>7</sup> Shellfish Farming	7				
EQUIVALENT NAICS FIRST			<b>EQUIVALENT NAI</b>	CS SECOND	
C (specify)	7	(spe	ecify)		
7	7				
UBI NUMBER – 601 866 134					
VIII. OPERATOR INFORMATION					
	IAME			B. Is the na	ame listed in Item
Willapa/Grays Harbor Oyster Growers A				VIII-A al	so the owner?
8					S NO
C. STATUS OF OPERATOR (Enter the appropriate letter in	to the answer box; i	f "Other," specify.)	D. PH	ONE (area code	& no )
F = FEDERAL M = PUBLIC (other than federal or state)	P (specify)		C 360	244	3099
S = STATE O = OTHER (specify)			A   333	:-11	
P = PRIVATE E. STREET OR PO BOX	L			<u> </u>	
PO Box 3	O STATE	H. ZIP CODE	LIV MIDIANI A	NIPS 1	Vancus Comments
F. CITY OR TOWN	G. STATE	1	IX. INDIAN LA		
Ocean Park	WA	98640	Is the facility locat		ls?
	1		YES	⊠ NO	
X. EXISTING ENVIRONMENTAL PERMITS					
A NPDES (Discharges to Surface Water)		missions from Prop	osed Sources)		
C T 1 1 9 N	C T 8				
9 N B. UIC (Underground Injection of Fluids	7 1 1	E. OTHER (specify	4	(Specify)	
C T I	C T 8	L. OTTIER (apouny	/	(Opcomy)	
9 0	9				
C. RCRA (Hazardous Wastes)		E. OTHER (specify	)	(Specify)	
C T I	C T B				
9 R	9		CONTRACTOR OF THE		100
XI. MAP		at least one will	havend property	houndaries T	he man must
Attach to this application a topographic map of the	area extending to	at least one mile	beyond property	boundaries. II	ne map must
show the outline of the facility, the location of ea	ich of its existing	and proposed	intake and discha	arge structures	, each of its
hazardous waste treatment, storage, or disposal fa	Cililles, and each	ne for procise re	guiremente	ground. Includ	e an springs,
rivers and other surface water bodies in the map are		ons for precise re	quirements.	The second second	
XII. NATURE OF BUSINESS (provide a brief de	scription)				
Application of the insecticide imidaclopri	id, for the con	trol of burro	wina shrimp o	n tidelands	in two
Washington coastal estuaries. These tid	alande eunna	rt commerci	al shallfish cu	ltivation	
vvasnington coastal estualles. These tid	eiailus suppu	ii Committer cre	ai Silennish Cu	uvalion.	
XIII. CERTIFICATION (see instructions)					September 1
I certify under penalty of law that I have personally	examined and an	n familiar with the	information subn	nitted in this an	plication and
all attachments and that, based on my inquiry of th	ose persons imm	ediately responsi	ible for obtaining t	he information	contained in
the application, I believe that the information is tru	e. accurate and	complete. I am	aware that there	are significant	penalties for
submitting false information, including the possibility					,
A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	12		C. DATE SI	GNED
		18		1/8/	
Ken Wiegardt President				1// 8//	411160

To ask about the availabi Persons with hearing los.	ility of this document in a versi s, call 711 for Washington Reld	on for the visually impair ty Service. Persons with a	red, call the Water Quality Pro a speech disability, call 877-8.	ogram at 360-407-6600 33-6341.
070-429 (9/11)		Page 3		

# Form 2D Instructions

Form 2D must be completed in conjunction with EPA Form 3510-1 (Form 1)

This form must be completed by all applicants who checked "yes" to Item II-D in Application Form 1. However, facilities which discharge only nonprocess wastewater that is not regulated by an effluent limitations guideline or new source performance standard may use EPA Form 3510-2E (Form 2E). Educational, medical, and commercial chemical laboratories should use this form or EPA Form 3510-2C (Form 2C). to further determine if you are a new source or a new discharger, see §122.2 and §122.29. This form should not be used for discharges of stormwater runoff.

# **Public Availability of Submitted Information**

You may not claim as confidential any information required by this form or Form 1, whether the information is reported on the forms or in an attachment. Section 402(j) of the CWA requires that all permit applications shall be available to the public. This information will therefore be made available to the public upon request.

You may claim as confidential any information you submit to EPA which goes beyond that required by this form and Form 1. Confidentiality claims for effluent data must be denied. If you do not assert a claim of confidentiality at the time of submitting the information, EPA may make the information public without further notice. Claims of confidentiality will be handled in accordance with EPA's business confidentiality regulations in 40 CFR Part 2.

# Completeness

Your application will not be considered complete unless you answer every question on this form and on Form 1 (except as instructed below). If an item does not apply to you, enter "NA" (for "not applicable") to show that you considered the question.

## Follow-up Requirements

Although you are now required to submit estimated data on this form (Form 2D), please note that no later than two years after you begin discharging from the proposed facility, you must complete and submit Items V and VI of NPDES application Form 2C (EPA Form 3510-2C). However, you need not complete those portions of Item V requiring tests which you have already performed under the discharge monitoring requirements of your NPDES permit. In addition, the permitting authority may waive requirements of Items V-A and VI if the permittee makes the demonstrations required under 40 CFR §122.22(g)(7)(i)(B) and 122.21(g)(9).

# **Definitions**

All significant terms used in these instructions and in the form are defined in the glossary found in the General Instructions which accompany Form 1.

#### Item I

You may use the map you provided for Item XI of Form 1 to determine the latitude and longitude (to the nearest 15 seconds) of each of your outfalls and the name of the receiving water. You should name all waters to which discharge is made and which flow into significant receiving waters. For example, if the discharge is made to a ditch which flows into an unnamed tributary which in turn flows into a named river, you should provide the name or description (if no name is available) of the ditch, the tributary, and the river.

## Item II

This item requires your best estimate of the data on which your facility or new outfall will begin to discharge.

## Item III-A

List all outfalls, their source (operations contributing to the flow), and estimate an average flow from each source. Briefly describe the planned treatment for these wastewaters prior to discharge. Also describe the ultimate disposal of any solid or liquid wastes not discharged. You should describe the treatment in either a narrative form or list the proper code for the treatment unit from a list provided in Table 2D-1.

## item III-B

An example of an acceptable line drawing appears in Figure 2D-1 to these instructions. The line drawing should show the route taken by water in your proposed facility from intake to discharge. Show all sources of wastewater, including process and production areas, sanitary flows, cooling water, and storm water runoff. You may group similar operations into a single unit, labeled to correspond to the more detailed listing in Item III-A. The water balance should show estimates of anticipated average flows. Show all significant losses of water to production, atmosphere, and discharge. You should use your best estimates.

#### Item III-C

Fill in every applicable column in this item for each source of intermittent or seasonal discharge. Base your answers on your best estimate. A discharge is intermittent if it occurs with interruptions during the operating hours of the facility. Discharges caused by routine maintenance shutdowns, process changes, or other similar activities are not considered to be intermittent. A discharge is seasonal if it occurs only during certain parts of the year. The reported flow rate is the highest daily value and should be measured in gallons per day. Maximum total volume means the total volume of any one discharge within 24 hours and is measured in units such as gallons.

#### item IV

"Production" in this question refers to those goods which the proposed facility will produce, not to "wastewater" production. This information is only necessary where production-based new source performance standards (NSPS) or effluent guidelines apply to your facility. Your estimated production figures should be based on a realistic projection of actual daily production level (not designed capacity) for each of the first three operating years of the facility. This estimate must be a long-term-average estimate (e.g., average production on an annual basis). If production will vary depending on long-term shifts in operating schedule or capacity, the applicant may report alternate production estimates and the basis for the alternate estimates.

If known, report quantities in the units of measurement used in the applicable NSPS or effluent guideline. For example, if the applicable NSPS is expressed as "trams of pollutant discharged per kilogram of unit production," then report maximum "Quantity Per Day" in kilograms. If you do not know whether any NSPS or effluent guideline applies to your facility, report quantities in any unit of measurement known to you. If an effluent guideline or NSPS specifies a method for estimating production, that method must be followed.

There is no need to conduct new studies to obtain these figures; only data already on hand are required. You are not required to indicate how the reported information was calculated.

# Items V-A, B, and C

These items require you to estimate and report data on the pollutants expected to be discharged from each of your outfalls. Where there is more than one outfall, you should submit a separate Item V for each outfall. For Part C only a list is required. Sampling and analysis are not required at this time. If, however, data from such analyses are available, then those data should be reported. Each part of this item addresses a different set of pollutants or parameters and must be completed in accordance with the specific instructions for that part. The following are the general and specific instructions for Items V-A through V-C.

# Item V - General Instructions

Each part of this item requires you to provide an estimated maximum daily and average daily value for each pollutant or parameter listed (see Table 2D-2), according to the specific instructions below. The source of the data is also required.

For parts A through C, base your determination of whether a pollutant will be present in your discharge on your knowledge of the proposed facility's raw,

materials, maintenance chemicals, intermediate and final products, byproducts, and any analyses of your effluent or of any similar effluent. You may also provide the determination and the estimates based on available inhouse or contractor's engineering reports of any other studies performed on the proposed facility (see Item VI of the form). If you expect a pollutant to be present solely as a result of its presence in your intake water, please state this information on the form.

Please note that no later than 2 years after you begin discharging from the proposed facility, you must complete and submit Items V and VI of NPDES application Form 2C (follow-up data).

Reporting Intake Data. You are not required to report pollutants or parameters present in intake water unless you wish to demonstrate your eligibility for a "net" effluent limitation for these pollutants or parameters, that is, an effluent limitation adjusted to provide allowance for the pollutants or parameters present in your intake water. If you wish to obtain credits for pollutants or parameters present in your intake water, please insert a separate sheet, with a short statement of why you believe you are eligible [see §122.45(g)], under Item VII (Other Information). You will then be contacted by the permitting authority for further instructions.

All estimated pollutant or parameter levels must be reported as concentration and as total mass, except for discharge flow, temperature, and pH. Total mass is the total weight of pollutants or parameters discharged over a day.

Use the following abbreviations for units:

Concentration	Mass
ppm parts per million	lbs pounds
mg/1 milligrams per liter	ton tons (English tons)
ppb parts per billion	mg milligrams
Ug/1 micrograms per liter	g grams
kg kilograms	T Tonnes (metric tons)

# Source

In providing the estimates, use the codes in the following table to indicate the source of such information in column 4 of Parts V - A and - B.

Code	
Engineering study	1
Actual data from pilot plants	1
Estimates from other engineering studies	2
Data from other similar plants	3
Best professional estimates	4
Othersspecify on the fo	rm

#### Item V-A

Estimates of data on pollutants or parameters in Group A must be reported by all applicants for all outfalls,

outfalls containing only noncontact cooling water or nonprocess wastewater.

