

**WDFW Plans- Facility Sampling, Solid Waste Management, Pollution Prevention**  
**George Adams Fish Hatchery - WAG13-1019**  
**August 26, 2020**

Washington Department of Fish and Wildlife (WDFW) Fish Hatcheries operating under the Upland Fin-Fish Hatching and Rearing National Pollutant Discharge Elimination (NPDES) Waste Discharge General Permit are required to submit the following plans:

FACILITY SAMPLING PLAN  
SOLID WASTE MANAGEMENT PLAN  
POLLUTION PREVENTION PLAN

Plans must be submitted to Department of Ecology and updates submitted as necessary during permit cycle.

Attached to each set of plans are diagrams illustrating and identifying facility sampling locations, as required under Facility Sampling Plan, and an overall facility site plan, as required under Pollution Prevention Plan.

**FACILITY SAMPLING PLAN**

Facility sampling plans are described in the general permit.

Plan to include a description of:

- all discharge points (outfalls) to surface water or land
- the ponds or raceways that contribute to each discharge point
- flow measurement for each outfall
- how flow is measured or calculated
- if grab samples from different outfalls are combined into a composite sample for analysis, plan is to include how a flow proportional composite sample will be compounded from the individual grab samples

**Influent**

Influent sampling is optional and is to be comparable to the effluent (as determined by Ecology). For multiple intake sources, collect a flow-proportional composite sample of all influent water sources.

List separately each influent source and details of sample collection.

**Primary influent source**

Name: **Purdy Creek Upper Intake**

Source (surface or groundwater): **Surface**

Months of use: **12**

Name ponds or raceways that use this water flow: **Standard raceways 1-6, Rearing Ponds 7-9, Raceways 11-12**

Flow quantity (average amount of use in million gallons per day): **13.7 MGD**

Method of flow measurement: **Flows are measured for each pond receiving water from this intake using the Francis Formula (Adapted from “King’s Handbook of Hydraulics”, 4<sup>th</sup> ed., Table 38. The flows are totaled to determine the total flow.**

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Does this flow get reused or recirculated? **Yes** If yes, *describe*: **Water from this intake can be re-used from the standard raceways 1-6 through Pond 9 to provide additional flow. Also, a portion of the flow supplied to pond 7 from this intake discharges into Purdy Creek above Pond 8 to provide additional flow. This flow is included in the total flow for Pond 8 when it is in use and is considered re-use water.**

Sample point on facility map or diagram: **See Diagram 1 (I -1) Purdy Creek Upper Intake Sampling Location**

Description of location of sample collection: **Upstream of incline intake screen box**  
Proportion of sample (if only source, 100%): **The proportion of influent sample will vary throughout the year at George Adams, calculations are made based off of current conditions.**

*Additional influent source*

Name: **Purdy Creek Lower Intake**

Source (surface or groundwater): **Surface**

Months of use: **5**

Name ponds or raceways that use this water flow: **Pond 7 exclusively**

Flow quantity (average amount of use in million gallons per day): **3.46 MGD**

Method of flow measurement: **Flow is measured for Pond 7 over stoplogs using the Francis Formula (Adapted from “King’s Handbook of Hydraulics”, 4<sup>th</sup> ed., Table 38.**

Does this flow get reused or recirculated? **Yes** If yes, *describe*: **Flow from Pond 7 discharges above Pond 8 providing additional re-use water to Pond 8.**

Sample point on facility map or diagram: **See Diagram 1 (I -2) Lower Intake Influent Sampling Location**

Description of location of sample collection: **Forebay above lower intake screen culvert**

Proportion of sample: **The proportion of influent sample will vary throughout the year at George Adams, calculations are made based off of current conditions.**

*Additional influent source*

Name: **Ellis Springs Intake**

Source (surface or groundwater): **Surface**

Months of use: **6**

Name ponds or raceways that use this water flow: **Raceways 11-12, Pond 9**

Flow quantity (average amount of use in million gallons per day): **.65 MGD**

Method of flow measurement: **Flow is measured for ponds over stoplogs using the Francis Formula (Adapted from “King’s Handbook of Hydraulics”, 4<sup>th</sup> ed., Table 38.**

Does this flow get reused or recirculated? **No** If yes, *describe*:

Sample point on facility map or diagram: **See Diagram 1 (I -3) Ellis Springs Intake Sampling Location**

Description of location of sample collection: **Intake forebay above incline intake screen**

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Proportion of sample: **The proportion of influent sample will vary throughout the year at George Adams, calculations are made based off of current conditions.**

Additional influent source

Name: **Wells 1-3**

Source (surface or groundwater): **groundwater**

Months of use: **8**

Name ponds or raceways that use this water flow: **Standard raceways 1-6, Pond 9, Raceways 11-12, Hatchery building**

Flow quantity (average amount of use in million gallons per day): **3.17 MGD**

Method of flow measurement: **Flow is measured for ponds over stoplogs using the Francis Formula (Adapted from “King’s Handbook of Hydraulics”, 4<sup>th</sup> ed., Table 38.**

Does this flow get reused or recirculated? **Yes** If yes, *describe*: **This flow is re-used from the standard raceways through Pond 9 to provide additional flow.**

Sample point on facility map or diagram: **See Diagram 1 (I -4) Well water sampling location**

Description of location of sample collection: **Inside hatchery building**

Proportion of sample: **The proportion of influent sample will vary throughout the year at George Adams, calculations are made based off of current conditions.**