To request a waiver from reporting any of these pollutants or parameters, the applicant must submit tot he permitting authority a waritten request specifying which pollutants or parameters should be waived and the reasons for requesting such a waiver. This request should be submitted to the permitting authority before or with the permit application. The permitting authority may waive the requirements for information about these pollutants or parameters if he or she determines that less stringent reporting requirements are adequate to support issuance of the permit. No extensive documentation will normally be needed, but the applicant should contact the permitting authority if she or he wishes to receive instructions on what his or her particular request should contain.

# Item V-B

Estimates of data on pollutants in Group B must be reported by all applicants for all outfalls, including outfalls containing only noncontact cooling water or nonprocess wastewater. You are merely required to report estimates for those pollutants which you know or have reason to believe will be discharged or which are limited directly by an effluent limitations guideline (or NSPS) or indirectly through promulgated limitations on an indicator pollutant. The priority pollutants in Group B are divided into the following three sections:

- 1) Metal toxic pollutants, total cyanide, and total phenols
- 2) 2,3,7,8-Tetrachlorodibenzo-P-Dioxin (TCDD) (CAS # 1764-016)
- Organic Toxic Pollutants (Gas Chromatography/-Mass Spectrometry Fractions)
  - a) Volatile compounds
  - b) Acid compounds
  - c) Base/neutral compounds
  - d) Pesticides

For pollutants listed in Sections 1 and 3, you must report estimates as instructed above.

For Section 2, you are required to report that TCDD may be discharged if you will use or manufacture one of the following compounds, or if you know or have reason to believe that TCDD is or may be present in an effluent:

- A. 2,4,5-trichlorophenoxy acetic acid (2,4,5-T) (CAS #93-765):
- B. 2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4, 5TP) (CAS # 93-72-I);
- C. 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon) (CAS # 136-25-4):
- D. 0,O-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate (Ronnel) (CAS # 299-84-3);

- E. 2,4,5-trichlorophenol (TCP) (CAS # 95-95-4); or
- F. Hexachlorophene (HCP) (CAS # 70-30-4)

## **Small Business Exemption**

If you are a "small business," you are exempt from the reporting requirement for Item V-B (section 3). You may qualify as a "small business" if you fit one of the following definitions:

- 1) Your expected gross sales will total less than \$100,000 per year for the next three years, or
- 2) in the case of coal mines, your average production will be less than 100,000 tons of coal per year.

If you are a "small business," you may submit projected sales or production figures to qualify for this exemption. The sales or production figures you submit must be for the facility which is the source of the discharge. The data should not be limited only to production or sales for the process or processes which contribute to the discharge. unless those are the only processes at your facility. For sales data, where intracorporate transfers of goods and services are involved, the transfer price per unit should approximate market prices for those goods and services as closely as possible. If necessary, you may index your sales figures to the second quarter of 1980 to demonstrate your eligibility for a small business exemption. This may be done by using the gross national product price deflator (second guarter of 1980 = 100), an index available in "National Income and Product Accounts of the United States" (Department of Commerce, Bureau of Economic Analysis).

The small business exemption applies to the GC/MS fractions (Section 3) of Item V-B only. Even if you are eligible for a small business exemption, you are still required to provide information on metals, cyanide, total phenols, and dioxin in Item V-B, as well as all of Items V-A and C.

# Item V-C

List any pollutants in Table 2D-3 that you believe will be present in any outfalls and briefly explain why you believe they will be present. No estimate of the pollutant's quantity is required, unless you already have quantitative data.

Note: The discharge of pollutants listed in Table 2D-4 may subject you to the additional requirements of section 311 of the CWA (Oil and Hazardous Substance Liability). These requirements are not administered through the NPDES program. However, if you wish an exemption under 40 CFR 117.12(a)(2) from these requirements, attach additional sheets of paper to this form providing the following information:

A. The substance and the amount of each substance which may be discharged;

- B. The origin and source of the discharge of the substance:
- C. The treatment which is to be provided for the discharge by:
  - An onsite treatment system separate from any treatment system which will treat your normal discharge,
  - A treatment system designed to treat your normal discharge and which is additionally capable of treating the amount of the substance identified under paragraph 1 above, or
  - 3. Any combination of the above.

An exemption from the section 311 reporting requirements pursuant to 40 CFR Part 117 for pollutants on Table 2D does not exempt you from the section 402 reporting requirements pursuant to 40 CFR Part 122 (Item V-C) for pollutants listed on Table 2D-3.

For further information on exclusions from Section 311, see 40 CFR Section 117.12(a)(2) and (c), or contact your EPA Regional Office (Table 1 in the Form 1 instructions).

## Item VI-A

If an engineering study was conducted, check the box labeled "report available." If no study was done, check the box labeled "no report."

# Item VI-B

Report the name and location of any existing plant(s) which (to the best of your knowledge) resembles your planned operation with respect to items produced, production process, wastewater constituents, or wastewater treatment. No studies need to be conducted to respond to this item. Only data which are already available need be submitted.

This information will be used to inform the permit writer of appropriate treatment methods and their associated permit conditions and limits.

## Item VII

A space is provided for additional information which you believe would be useful in setting permit limits, such as additional sampling. Any response is optional.

## Item VIII

The Clean Water Act provides for severe penalties for submitting false information on this application form.

Section 309(c)(2) of the Clean Water Act provides that "Any person who knowingly makes any false statement, representation, or certification in any application, . . .shall upon conviction, be punished by a fine of no more than \$10,000 or by imprisonment for not more than six months, or both."

# 40 CFR Part 122.22 Requires the Certification To Be Signed as Follows:

- A. For a corporation: by a responsible corporate officer
  - A responsible corporate officer means (i) 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 (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross sales annual or expenditures exceeding \$25,000,000 (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- B. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
- C. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

# PHYSICAL TREATMENT PROCESSES

	1111010712 1111	-AIMENT TROOLOGEO					
1-A	Ammonia Stripping	1-MGrit Removal					
	Dialysis	1-N Microstraining					
	Diatomaceous Earth Filtration						
	Distillation	1-O Mixing					
	Electrodialysis	1-P Moving Bed Filters					
	Evaporation	1-QMultimedia Filtration					
	Evaporation	1-R Rapid Sand Filtration					
	Flocediation	1-S Reverse Osmosis (Hyperfiltration)					
	Flotation	1-TScreening					
		1-U Sedimentation (Settling)					
	Freezing	1-V Slow Sand Filtration					
	Gas-Phase Separation	1-W Solvent Extraction					
7-L	Grinding (Comminutors	1-X Sorption					
	CHEMICAL TRE	EATMENT PROCESSES					
2-A	Carbon Adsorption	2-G Disinfection (Ozone)					
	Chemical Oxidation	2-H Disinfection (Other)					
2-C	Chemical Precipitation	2-I Electrochemical Treatment					
	Coagulation	2-Jlon Exchange					
	Dechlorination	2-K Neutralization					
	Disinfection (Chlorine)	2-LReduction					
	•						
	BIOLOGICAL TR	EATMENT PROCESSES					
3-A	Activated Sludge	3-E Preaeration					
	Aerated Lagoons	3-FSpray Irrigation/Land Application					
	Anaerobic Treatment	3-G Stabilization Ponds					
	Nitrification-Denitrification	3-HTrickling Filtration					
	OTHER	PROCESSES					
4-A	Discharge to Surface Water	4-C Reuse/Recycle of Treated Effluent					
4-B	Ocean Discharge Through Outfall	4-D Underground Injection					
		•					
	SLUDGE IREALMENT	AND DISPOSAL PROCESSES					
5-A	Aerobic Digestion	5-M Heat Drying					
5-B	Anaerobic Digestion	5-N Heat Treatment					
	Belt Filtration	5-OIncineration					
5-D	Centrifugation	5-P Land Application					
	Chemical Conditioning	5-QLandfill					
	Chlorine Treatment	5-R Pressure Filtration					
	Composting	5-SPyrolysis					
	Drying Beds	5-TSludge Lagoons					
	Elutriation						
	Flotation Thickening	5-U Vacuum Filtration					
	Eroozing	5-V Vibration					

5-K ..... Freezing 5-L.... Gravity Thickening

5-W ..... Wet Oxidation

# **GROUP A**

Biochemical Oxygen Demand (BOD) Chemical Oxygen Demand (COD Total Organic Carbon (TOC) Total Suspended Solids (TSS) Flow

Ammonia (as N) Temperature (winter) Temperature (summer) pH

# **GROUP B**

Bromide
Total Residual Chlorine
Color
Fecal Coliform
Fluoride
Nitrate-Nitrite (as N)
Oil and Grease
Phosphorus (as P) Total
Radioactivity

- (1) Alpha, Total (2) Beta, Total
- (3) Radium, Total
- (4) Radium 226, Total

Sulfate (as SO<sub>4</sub>)
Sulfide (as S)
Sulfite (as SO<sub>3</sub>)
Surfactants
Aluminum, Total
Barium, Total
Boron, Total
Cobalt, Total
Iron, Total
Magnesium, Total
Molybdenum, Total
Manganese, Total
Tin, Total
Titanium, Total

# Section 1

Antimony, Total Beryllium, Total Chromium, Total Lead, Total Nickel, Total Silver, Total Zinc, Total Phenols, Total

Arsenic, Total Cadmium, Total Copper, Total Mercury, Total Selenium, Total Thallium, Total Cyanide, Total

# Section 2

2,3,7,8,Tetrachlorodibenzo-P-Dioxin

# GC/MS FRACTION\* - VOLATILE COMPOUNDS

Arcolein
Benzene
Carbon Tetrachloride
Chlorodibramomethane
2-Chloroethylvinyl Ether
Dichlorobomomethane
1,2-Dichloroethane
1,2-Dichloropropane
Ethylbenzene
Methyl Chloride
1,1,2,2-Tetrachloroethane
Toluene
1,1,1-Trichloroethane
Trichloroethylene

Vinyl Chloride
Acrylonitirile
Bromoform
Chlorobenzene
Chloroethane
Chloroform
1,1-Dichloroethane
1,3-Dichloropropylene
Methyl Bromide
Methylene Chloroethane
1,2-Trans-Dichloroethylene
1,1,2-Trichloroethane

# GS/MS FRACTION -ACID COMPOUNDS

2-Chlorophenol 2.4-Dimethylphenol 2,4-Dinitro-phenol 4-Nitrophenol pentachlorophenol 2,4,6-Trichlorophenol

2,4-Dichlorophenol 4,6-Dinitro-O-Cresol 2-Nitrophenol P-Chloro-M-Cresol Phenol

# GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS

Acenaphthene Anthracene

Benzo (a) Anthracene 3.5-Benzofluoranthene Benzo (k) Fluoranthene Bis (2-Chloroethyl) Ether Bis Bis (2-Ethylhexyl) Phthalate Butyl Benzyl Phthalate 4-Chlorophenyl Phenyl Ether Dibenzo (a,h) Anthracene 1,3-Dichlorobenzene 3,3-Dichlorobenzidine Dimethyl Phthalate 2,4-Dinitrotoluene Di-N-Octyl Phthalate Fluoranthene Hexachlorobenzene Hexachlorocyclopentadiene

Indeno (1,2,3-cd) Pyrene

Naphthalene

N-Nitro-soldimethylamine N-Nitro-sodiphenylamine

Pyrene

Acenaphtylene Benzidine

Benzo (a) Pyrene Benzo (ghi) Perylene

Bis (2 Chloroethoxy) Methane (2-Chloroisopropyl) Ether 4-Bromophenyl Phenyl Ether

2-Chloronaphthalene

Chrysene

1,2-Dichlorobenzene 1.4-Dichlorobenzene Diethyl Phthalate Di-N-Butyl Phthalate 2,6-Dinitrotoluene

1,2, Diphenylhydrazine (as Azobenzen)

Fluorene

Hexachlorobutadiene Hexachloroethane Isophorone

Nitrobenzene

N-Nitrosodi-N-Propylamine

Phenanthrene

1,2,4-Trichlorobenzene

# **GC/MS FRACTION - PESTICIDES**

Aldrin Alpha-BHC Beta-BHC 4,4' DDT 4,4'-DDD

Alpha-Endosulfan **Endosulfan Sulfate** Endrin Aldehyde Heptachlor Epoxide

PCB-1254 PCB-1232 PCB-1260 Toxaphene

\*fractions defined in40 CFR Part 136

Gamma-BHC Delta-BHC Chlordane 4,4' DDE Dieldrin

Beta-Endosulfan

Endrin Heptachlor PCB-1242 PCB-1221 PCB-1248 PCB-1016

# TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES REQUIRED TO BE IDENTIFIED BY APPLICANTS IF EXPECTED TO BE PRESENT

# **TOXIC POLLUTANT**

#### Asbestos

# HAZARDOUS SUBSTANCES

Aceltaldehyde Allyl alcohol Allyl chloride Amyl acetate Aniline Benzonitrile Benzyl chloride

Benzyl chloric Butyl acetate Butylamine Captan Carbaryl Carbofuran

Carbon disulfide Chlorpyrifos Coumpahos Cresol

Crotonaldehyde Cyclohexane

2,4-D (2,4-Dichlorophinoxyacetic acid)

Diazinon
Dicamba
Dichlobenil
Dichlone

2,2 Dichloropropionic acid

Dichlorvos
Diethyl amine
Dimethyl amine
Dintrobenzene

Diquat Disulfoton Diuron

Epichlorohydrin

Ethion

Ethylene diamine Formaldehyde

Furfural Guthion Isoprene

Isopropanolamine dodecylbenzenesulfonate

Kelthane Kepone Malathion

Mercaptodimethur

Methoxychlor

# **HAZARDOUS SUBSTANCES**

Methyl mercaptan Methyl methacrylate Methyl parathion Mevinphos Mexacarbate Monoethyl amine Monomethyl amine

Naled Naphthenic acid Nitrotoluene Parathion Phenolsufonate Phosgene

Propargite
Propylene oxide
Pyrethrins
Quinoline
Resorcinol
Strontium
Strychnine

2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)

TDE (Tetrochlorodiphenyl ethane

2,4,5-TP [2-(2,4,5-Trichlorophenoxy) propanic acid]

Trichlorofon

Triethanolamine dodecylbenzenesulfonate

Triethylamine Uranium Vanadium Vinyl acetate Xylene Xylenol

Zirconium

# **HAZARDOUS SUBSTANCES**

Acetaldehyde
Acetic acid
Acetic anhydride
Acetone cyanohydrin
Acetyl bromide
Acetyl chloride
Acrolein
Acrylonitrile
Adipic acid
Aldrin

Allyl alcohol
Alyll chloride
Aluminum sulfate
Ammonia

Ammonium acetate
Ammonium benzoate
Ammonium bicarbonate
Ammonium bichromate
Ammonium bifluoride
Ammonium bisulfite
Ammonium carbamte
Ammonium carbonate
Ammonium chloride
Ammonium chromate
Ammonium chromate
Ammonium citrate
Ammonium flouroborate

Ammonium silicofluoride Ammonium sulfamate Ammonium sulfide Ammonium silfite Ammonium tartrate Ammonium thiocyanate Ammonium thisulfate

Ammonium fluoride

Ammonium oxalate

Ammonium hydroxide

Amyl acetate Aniline

Antimony pentachloride Antimony potassium tartrate

Antimony tribromide
Antimony trichloride
Antimony trifluoride
Antimony trioxide
Arsenic disulfide
Barium cyanide
Repressor

Benzene
Benzoic acid
Benzonitrite
Benzoyl chloride
Benzyl chloride
Beryllium chloride
Beryllium fluoride
Beryllium nitrate
Butylacetate
n-Butylphthalate

Butylamine
Butyric acid
Cadmium acetate
Cadmium bromide
Cadmium chloride
Calcium arsenate
Calcium arsenite
Calcium carbide
Calcium chromate
Calcium cyanide

Calcium dodecylbenzenesulfonate

Calcium hypochlorite

Captan
Carbaryl
Carbofuran
Carbon disulfide
Carbon tetrachloride

Chlordane
Chlorine
Chlorobenzene
Chloroform
Chloropyrifos
Chlorosulfonic acid
Chromic acetate
Chromic acid
Chromic sulfate
Chromous chloride
Cobaltous bromide
Cobaltous formate
Cobaltous sulfamate

Coumaphos Cresol

Crotonaldehyde
Cupric acetate
Cupric acetoarsenite
Cupric chloride
Cupric nitrate
Cupric oxalate
Cupric sulfate

Cupric sulfate ammoniated

Cupric tartrate Cyanogen chloride Cyclohexane

2,4-D acid (2,4-Dichlorophenoxyacetic

acid esters)

DDT
Diazinon
Dicamba
Dichlobenil
Dichlone
Dichloroben

Dichlorobenzene Dichloropropane Dichloropropene

Dichloropropene-Dichloropropane mix

2.2-Dichloropropionic acid

Dichlorvos
Dieldrin
Diethylamine
Dimethylamine
Dinitrobenzene
Dinitrotoluene
Digust

Diquat
Disulfoton
Diuron

Dodecylbenzesulfonic acid

Endosulfan Endrin Epichlorohydrin Ethion

Ethylbenzene Ethylenediamine Ethylene dibromide Ethylene dichloride

Ethylene diaminetetracetic acid

(EDTA)

Ferric ammonium citrate Ferric ammonium exalate

Ferric chloride Ferric fluoride Ferric nitrate Ferric sulfate Ferrous chloride Ferrous sulfate Formaldehyde Formic acid Fumaric acid Furfural Guthion

Hexachlorocyclopentadiene

Hydrochloric acid Hydrofluoric acid Hydrogen cyanide Hydrogen sulfide

Heptachlor

Isoprene Isopropanolamine

dodecylbenzenesulfonate

Kelthane
Kepone
Lead acetate
Lead arsenate
Lead chloride
Lead fluoborate
Lead fluorite
Lead iodide
Lead nitrate
Lead stearate
Lead sulfate
Lead sulfide
Lead thiocyanate

Lindane

Lithium chromate

Malathion

# **HAZARDOUS STUBSTANCES (Continued)**

Maleic acid
Maleic anhydride
Mercaptodimethur
Mercuric cyanide
Mercuric nitrate
Mercuric sulfate
Mercuric thiocyanate
Mercurous nitrate
Methoxychlor
Methyl methacrylate
Methyl parathion
Mevinphos
Mexacarbate
Monethylamine
Monomethylamine

Naled

Naphthalene Naphthenic acid

Nickel ammonium sulfate

Nickel chloride
Nickel hydroxide
Nickel nitrate
Nickel sulfate
Nitric acid
Nitrobenezene
Nitrogen dioxide
Nitrophenil
Nitrotoluene
Paraformaldehyde

Parathion

Pentachlorophenol

Phenol Phosoene Phosphoric acid Phosphorus

Phosphorus oxychloride Phosphorus pentasulfide Phosphorus trichloride

Polychlorinated biphenyls (PCB)

Potassium arsenate Potassium arsenite Potassium bichromate Potassium cyanide Potassium hydroxide Potassium permanganate

Propargite
Propionic acid
Propionic anhydride
Propylene oxide

Pyrethrins
Quinoline
Resorcinol
Selenium oxide
Silver nitrate
Sodium

Sodium arsenate Sodium arsenite Sodium bichromate Sodium bifluoride Sodium bisulfite Sodium chromate Sodium cyanide

Sodium dodecylbenzenesulfonate

Sodium fluoride
Sodium hydrosulfide
Sodium hydroxide
Sodium hypochlorite
Sodium methylate
Sodium nitrate

Sodium phospate (dibasic) Sodium phosphate (tribasic)

Sodium selenite Strontium chromate

Strychnine Styrene Sulfuric acid

Sulfur monochloride

2,4,5-T acid (2,4,5-Trichlorophenoxy acetic acid)

2,4,5-Tamines (2,4,5-Trichlorophenoxy acetic acid amines)

2,4,5-T esters (2,4,5-Trichlorophenoxy

propanoic acid)

2,4,5-TP acid esters (2,4,5-

Trichlorophenoxy propanoic acid

esters)

TDE (Tetrachlorodiphenyl ethane)

Tetraethyl lead

Tetraethyl pyrophosphate

Thallium sulfate

Toluen
Toxaphene
Trichlorofon
Trichloroethylene
Trichlorophenol
Triethanolamine

dodecylbenzenesulfonate

Triethylamine
Trimethylamine
Uranyl acetate
Uranyl nitrate
Vanadium pentoxide
Vanadyl sulfate
Vinyl acetate
Vinylidene chloride

Xylene Xylenol Zinc acetate Zinc ammonium chloride

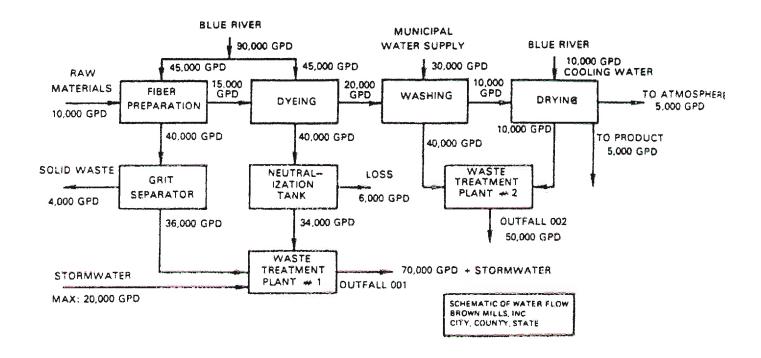
Zinc borate
Zinc bromide
Zinc carbonate
Zinc chloride
Zinc cyanide
Zinc fluoride
Zinc fluoride
Zinc formate
Zinc hydrosulfite
Zinc nitrate

Zinc phenolsulfonate Zinc phosphide Zinch silicofluoride Zinc sulfate

Zinc suitate Zirconium nitrate

Zirconium potassium fluoride

Zirconium sulfate Zirconium tetrahloride



Form Approved OMB No. 2040-0086 Approval expires 7-31-88

Please type or print in the unshaded areas only

Form 2D **NPDES** 



# **New Sources and New Dischargers Application for Permit to Discharge Process Wastewater**

For this	outfall, li	st the lati	tude and	longitude	e, and nar	ne of the	e receiving water(s)
Outfall Number (list) Deg	Latitude			Longitude			Receiving Water (name)
	Deg	Min	Sec	Deg	Min	Sec	
1							Willapa Bay 46.37 46.75 Latitude (dd); -124.05123.84 Longitude (dd)
1				8			Grays Harbor 46.86 47.04 Latitude (dd); -124.16123.84 Longitude (dd)
				i.			See maps included as Appendix B to SEPA checklist
	+						
1		1					
					i		

II. Discharge Date (When do you expect to begin discharging?)) June 2016

III. Flows, Sources of Pollution, and Treatment Technologies

For each outfall, provide a description of (1) all operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and stormwater runoff; (2) the average flow contributed by each operation; and (3) the treatment received by the wastewater. Continue on additional sheets if necessary. Outfall 1. Operations Contributing Flow

Outfall Number	Operations Contributing Flow     (list)	Average Flow (include units)	3. Treatment (Description of list Codes from Table 2D-1)
61	Ground applications (Protector 2F and Protector 0.5G)	0.5 lb ai/ac	4-A
	Applications from Boat (Protector 0.5G)	0.5 lb ai/ac	4-A
	Applications to selected areas are usually not repeated for 3 or more years		
	See Appendix B (Protector 2F and Protector 0.5G Labels)		

1 1	,		
ı i			
I	 		
1	- 1	j	
1			
1			
			İ

C. I	contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item III-A. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.							
	Yes (co	mplete the following	table)	☐ No (	go to Item IV)			
İ	Outfall			1. Freq	uency		2. Flow	
ŀ	Number		a. Days Per Wes		b. Months Per Year	a. Maximum	b. Maximum	c. Duration
			(specify		(specify)	Daily Flow Rate	Total Volume (specify	(in days)
	1		average	)	average)	(in mgd)	with units)	
	,				April 15-			
İ					December 15			
İ				1				
				J				
				ł				
				i				
				1				
				j				
				j				
							1	
				-				
						İ		
					1	İ		
					•	i		
						H.		
			1	1		1		į
V. Produ	ction	COLUMN TO SERVICE AND ADDRESS OF THE PARTY O		J.				
		THE PARTY OF	A 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	100 Tally 1		ASST THE STATE OF	1 43/1 LD3h	
nroduction	s an applicable produ	action-based effluen	t guideline or NSPS	, for eac	h outfall list the estim	ated level of prod	uction (projection	of actual
production	on level, not designed	J. CADIESSED III IDE I	enns and units user	i in the oi	pplicable effluent guidetes (attach a separate	olina es NCDO fee	each of the first 3	years of
			vice annuil difettiall.	- estima	tes (attach a separate	sneet).		
Year	a. Quantity	b. Units of						
1 501	Per Day	Measure		C.	Operation, Product, M	laterial, etc (speci	fy)	
	1,		<u> </u>					

			(数)
CONTINUED FROM THE FRONT	EPA ID Number (co)	from Item 1 of Form 1	Outfall Number
V. Effluent Characteristics	7 57 E P. S. W.	SE SINGS	
be discharged from each of your of be completed in accordance with separate page. Attach additional si General Instructions (See Table 2 Each part of this item requests you the source of information. Data for the permitting authority. For all out	the specific instruction the specific instruction the specific instruction to provide an estimate all pollutants in Gralls, data for pollutations.	this item address ction for that part cessary.  nated daily maximized A, for all outfants in Group B sh	ncentration and mass) of the pollutants to less a different set of pollutants and should and all and average for certain pollutants and alls, must be submitted unless waived by ould be reported only for pollutants which is guideline or NSPS or indirectly through
1. Pollutant	2. Maximum Daily Value (include units)	3. Average Daily Value (include units)	4. Source (see instructions)
lmidacloprid			
Acute toxicity criterion at 48 hr	3.0 ppb		NPDES permit WA
Chronic toxicity criterion @ 30 day	0.06 ppb		NPDES permit WA

CONTINUED FROM THE FRONT EPA ID Num	ther (cop from Item 1 of Form 1)
reason to believe will be discharged from any believe it will be present.	ants listed in Table 2D-3 of the instructions which you know or have outfall. For every pollutant you list, briefly describe the reasons you
1. Pollutant	2. Reason for Discharge
Imidacloprid	Insecticide to control burrowing shrimp on commercial shellfish beds.
VI. Engineering Report on Wastewater Treatment	
<ol> <li>If there is any technical evaluation concerning your wastewn appropriate box below.</li> </ol>	ater treatment, including engineering reports or pilot plant studies, check the
production facility with respect to production pro	ng plant(s) which, to the best of your knowledge, resembles this cesses, wastewater constituents, or wastewater treatments.
N/A	Location

	EPA ID Number (cop from Item 1 of Form 1)
VII. Other Information (Optional)	TANKS TO BE STORY
Use the space below to expand upon any of the above questions or to bring other information you feel should be considered in establishing permit limitat additional sheets if necessary.	tions for the proposed facility. Attach
See Appendix B (FIFRA Registration Labels for Protector 2F and Protector 0	).5G )
. Certification	
I Certify under penalty of law that this document and all attachments were supervision in accordance with a system designed to assure that qualified evaluate the information submitted. Based on my inquiry of the person or personse persons directly responsible for gathering the information, the information knowledge, and heliof true accounts.	ons who manage the system are

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.

EPA Form 3510-2D (Rev. 8-90)

A. Name and Official Title (type or print)

Ken Wiegardt - President

C. Signature

B. Phone No.

D. Date Signed

(360) 244-3099

12016

## Appendix A.

# For NPDES Application Form 2D. Grays Harbor and Willapa Bay Commercial Shellfish

Beds





# Appendix B. For NPDES Application Form 2D. FIRFA Registration Labels for Imidacloprid (Protector 2F and Protector 0.5G)



### U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Chemical Safety and Pollution Prevention Registration Division (7505C)

EPA Reg. Number: Date of Issuance:

22267 2

White STOREHO	1200 Pennsylvania Ave., N.W. Washington, D.C. 20460	66607-2	JUN 0 6 2013
NOTICE OF PESTICIDE:  _X Registration  Reregistration		Term of Issuance: Conditional  Name of Pesticide Product:	

Willapa-Grays Harbor Oyster Growers Association P.O. Box 3, Ocean Park, WA 98640

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(a). You must:

- 1. Submit and/or cite all data required for registration/registration review of your product when the Agency requires all registrants of similar products to submit such data.
- 2. Submit or cite any data which have previously been required for imidacloprid.
- 3. Make the following label change before you release the product for shipment:
- Revise the EPA Registration Number to read, "EPA Reg. No 88867-2."

Signature of Approving Official:	Date:
John Hebert, Product Manager 07	JUN 0 6 2013
Insecticide Rodenticide Branch, Registration Division (7505P)	

PA Form 8570-6

Page 2 EPA Reg. No. 88867-2

- 4. Note that monitoring data reporting is required under the National Pollutant Discharge Elimination System (NPDES) permit. We request that you submit this information to the Registration Division, Office of Pesticide Programs, as well.
- 5. Submit one copy of the revised final printed label for the record before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the CSF currently on file for this product is the basic CSF, dated 2/21/12.

If you have any questions, please contact Dr. Jennifer Urbanski at 703-347-0156 or urbanski.jennifer@epa.gov.

John Hebert Product Manager 07 Insecticide-Rodenticide Branch Registration Division (7505P)

Enclosure

### PROTECTOR 2F

FOR USE ONLY IN WILLAPA BAY/ GRAYS HARBOR, WASHINGTON, TO CONTROL BURROWING SHRIMP IN COMMERCIAL SHELLFISH BEDS

**ACTIVE INGREDIENT:** 

Imidacloprid: 1-[(6-Chloro-3-pyridiny)methyl]-N-nitro-2-imidazolidinimine	21.4%
OTHER INGREDIENTS:	78.6%
TOTAL:	100.0%

Contains 2 pounds of imidacloprid per gallon.

# KEEP OUT OF REACH OF CHILDREN CAUTION-CAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detaile. (If you do not understand the label, find someone to explain it to you in detail.)

EPA Reg. No.

EPA Establishment No.

SHAKE WELL BEFORE USING

ACCEPTED JUN 0 6 2013

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under:

EPA. Reg. No: 88867-2

FIRST AID		
If swallowed:	Call a poison control center or doctor immediately for treatment advice.	
	<ul> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vorniting unless told to do so by the poison control center or doctor.</li> </ul>	
	<ul> <li>Do not give anything by mouth to an unconscious person.</li> </ul>	
If inhaled	Move person to fresh air     If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible	
If on skin or clothing:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.	

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

No specific antidote is available. Treat the patient symptomatically.

may also contact 1-800-222-1222 for emergency medical

treatment information NOTE TO PHYSICIAN

Harmful if swallowed. Harmful if inhaled. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton
- Shoes and socks
- · Protective evewear

Follow Manufacturer's instructions for cleaning/maintaining PPE. If instructions for washables do not exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### **ENGINEERING CONTROLS STATEMENTS**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

#### **USER SAFETY RECOMMENDATIONS**

#### **Users Must:**

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Wash contaminated area thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing.

Do not contaminate water when disposing of equipment washwaters. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops and weeds. Do not allow this product to drift to blooming crops or weeds are visiting the treatment area. This product is toxic to wildlife and highly toxic to aquatic invertebrates.

#### **DIRECTIONS FOR USE**

It is a violation of the Federal law to use this product in a manner inconsistent with its labeling. A copy of this label must be in the possession of the user at the time the product is applied.

**READ THIS LABEL:** Read the entire label and follow all use directions and precautions.

For use only to control burrowing shrimp in intertidal commercial shellfish beds of Washington State's Willapa Bay and Grays Harbor.

#### **MIXING INSTRUCTIONS:**

To prepare the application mixture, add a portion of the required amount of water to the spray tank, begin agitation, and add the Protector 2F. Complete filling tank with the balance of water needed. Be sure to maintain agitation during both mixing and application.

Do NOT formulate this product into other end-use products.

#### **APPLICATION INSTRUCTIONS:**

To control burrowing shrimp in intertidal commercial shelifish beds [of Washington State's Willapa Bay and Grays Harbor], apply at a maximum rate of 0.5 lb a.i.imidacloprid /acre per year using the following properly calibrated application equipment:

- Helicopters equipped with boom ¾ as long as rotor diameter equipped with Accuflo or similar nozzles
- Backpack sprayer.
- Ground based vehicle with boom.

#### RESTRICTIONS:

- Do not harvest shellfish within thirty days after treatment.
- All ground must be properly staked and flagged to protect adjacent shellfish and water areas. For aerial applications, the corners of each plot must be marked so the plot is visible from an altitude of at least 500ft.
- Aerial applications must be on beds exposed at low tide.
- A single application of imidacloprid per year is allowed.
- No adjuvants or surfactants are allowed with the use of this product.
- All applications must occur between April 15 and December 15.
- A 100-foot buffer zone must be maintained between the treatment area and the nearest shellfish to be harvested when treatment is by aerial spray; a 25 foot buffer zone is required if treatment is by hand spray.
- Do not apply aerially during Federal holiday weekends. During aerial applications, all public access areas within one-quarter (1/4) mile and all public boat launches within a quarter (1/4) mile radius of any bed scheduled for treatment shall be posted. Public access areas shall be posted at 500 feet intervals at those access areas more than 500 feet wide. Signs shall be a minimum of 8 ½ x 11 inches in size, and be made of a durable

weather-resistant, white material. The sign will say "Imidacloprid will be applied for burrowing shrimp control on [date] on commercial shell fish beds. Do not Fish, Crab or Clam within one-quarter mile of the treated area. The location of the treated area will be included on the sign.

The sign will include lettering shall be in bold black type with the word "WARNING" or "CAUTION" at least one-fourth (1/4) of an inch high. Signs shall be posted so they are secure from the normal effects of weather and water currents, but cause no damage to private property. Signs shall be posted at least 2 days prior to treatment and shall remain for at least 30 days after treatment.

#### SPRAY DRIFT MANAGEMENT:

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determines the potential for spray drift. The applicator and the entity authorizing spraying are responsible for considering all these factors when making decisions.

To minimize spray drift, the applicator should be familiar with and take into account the following drift reduction advisory information. Additional information may be available from state enforcement agencies or the Cooperative Extension on the application of the product.

The best drift management strategy and most effective way to reduce drift potential are to apply large droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see WIND, TEMPERATURE AND HUMIDITY, and TEMPERATURE INVERSIONS.

#### CONTROLLING DROPLET SIZE

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle types, narrow spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift. Do not use nozzles producing a mist droplet spray.

#### **APPLICATION HEIGHT**

Making applications at the lowest possible height (helicopter, ground driven spray boom) that is safe and practical reduces exposure of droplets to evaporation and wind.

ground) upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.).

#### WIND

Drift potential is lowest between wind speeds of 3-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 3 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

#### **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud, which can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### AERIAL APPLICATION METHODS AND EQUIPMENT HELICOPTERS ONLY

Water Volume: Use 2 or more gallons of water per acre. The actual minimum spray volume per acre is determined by the spray equipment used. Use adequate spray volume to provide accurate and uniform distribution of spray particles over the treated area and to avoid spray drift.

Managing spray drift from aerial applications: Applicators must follow these requirements to avoid off-target drift movement: 1) boom length – the distance of the outmost nozzles on the boom must not exceed ½ the length of the rotor, 2) nozzle orientation – nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees, and 3) application height – without compromising helicopter safety, applications should be made at a height of 10 feet or less above the crop canopy or tallest plants. Applicators must follow the most restrictive use cautions to avoid drift hazards, including those found in this labeling as well as applicable state and local regulations and ordinances.

#### **GROUND APPLICATION (BROADCAST)**

Water Volume: Use 5 or more gallons of water per acre. The actual minimum spray volume per acre is determined by the spray equipment used. Use adequate spray volume to provide accurate and uniform distribution of spray particles over the treated area and to avoid spray drift.

Spray tank should have constant agitation to assure adequate mixing of product.

#### **AERIAL APPLICATIONS**

All precautions should be taken to minimize or eliminate spray drift. Helicopters can be used to apply PROTECTOR 2F; however, DO NOT make applications by helicopter unless appropriate buffer zones can be maintained to prevent spray drift out of the target area, or when spray drift as a result of helicopter application can be tolerated. Aerial equipment designed to minimize spray drift, such as a helicopter

equipped designed to minimize spray drift, such as a helicopter equipped with a MicrofoilTM boom, Thru-ValveTM boom or raindrop nozzles, must be used and calibrated. Except when applying with a Microfoil boom, a drift control agent may be added at the recommended label rate. To avoid drift, applications should not be made during inversion conditions, when winds are gusty or any other conditions which allow drift. Side trimming is not recommended with PROTECTOR 2F unless death of treated tree can be tolerated.

#### **GROUND APPLICATIONS**

Low Volume

Use equipment calibrated to deliver 5 to 20 gallons of spray solution per acre.

For low volume, selected proper nozzles to avoid over-application. Proper application is critical to ensure desirable results.

#### Restrictions During Temperature Inversions

Because the potential for spray drift is high during temperature inversions, do NOT make air applications during temperature inversions.

#### Mixing and Loading Requirements

The use of a properly designed and maintained containment pad for mixing and loading of any pesticide into application equipment is recommended. If containment pad is not used, maintain a minimum distance of 25 feet between mixing and loading areas and potential surface to groundwater conduits such as field sumps, uncased well heads, sinkholes, or field drains.

#### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Pesticide Storage: Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of reach of children, preferably in a locked storage area. Handle and open container in a manner as to prevent spillage. If the container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk though spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. In spill or leak incidents, keep unauthorized people away.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of at an approved waste disposal facility.

#### **CONTAINER DISPOSAL [HANDLING]:**

For containers smaller than 5 gallons: Nonrefillable container: Do not reuse or refill this container. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable Containers Larger than 5 Gallons: Nonrefillable

container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

This product is registered by the Willapa-Grays Harbor Oyster Growers Association, P.O. Box 3, Ocean Park, WA 98640



# U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Chemical Safety and Pollution Prevention Registration Division (7505C) 1200 Pennsylvania Ave., N.W. Washington, D.C. 20460

0000

Date of Issuance:

88867-1

EPA Reg. Number:

JUN 0 6 2013

NOTICE (	OF:	PES <sub>1</sub>	ric	IDE
----------	-----	------------------	-----	-----

X Registration

\_ Reregistration

(under FIFRA, as amended)

Term of Issuance:

Conditional

Name of Pesticide Product:

Protector 0.5G

Name and Address of Registrant (include ZIP Code):

Willapa-Grays Harbor Oyster Growers Association

P.O. Box 3, Ocean Park, WA 98640

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(a). You must:

- 1. Submit and/or cite all data required for registration/registration review of your product when the Agency requires all registrants of similar products to submit such data.
- 2. Submit or cite any data which have previously been required for imidacloprid.
- 3. Make the following label change before you release the product for shipment:
- Revise the EPA Registration Number to read, "EPA Reg. No 88867-1."

Signature of Approving Official:

Date:

Jøhn Hebert, Product Manager 07

nsectiolde-Rodenticide Branch, Registration Division (7505P)

JUN 0 6 2013

EPA Form 8570-6

Page 2 EPA Reg. No. 88867-1

- 4. Note that monitoring data reporting is required under the National Pollutant Discharge Elimination System (NPDES) permit. We request that you submit this information to the Registration Division, Office of Pesticide Programs, as well.
- 5. Submit one copy of the revised final printed label for the record before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the CSF currently on file for this product is the basic CSF, dated 2/21/12.

If you have any questions, please contact Dr. Jennifer Urbanski at 703-347-0156 or urbanski.jennifer@epa.gov.

John Hebert Product Manager 07 Insecticide-Rodenticide Branch Registration Division (7505P)

Enclosure

#### ACCEPTED

JUN 0 6 2013 Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under:

GROUP M INSECTICIDE

88867-1 EPA. Reg. No:\_\_

# PROTECTOR 0.5G

FOR USE ONLY IN WILLAPA BAY/ GRAYS HARBOR, WASHINGTON, TO CONTROL BURROWING SHRIMP IN COMMERCIAL SHELLFISH BEDS

ACTIVE INGREDIENT:	
Imidacloprid: 1-[(6-Chloro-3-pyridiny) methyl]-N-nitro-2-imidazolidinimine OTHER INGREDIENTS:	0.5%
TOTAL:	100.0%

# KEEP OUT OF REACH OF CHILDREN **CAUTION-CAUCION**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detaile. (If you do not understand the label, find someone to explain it to you in detail.)

EPA Reg. No.

EPA Establishment No.

# If in eyes: Hold eye open and rise slowly and gently with water for 15-20 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice

Have the product container or label with you when calling poison control center or doctor or going for treatment. You may also 1-800-222-1222 for emergency medical treatment information.

NOTE TO PHYSICIAN

No specific antidote is available. Treat the patient symptomatically

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton
- Shoes and socks
- Protective eyewear
- Dust mask

Follow manufacturer's instructions for cleaning/maintaining PPE. If instructions for washables do not exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### **ENGINEERING CONTROLS STATEMENTS**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

#### USER SAFETY RECOMMENDATIONS

#### Users Must:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside.
   Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product.
   Wash the outside of gloves before removing.

#### **ENVIRONMENTAL HAZARDS**

Do not contaminate water when disposing of equipment wash waters. This product is toxic to wildlife and highly toxic to aquatic invertebrates.

#### **DIRECTIONS FOR USE**

It is a violation of the Federal law to use this product in a manner inconsistent with its labeling. A copy of this label must be in the possession of the user at the time the product is applied.

READ THIS LABEL: Read the entire label and follow all use directions and precautions.

For use only to control burrowing shrimp in intertidal commercial shellfish beds [of Washington State's Willapa Bay and Grays Harbor]

#### MIXING INSTRUCTIONS:

Do NOT formulate this product into other end-use products.

#### **APPLICATION INSTRUCTIONS:**

To control burrowing shrimp in intertidal commercial shellfish beds [of Washington State's Willapa Bay and Grays Harbor], apply at a maximum rate of 0.5 lb a.i. imidacloprid/acre per year.

Apply this product uniformly over the area being treated using droptype or rotary-type spreaders. Do not use spreaders that would apply the material in narrow, concentrated bands. All spreader equipment must be calibrated at the time of application to achieve desired application rate.

Use one of the following properly calibrated application equipment:

- Conventional granular pesticide applicators ("belly grinders").
- Helicopters equipped with boom ¼ as long as rotor diameter.
- Ground based vehicles equipped with spinners or drop spreaders.

#### **RESTRICTIONS:**

- Do not harvest shellfish within 30 days after treatment.
- All ground must be properly staked and flagged to protect adjacent shellfish and water areas. For aerial applications, the corners of each plot must be marked so the plot is visible from an attitude of at least 500ft.
- A single application of imidacloprid at up to 0.5 ai per acre per year is allowed.
- No adjuvants or surfactants are allowed with the use of this product.
- Aerial applications must be on beds exposed at low tide.
   Applications from a floating platform or boat may be applied to beds under water using a calibrated granular applicator.
- All applications must occur between April 15 and December 15.
- A 100-foot buffer zone must be maintained between the treatment area and the nearest shellfish to be harvested within 30 days when treatment is by aerial spray; a 25 foot buffer zone is required if treatment is by hand spray if nearest shellfish bed is to be harvested within 30 days.
- Do not apply aerially during Federal holiday weekends. During aerial applications, all public access areas within one-quarter (1/4) mile and all public boat launches within quarter (1/4) mile radius of any bed scheduled for treatment shall be posted. Public access areas shall be posted at 500 feet intervals at those access areas more than 500 feet wide. Signs shall be a minimum of 8 ½ x 11 inches in size, and be made of a durable weather-resistant, white material. The sign will say "Imidacloprid will be applied for burrowing shrimp control on [date] on commercial shell fish beds. Do not Fish, Crab or Clam within one-quarter mile of the treated area." The location of the treated area will be included on the sign.

#### Draft Label

The sign will include lettering shall be in bold black type with the word "WARNING" or "CAUTION" at least one-fourth (1/4) of an inch high. Signs shall be posted so they are secure from the normal effects of weather and water currents, but cause no damage to private property. Signs shall be posted at least 2 days prior to treatment and shall remain for at least 30 days after treatment.

#### **DRIFT MANAGEMENT:**

The interaction of many equipment and weather related factors determine the potential for product drift. Average wind speed at the time of application is not to exceed 10 mph to minimize drift to adjacent shellfish and water areas when applied by air. Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors including height of granular spreader above the tideflat and equipment specifications determine drift potential at any given wind speed. Do NOT apply when winds are greater than 10 mph or during temperature inversions. Make applications at the lowest possible height (helicopter, ground or barge) that is safe to operate and reduces exposure of the granules to wind. When applications are made crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the treatment area, the applicator must compensate for this displacement by adjusting the path of the application equipment upwind. Swath adjustment distance should increase with increasing drift potential.

#### Mixing and Loading Requirements

The use of a properly designed and maintained containment pad for mixing and loading of any pesticide into application equipment is recommended. If containment pad is not used, maintain a minimum distance of 25 feet between mixing and loading areas and potential surface to groundwater conduits such as field sumps, uncased well heads, sinkholes, or field drains.

#### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved wasted disposal facility.

Pesticide Storage: Store in a cool, dry place an in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a tocked storage area.

Handle and open container in a manner as to prevent spillage. If material is spilled for any reason or cause, carefully contain any spilled material to prevent non-target contamination. Do not walk through spilled material and dispose of as directed for pesticides above. Refer to Precautionary Statements on label for hazards associated with handle of this material. In spill or leak incidents, keep unauthorized people away. For chemical spill, leak, fire, or exposure, you may contact CHEMTREC at 800-424-9300.

Container Disposal: Non-Refillable: Do not reuse or refill this container. Completely empty bag into application equipment. Dispose of empty bag in a sanitary landfill, by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

This product is registered by the Willapa-Grays Harbor Oyster Growers Association, P.O. Box 3, Ocean Park, WA 98640

#### WAC 197-11-960 Environmental checklist.

#### ENVIRONMENTAL CHECKLIST

Purpose of checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

#### A. BACKGROUND

1. Name of proposed project, if applicable:

Application of Imidacloprid to Molluscan Shellfish Beds in Willapa Bay and Grays Harbor to Control Destructive Burrowing Shrimp.

- 2. Name of applicant: Willapa/Grays Harbor Oyster Growers Association
- 3. Address and phone number of applicant and contact person:

Ken Wiegardt, President PO Box 3 Ocean Park, WA 98640 360-244-3099

- 4. Date checklist prepared: December 18, 2015
- 5. Agency requesting checklist: Washington State Department of Ecology
- 6. Proposed timing or schedule (including phasing, if applicable):

Molluscan shellfish beds will be treated with imidacloprid as needed at various times between from April 15 and December 15 of each year the permit is valid. The exact date and time of treatments will depend on such parameters as crop cycle (e.g. when harvest oysters are removed), tides, eelgrass cover, weather, etc.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

#### Not at this time.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Extensive environmental information has been prepared with respect to this proposal. Please see the attached list of reference documents at Appendix A.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

There are no pending approvals for other proposals that would directly affect the commercial shellfish beds of Willapa Bay and Grays Harbor.

10. List any government approvals or permits that will be needed for your proposal, if known.

An individual NPDES permit will be required, as well as Federal and State Registrations for this particular use of imidacloprid.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

Located in Washington State's Pacific and Grays Harbor counties, Willapa Bay and Grays Harbor are currently home to tens of thousands of acres of commercial oyster and clam beds. Ghost shrimp (*Neotrypaea californiensis*) and mud shrimp (*Upogegia pugettensis*) (collectively burrowing shrimp) adversely affect the commercial shellfish culture by destabilizing sediments, causing significant mortality, and reducing growth rates. As part of an ongoing integrated pest management program (IPM), imidacloprid, a neonicotinoid insecticide, has been under investigation for use to control burrowing shrimp on commercial oyster and clam beds since 1996.

This proposal involves the application of the insecticide imidacloprid on tidelands in Willapa Bay (46.37 – 46.75 Latitude and -124.05 - -123.84 Longitude) and Grays Harbor (46.86 – 47.04 Latitude and -124.16 - -123.84 Longitude), Washington, to control burrowing shrimp. Two forms of imidacloprid are proposed to be applied to affected tidelands – Protector 0.5G (a granular product) and Protector 2F (a liquid product). Ground applications will be used with the liquid form of imidacloprid, and the granular form will be applied by ground, and boat. Average application rate will be 0.5 pound (lb) active ingredient per acre (a.i./ac). The combined surface area of Willapa Bay and Grays Harbor is approximately 155,000 acres. The area to be treated yearly with imidacloprid will be a small percent of the total combined surface areas of the farmed intertidal shellfish growing area in the two bays. The amount of ground treated each year will vary and is dependent on previous recruitment and the survival and growth rate of those burrowing shrimp. On average, a particular shellfish bed will be treated once every five years, depending again on the measurable dynamics of the shrimp population. Providing growers the flexibility of when to treat the infested acreage in any given year will facilitate an adaptive approach that is expected to result in increased treatment efficiencies and thereby reduce the overall amount of imidacloprid that would be applied in a restricted time frame.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

See answer to A.11 directly above.

#### B. ENVIRONMENTAL ELEMENTS

#### 1. Earth

a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous,

The affected geographic areas consist entirely of relatively flat tidelands in Willapa Bay and Grays Harbor.

b. What is the steepest slope on the site (approximate percent slope)?

The affected geographic areas generally slope toward the main channels and bay entrance to the ocean.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

The affected geographic areas consist of marine sediments often referred to as mud. These estuary sediments are primarily poorly sorted clastics grading from sand to silt. There are some organics and clay intermixed. Silt (a size category of rock particles) is generally the major sediment type. Sediment type and size is largely controlled by fluvial processes such as wave, channel currents and tidal action. The intertidal area is a constant geological environment of aggradation and degradation (deposition and erosion) as sediment is deposited (dropping from streams as it reaches sea level) and gradually fills in or moves toward the mouths of the bays. Gravel and shell can also be found on some portions of the beds to provide substrate for shellfish.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

Tidal action and local biological activity can temporarily or periodically disturb surface sediments. This is a natural condition in tidal environments.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

This proposal does not involve any filling or grading activities.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

No land disturbing activities are associated with this proposal. Therefore, erosion resulting from the proposal is not anticipated.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

No impervious surfaces will be created as a result of this proposal.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

No impacts to earth resources, including erosion, will occur as a result of the proposal. Therefore, no measures to reduce earth impacts are required.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Boats, ATVs, and ground sprayers would emit minimal emissions to the air; however the quantities are unknown at this time.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No, there are no upwind, off-site sources of emissions or odor that would affect this proposal.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Boats will need to use a hopper, hopper loaders, and possibly a barge to hold additional chemical, equipment and personnel. Applications are very accurate.

#### 3. Water

#### a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Nine rivers feed into Willapa Bay: Willapa River, North River, Naselle River, Bone River, Palix River, Niawiakum River, Cedar River, Nemah River, and Bear River. There are also numerous creeks and streams that feed into Willapa Bay. Several rivers also feed into Grays Harbor including: Chehalis River, Humptulips River, Hoquiam River, as well as many lesser rivers and streams. However, treatment of molluscan shellfish beds with imidacloprid will not occur in the vicinity of these rivers and streams.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes. Imidacloprid will be applied to the tidelands of Willapa Bay and Grays Harbor by ground, boat, or aerial application. See Appendix B (WGHOGA commercial aquaculture parcels/beds/tidelands).

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

This proposal will not involve the placement or removal of fill or dredged material in surface water or wetlands.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No surface water withdrawals or diversions will be required as a result of this proposal.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

The affected geographic areas are on tidelands of Willapa Bay and Grays Harbor (See Appendix B).

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

The proposal does not involve the discharge of waste materials to surface waters.

#### b. Ground:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No withdrawals from, or discharge to, groundwater will occur as a result of the proposal.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

No waste material will be discharged into the ground.

- c. Water runoff (including stormwater):
  - Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

The source of runoff is surface water movement during tidal exchanges. The water will flow on and off the tide flats of Willapa Bay and Grays Harbor twice every 26 hours. Imidacloprid is, however, known to dissipate quite quickly in surface water and is usually analytically undetectable 24-48 hours after application. In addition, imidacloprid is typically undetectable at distances greater than 400 meters from the application area.

2) Could waste materials enter ground or surface waters? If so, generally describe.

No waste materials will be discharged as part of this proposal.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

Imidacloprid will only be applied as necessary to control burrowing shrimp. No more than 0.5 lbs a.i./ac will be applied at a maximum interval of one year. Each shellfish bed will be treated, at maximum, once per year and most likely only once per several years (the expected average treatment frequency on a specific shellfish bed which has reoccurring shrimp infestations is once every five years, depending on re-infestation levels and growth rate of burrowing shrimp).

#### 4. Plants

	•••	extent of office types of vegetation found on the site.
_		deciduous tree: alder, maple, aspen, other
		evergreen tree: fir, cedar, pine, other
		- shrubs
		- grass
		-pasture
		- crop or grain
		wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
<b>X</b> _		- water plants: water lily, eelgrass, milfoil, other: spartina
		other types of vegetation:
	b.	What kind and amount of vegetation will be removed or altered?

Check or circle types of vegetation found on the gita

No vegetation will be removed as part of this proposal, and reducing burrowing shrimp will improve growth of some aquatic vegetation.

c. List threatened or endangered species known to be on or near the site.

There are no known threatened or endangered plant species.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Adverse impacts to vegetation are not anticipated, and therefore no preservation or enhancement measures are proposed.

#### 5. Animals

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site;

birds: hawk, heron, eagle, songbirds, other: shorebirds, including seagull and crow

mammals: deer, bear, elk, beaver, other:

fish: bass, salmon, trout, herring, shellfish, other: sturgeon, shark

b. List any threatened or endangered species known to be on or near the site.

The United States Fish and Wildlife Service and National Marine Fisheries Service ("Services") conducted programmatic consultations under Section 7 of the Endangered Species Act for Nationwide Permit 48 activities in Washington State. The Services completed their consultations and issued biological opinions in 2009. The biological opinions analyze the use of the insecticide carbaryl to treat burrowing shrimp in the action area (Willapa Bay and Grays Harbor). In addressing the use of carbaryl, the biological opinions analyze potential effects on the following listed species in the action area: Bull Trout; Green Sturgeon; Chinook salmon; Chum salmon; Marbled murrelet; Western Snowy Plover; and California brown pelican.

c. Is the site part of a migration route? If so, explain.

Yes, this site is part of the Pacific Flyway, so many migratory birds are seen here. Bird migrations (e.g. Anatidae, various shorebirds) primarily occur in the spring and fall as a forage stop from southern wintering areas (South America, Mexico, etc.) to northern nesting areas (e.g. Alaska). Salmonids and other fish migrate and rear along the shallows of the tidelands of Willapa Bay and Grays Harbor.

d. Proposed measures to preserve or enhance wildlife, if any:

Adverse impacts to non-target wildlife species are not expected, and anecdotal evidence shows that the control of burrowing shrimp for shellfish aquaculture greatly enhances wildlife richness and diversity. Therefore, no preservation or enhancement measures are necessary or proposed.

#### 6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

#### None.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

#### None

#### 7. Environmental health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

There is a risk of exposure to imidacloprid for persons applying imidacloprid. Applicators will have approved Personal Protective Equipment ("PPE") and will be trained in pesticide applications. Benthic invertebrates are also subject to exposure; however experimental field trials have shown that the imidacloprid disperses very quickly (usually within 24 hours) and has little toxic effects on the benthic invertebrates.

1) Describe special emergency services that might be required.

#### None.

2) Proposed measures to reduce or control environmental health hazards, if any:

The following PPE will be required of all applicators and handlers:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton
- Shoes and socks
- Protective eyewear when working in a non-ventilated space
- Follow Manufacturer's instructions for cleaning/maintaining PPE. If instructions for washables do not exist, use detergent and hot water. Keep and wash PPE separately from other laundry."
- b. Noise
  - 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

#### None

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Noise associated with boat use and ATV's will cause short-term noise during liquid and granular applications.

3) Proposed measures to reduce or control noise impacts, if any:

Except for limiting treatment to daylight hours and avoiding holiday applications, none are proposed.

8. Land and shoreline use

a. What is the current use of the site and adjacent properties?

Commercial and recreational shellfish beds and private and state-owned tidelands.

b. Has the site been used for agriculture? If so, describe.

The site has and continues to be used for shellfish aquaculture.

c. Describe any structures on the site.

The affected geographic areas are open water tidelands with no structures.

d. Will any structures be demolished? If so, what?

No.

e. What is the current zoning classification of the site?

The zoning classification in Willapa Bay is Aquaculture. Zoning in Grays Harbor County is terrestrially based and does not extend out into the Bay. There are several zoning classifications in Grays Harbor adjacent the Bay, including Agricultural, General Development, Resort Residential, General Residential, Restricted Residential, and Industrial in Grays Harbor County, Residential and Recreational in the City of Ocean Shores, and Mixed Use and Recreation & Parks in the City of Westport.

f. What is the current comprehensive plan designation of the site?

The comprehensive plan designation in Willapa Bay is Habitat Conservation. There are several comprehensive plan designations in Grays Harbor County, including Agricultural, General Development, Recreational – Residential, Residential, and Industrial.

g. If applicable, what is the current shoreline master program designation of the site?

The shoreline master program ("SMP") designation in Willapa Bay is Conservancy. The SMP designations in Grays Harbor are Conservancy and Natural.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

Grays Harbor County maps show Grays Harbor is within a Frequently Flooded Area (Zone A – 100 Year Flooding) and contains Wetlands. Additional environmentally sensitive classifications may be identified on a site-specific basis during individual project review. Waters of the state and commercial shellfish areas are included in the definition of fish and wildlife habitat conservation areas in both Grays Harbor County and Pacific County.

i. Approximately how many people would reside or work in the completed project?

There is no residential occupancy at the affected geographic areas. Between 3 and 5 workers will temporarily occupy affected geographic areas to conduct aquaculture activities, including application of pesticides.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

No displacement impacts are expected, and therefore no avoidance or reduction measures are proposed.

 Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: The affected geographic areas are currently used for, and will continue to be used for, commercial shellfish aquaculture. This is consistent with the land use designation for the tidelands that will be treated with imidacloprid.

#### 9. Housing

 a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

#### None.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

#### None.

c. Proposed measures to reduce or control housing impacts, if any:

#### None.

#### 10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

#### No structures are proposed.

b. What views in the immediate vicinity would be altered or obstructed?

The periodic application of imidacloprid to the commercial shellfish beds in Willapa Bay and Grays Harbor will not involve any structures that would alter or obstruct views in the immediate vicinity.

c. Proposed measures to reduce or control aesthetic impacts, if any:

No adverse aesthetic impacts are expected and therefore no reduction measures are necessary or proposed.

#### 11. Light and glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

No light or glare will be produced by this project. All applications of imidacloprid will occur during daylight hours.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

#### No.

c. What existing off-site sources of light or glare may affect your proposal?

#### None.

d. Proposed measures to reduce or control light and glare impacts, if any:

No adverse impacts from lighting or glare are expected and therefore no reduction measures are necessary or proposed.

#### 12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

#### Fishing, boating, and recreationally harvested shellfish beds.

b. Would the proposed project displace any existing recreational uses? If so, describe.

# Existing recreational uses will not be displaced during the application of imidacloprid. Federal registration requires that sufficient public notice is given prior to application.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

## Federal registration of imidacloprid requires that sufficient public notice is given prior to application.

- 13. Historic and cultural preservation
  - a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

#### No.

 Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

#### None.

c. Proposed measures to reduce or control impacts, if any:

## No adverse impacts are expected and therefore no reduction measures are necessary or proposed.

#### 14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

# Commercial shellfish beds are accessed from a variety of areas within Willapa Bay and Grays Harbor. The current access points to the existing street system will not change with this proposal.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

#### The sites are not served by public transit and the nearest transit stop is unknown.

c. How many parking spaces would the completed project have? How many would the project eliminate?

#### The completed project will neither create nor eliminate parking spaces.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

#### No.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The shellfish beds will be accessed by foot, ATV, or boat. Foot and ATV access will occur at various points adjacent to the shellfish beds. Boats will originate from Tokeland, South Bend, Bay Center, Niawaiakum River, or the Port of Peninsula (Nahcotta).

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

One per application day, resulting in one trip two and from the beds being treated. Trips would occur during optimal tides and during day light hours.

g. Proposed measures to reduce or control transportation impacts, if any:

The proposal is not anticipated to cause transportation impacts. Therefore, no transportation control measures are required for the application of imidacloprid to the shellfish beds.

#### 15. Public services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

Spills and worker exposures are the responsibility and liability of the licensed application. However, if a worker was exposed, health care may be needed in the form of a hospital or clinic visit.

b. Proposed measures to reduce or control direct impacts on public services, if any.

Workers will use appropriate PPE and be trained in the application of imidacloprid.

#### 16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

#### Not applicable.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

#### None.

#### C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature:

Date Submitted: January 8, 2016

# Appendix A. For SEPA Checklist. Environmental Information Related to Proposal

Booth, S.R., K. Rassmussen, and A. Suhrbier. 2011. Impact of imidacloprid on epi-benthic and benthic invertebrates: Initial studies to describe the Sediment Impact Zone (SIZ) related to imidacloprid treatments to manage burrowing shrimp. Submitted to WGHOGA June 26, 2011.

Booth, S.R.; Suhbier, A.; Patten, K.D.; Rasmussen, K. Field trials to determine the impact of imidacloprid on epibenthic and benthic invertebrates. Presentation to the 65<sup>th</sup> Annual Pacific Coast Shellfish Growers Association Conference. Salem, OR. September 20, 2011

Booth, S. Rassmussen, K. Suhrbier, A. 2011: Impact of imidacloprid on epi-benthic and benthic invertebrates: Initial studies to describe the Sediment Impact Zone (SIZ) related to imidacloprid treatments to manage burrowing shrimp.

Booth, S.R., Suhbier, A., Patten, K.D., Rasmussen, K. 2012. Impact of imidacloprid applications to control burrowing shrimp on benthic organisms: 2011 results and 2012 preliminary results. Presentation to the 66<sup>th</sup> Annual Pacific Coast Shellfish Growers Association Conference. Tulalip, WA. September 24-27, 2012

Booth, S. 2013. Impacts of Imidacloprid on Benthic Invertebrates 2012. Pacific Shellfish Institute. Final report to Washington Department of Fish and Wildlife.

Booth, Steven R., B. Hudson, A. Suhrbier, K. Patten, J. Barrett, and A. Stutes 2015. Impact of imidacloprid on epibenthic and benthic invertebrates: 2014 studies to describe the Sediment Impact Zone (SIZ) related to imidacloprid treatments to manage burrowing shrimp. Report submitted to Washington Department of Fish & Wildlife.

Booth, S. 2015. Impacts of Imidacloprid on Benthic Invertebrates 2014. Pacific Shellfish Institute. Final report to Washington Department of Fish and Wildlife.

Compliance Services International (CSI). 2013. Risk Assessment for Use of Imidacloprid to Control Burrowing Shrimp in Shellfish Beds of Willapa Bay and Grays Harbor. Prepared for Plauché and Carr, LLP. Seattle, WA.

Curran, C.A., J.A. Frew, and C.E. Grue. 2008. Toxicological evaluation of imidacloprid (as Imida E AG 2F) using sheepshead minnows.

Felsot, Allan S. and J. R. Ruppert 2002. Imidacloprid Residues in Willapa Bay (Washington State) Water and Sediment Following Application for Control of Burrowing Shrimp. J. Agric. Food Chem. 2002, 50, 4417-4423

Frew, J. Grue, C. 2010. Development of a new method for the determination of residues of the neonicotinoid insecticide imidacloprid in juvenile chinook using ELISA detection. Presentation to the 64<sup>th</sup> Annual Pacific Coast Shellfish Growers Association Conference. Tacoma, WA. September 21-23, 2010.

Frew J. Grue, C. 2011. Exposure of green sturgeon to imidacloprid following applications to control burrowing shrimp in Willapa Bay, Washington. Presentation to the 65<sup>th</sup> Annual Pacific Coast Shellfish Growers Association Conference. Salem, OR. September 20, 2011

Frew, J.A. and C.E. Grue. 2012. Imidacloprid degradation products.

Frew, J.A. and C.E. Grue. 2012. Development of a new method for the determination of residues of the neonicotinoid insecticide imidacloprid in juvenile Chinook (*Oncorhynchus tshawytscha*) using ELISA detection. Journal of Environmental Monitoring. Journal of Environmental Monitoring 14:1024-1034.

- Frew, J.A. and C.E. Grue. 2012. Development of a new method for the determination of residues of the neonicotinoid insecticide imidacloprid in juvenile Chinook (*Oncorhynchus tshawytscha*) using ELISA detection. Journal of Environmental Monitoring. Journal of Environmental Monitoring 14:1024-1034.
- Frew, J.A. and C.E. Grue. 2012. Bioavailability of imidacloprid breakdown products in sediment, pore-water, and vegetation to benthic invertebrates, fish, and waterfowl.
- Frew, J.A. and C.E. Grue. 2012. Quantification of imidacloprid residues in green sturgeon plasma and burrowing shrimp.
- Frew, J. Grassley, M. Grue, C. 2012. Evaluating risk to green sturgeon by estimating imidacloprid exposure, toxicokinetics and toxicodynamics following applications of the insecticide to control burrowing shrimp in Willapa Bay, Washington. Presentation to the 66<sup>th</sup> Annual Pacific Coast Shellfish Growers Association Conference. Tulalip, WA. September 24-27, 2012
- Grue, C.E. 2010. Supplement Toxicological evaluation of imidacloprid (as Imida E AG 2F) using sheepshead minnows.
- Grue, C.E. 2010. Assessing the hazards of imidacloprid to non-target fishes.
- Grue, C. Grassley, M. Frew, Troiano, J. 2011. Toxicity of imidacloprid to burrowing shrimp in the laboratory: implications for the control of burrowing shrimp in Willapa Bay/Grays Harbor, Washington. Presentation to the 65<sup>th</sup> Annual Pacific Coast Shellfish Growers Association Conference. Salem, OR. September 20, 2011
- Grue, C.E., J.M. Grassley, J.A. Frew. 2011. Addendum: Concentrations of imidacloprid in sediment pore water following application of imidacloprid in Willapa Bay, Washington.
- Grue, C.E., J.M. Grassley, J.A. Frew, and A.T. Troiano. 2011. Concentrations of imidacloprid in sediment pore water following application of imidacloprid in Willapa Bay, Washington 2010.
- Grue, C.E. 2012. Fate, persistence, and potential for non-target impacts associated with the use of imidacloprid to control burrowing shrimp on oyster beds in Willapa Bay and Grays Harbor, Washington A compilation of reports prepared for the Willapa Grays Harbor Oyster Growers Association. Report submitted to the Willapa Grays Harbor Oyster Growers Association. Washington Cooperative Fish and Wildlife Research Unit, School of Aquatic and Fishery Sciences, University of Washington. Seattle, WA. 92 pp.
- Grue, C.E., J.M. Grassley, J.A. Frew, and A.T. Troiano. 2012. Effects of freezing and HDPE plastic on imidacloprid concentrations within sediment samples collected in Willapa Bay, Washington.
- Grue, C.E., J.M. Grassley, J.A. Frew, and A. Troiano. 2012. Use of an Enzyme-linked Immunosorbent Assay (ELISA) to quantify imidacloprid in sediment pore water following application of imidacloprid in Willapa Bay, Washington Matrix effects and cross-reactivity.
- Grue, C. Grassley, M. Frew, J. Troiano, T. 2012. Behavior of ghost shrimp exposed to imidacloprid in the laboratory: implications for the control of burrowing shrimp in Willapa Bay, Washington. Presentation to the 66<sup>th</sup> Annual Pacific Coast Shellfish Growers Association Conference. Tulalip, WA. September 24-27, 2012
- Grue, C.E. and J.M. Grassley. 2013. Environmental Fate and Persistence of Imidacloprid Following Experimental Applications to Control Burrowing Shrimp in Willapa Bay, Washington. Washington Cooperative Fish and Wildlife Research Unit, University of Washington. Seattle, WA. 91 pp.
- Grue, Christian 2013. Survival of ghost shrimp in sediments exposed to imidacloprid in the laboratory:

Implications for control of shrimp on oyster beds in Willapa Bay, WA. Presentation to Pacific Coast Shellfish Grower's Association Annual Conference, Sun River, OR. Oct 2, 2013.

Hart Crowser, Inc. 2012. Sampling and Analysis Plan: Experimental Trials for Imidacloprid Use in Willapa Bay, Washington. Hart Crowser, Inc. Edmonds, WA. 72 pp.

Hart Crowser, Inc. 2013. Draft Field Investigation 2012 Experimental Trials for Imidacloprid Use in Willapa Bay, Washington. Prepared for Willapa Grays Harbor Oyster Growers Association, May 15, 2013. Report No. 12733-02. Hart Crowser Inc. Edmonds, WA. 192 pp.

Hart Crowser 2014. Draft Sampling and Analysis Plan. Experimental Trials for Imidacloprid Use in Willapa Bay. Willapa Bay, Washington. Prepared for Willapa Grays Harbor Oyster Growers Association. July 7, 2014.

Hart Crowser 2015. Final Environmental Impact Statement: Control of Burrowing Shrimp using Imidacloprid on Commercial Oyster and Clam Beds in Willapa Bay and Grays Harbor, Washington. Water Quality Program Washington State Department of Ecology. Olympia, Washington. April 9, 2015. Publication no. 15-10-013 http://www.ecy.wa.gov/programs/wq/pesticides/imidacloprid/index.html

McGaughney, B. et al. 2013. Risk Assessment for Use of Imidacloprid to Control Burrowing Shrimp in Shellfish Beds of Willapa Bay and Grays Harbor, WA.

Stutes, A, Barrett, J, and McGinnis, R. 2013. Imidacloprid Degradation Compound Standards.

Patten, K. Progress report 2006/2007: Non-target impacts of imidacloprid on oyster and clam larvae, young juvenile crab and estuary fish species.

Patten, K. Progress Report 2006 to 2011: Non-target impacts of imidacloprid on several estuary species, excluding Dungeness crab

Patten, K. and D. Aasen. 2008. Efficacy and non-target impacts of imidacloprid for burrowing shrimp control. Pacific Coast Shellfish Growers Association Conference (abstract).

Patten, K. 2008. Title: Imidacloprid efficacy assessments on large-scale application in Willapa Bay

Patten, K. 2008. Progress report to WSCPR. Washington State University. Efficacy Testing of Imidacloprid for Management of Burrowing Shrimp Infestations on Bivalve Shellfish Grounds.

Patten, K. Assen, D. 2008. Efficacy and non-target impacts of imidacloprid for burrowing shrimp control.

Patten, K. 2008-2010. Studies on the non-target effects of imidacloprid on Dungeness crab in Willapa Bay, Washington.

Patten, K. Norelius, S. 2009 Evaluations of formulations and rates of imidacloprid for burrowing shrimp control.

Patten, K. 2009. Juvenile Dungeness crab exposure to imidacloprid in laboratory setting.

Patten, K. Booth, S. Cheney, D. 2009. Title: Non-target impacts of imidacloprid on Dungeness crab.

Patten, K. Booth, S. 2009 Title: Imidacloprid efficacy assessments on large scale application in Willapa Bay.

Patten, K. 2009. Final Progress Report Title: Non-target impacts of imidacloprid on estuary species.

Patten, K. 2009. Title: Efficacy assessments of imidacloprid formulations for management of burrowing shrimp populations.

Patten, K. 2009-2010 Studies on the non-target effects of imidacloprid on Dungeness crab in Willapa Bay, Washington. Data Evaluation Report on Non-Target Effects of Imidacloprid on Dungeness crab in Willapa Bay, Washington

Patten, K. Norelius, S. Efficacy and non-target impacts of field and lab trials of two formulations of imidacloprid for burrowing shrimp control. Presentation to the 64<sup>th</sup> Annual Pacific Coast Shellfish Growers Association Conference. Tacoma, WA. September 21-23, 2010.

Patten, K. 2010. "Small plot research to improve the Efficacy of Imidacloprid for Management of Burrowing Shrimp Infestations on Shellfish Grounds in 2010."

Patten, K. Norelius, S. 2010 Efficacy and non-target impacts of field and lab trials of two formulations of imidaeloprid for burrowing shrimp control.

Patten, K. 2011 Progress Report to the WSCPR: Improving the Efficacy of Imidacloprid for Management of Burrowing Shrimp Infestations on Shellfish Grounds.

Patten, K. Grue, C. Rasmussen, K. Booth, S. 2011 Progress Report for the 2010 UI/WSU Aquaculture Grant: Large-Scale Assessment of Imidacloprid for Burrowing Shrimp Control.

Patten, K. 2011 Data Evaluation Report on Non-Target Effects of Imidacloprid on Dungeness crab in Willapa Bay, Washington.

Patten, K. 2011 Final Report: 2011 Field trials of imidacloprid for control of burrowing shrimp in Willapa Bay.

Patten, K. 2011 Non-target impacts of imidacloprid on several estuary species, excluding Dungeness crab.

Patten, K. 2012 Progress Report to the WSCPR: Efficacy and Non-Target Impacts of Imidacloprid Following Application to Control Burrowing Shrimp in Willapa Bay, Washington in 2012.

Patten, K. 2013. Efficacy and Non-Target Impacts of Imidacloprid Following Applications to Control Burrowing Shrimp in Willapa Bay, Washington in 2012. Washington State University Long Beach Research and Extension Unit.

Patten, K. 2015. Progress Report to WDFW – Investigation of the use of Imidacloprid for Burrowing Shrimp Management in Bivalve Aquaculture in Willapa Bay, Washington: 1) Impacts on Megafauna, Epibenthic and Benthic Organisms and 2) Persistence and Spatial Distribution of Imidacloprid within the Sediment Impact Zone. Report submitted to Washington Department of Fish & Wildlife.

U.S. Environmental Protection Agency (USEPA). 2013a. Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Registration No. 88867-1 for Imidacloprid Protector 0.5G (for use only in Willapa Bay/Grays Harbor, Washington, to control burrowing shrimp in commercial shellfish beds). Washington, D.C. June 6, 2013.

U.S. Environmental Protection Agency (USEPA). 2013b. Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Registration No. 88867-2 for Imidacloprid Protector 2F (for use only in Willapa Bay/Grays Harbor, Washington, to control burrowing shrimp in commercial shellfish beds). Washington, D.C. June 6, 2013.

# Appendix B. For SEPA Checklist.

Grays Harbor and Willapa Bay Commercial Shellfish Beds