Additional influent source

Name: **Pond 10**

Source (surface or groundwater): **surface**

Months of use: **4**

Name ponds or raceways that use this water flow: **Pond 10**

Flow quantity (average amount of use in million gallons per day): **4.3 MGD**

Method of flow measurement: **Flow is measured for pond by replacing screens with a large dam board.**

Does this flow get reused or recirculated? **No** If yes, *describe*:

Sample point on facility map or diagram: **See Diagram 1 (I -5) Pond 10 upper end**

Description of location of sample collection: **Upper end of Pond 10**

Proportion of sample: **The proportion of influent sample will vary throughout the year at George Adams, calculations are made based off of current conditions.**

**Effluent**

Effluent sampling is required to be representative of all outfalls which discharge rearing pond or raceway water to waters of the state. For multiple outfalls, collect a flow-proportional composite sample of all outfalls.

List separately each outfall and details of sample collection.

Primary outfall

Name or description of point of discharge: **Pond 1-6,7,8 Discharge**

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Months of use: **12**

Name ponds or raceways that flow to this outfall: **Ponds 1-6,7,8**

Does this flow get reused or recirculated? **No** If yes, *describe*:

Sample point on facility map or diagram: **See Diagram 1(E-A) Discharge Sampling Location**

Description of location of sample collection: **Below fish ladder**

Flow quantity (average amount of discharge in million gallons per day): **15.55 MGD**

Method of flow measurement: **Total of flow measurement of raceways 1-6,7,8**

Proportion of sample (if only source, 100%): **The proportion of effluent sample will vary throughout the year at George Adams , calculations are made based off of current conditions.**

Additional outfall

Name or description of point of discharge: **Pond 9, Discharge**

Months of use: **6**

Name ponds or raceways that flow to this outfall:, **Pond 9**

Does this flow get reused or recirculated? **No** If yes, *describe*:

Sample point on facility map or diagram: **See Diagram 1 (E- B)**

Description of location of sample collection: **Just before outflow screens** Flow quantity (average amount of discharge in million gallons per day): **9.36 MGD**

Method of flow measurement: **Total of flow measurements from Ponds 9,11,12**

Proportion of sample: **The proportion of effluent sample will vary throughout the year at George Adams , calculations are made based off of current conditions.**

Additional outfall

Name or description of point of discharge: **Pond 11,12 Discharge**

Months of use: **12-4**

Name ponds or raceways that flow to this outfall: **Ponds 11-12,**

Does this flow get reused or recirculated? **No** If yes, *describe*:

Sample point on facility map or diagram: **See Diagram 1 (E- C)**

Description of location of sample collection: **Just before outflow screens**

Flow quantity (average amount of discharge in million gallons per day): **9.36 MGD**

Method of flow measurement: **Total of flow measurements from Ponds 9,11,12**

Proportion of sample: **The proportion of effluent sample will vary throughout the year at George Adams , calculations are made based off of current conditions.**

Additional outfall

Name or description of point of discharge: **Pond 10 Discharge**

Months of use: **4**

Name ponds or raceways that flow to this outfall: **Pond 10**

Does this flow get reused or recirculated? **No** If yes, *describe*:

Sample point on facility map or diagram: **See Diagram 1 (E -D) Discharge Sampling Location Pond 10 lower end**

Description of location of sample collection: **Just before outflow screens**

Flow quantity (average amount of discharge in million gallons per day): **4.3 MGD**

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Method of flow measurement: **Total of flow measurements from Pond 10**

Proportion of sample: : **The proportion of effluent sample will vary throughout the year at George Adams , calculations are made based off of current conditions.**

**Effluent Waste**

Effluent from pollution abatement waste treatment ponds is required.

- ☐ No effluent waste discharges monitored. This facility has:
- ☐ In-line settling of entire effluent
  - ☐ Rearing ponds only with a minimum hydraulic retention time of two hours. If less than two hours, *describe*:
  - ☐ Other treatment or waste discharges, *describe*:

List details of sample collection.

Name or description of point of discharge (for example, mixes to vault): **Discharges to adjoining wetlands.**

Months of use: **12**

Sample point on facility map or diagram: **See Diagram 1 (EW) North of P.A. Ponds**

Description of location of sample collection: **Discharge pipe for P.A. ponds.**

Method of effluent flow measurement: **Calculated based off known pumping rate of trash pump used for vacuuming**

If the effluent waste discharges to the same outfall as the flow through raceways or rearing ponds, indicate how sampling is done to separate the two types of discharge.

**Additional monitoring sites**

Describe flow, sample location, nature of discharge for each site that is monitored.

- ☐ No additional monitoring sites at this facility.

Drawdown for fish release: **Drawdown samples are collected from Pond 7,8, & 9 discharge points in May and from Pond 8 discharge point in April. See Diagram 2**

Discharges to storm drains:

Discharges to land:

Discharges to other facilities (e.g. a sewage treatment plant):

Discharges to septic tanks (except for domestic wastes from on-site housing and kitchen and bathroom facilities in the hatchery or office building):

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**SOLID WASTE MANAGEMENT PLAN**

Facility Solid Waste Management Plans are described in the general permit.

The Solid Waste Management Plan shall include all solid wastes with the exception of those solid wastes regulation by Chapter 173-303 (Dangerous Waste Regulations). A copy of the Solid Waste Management Plan shall be kept on site and complied with by all hatchery personnel. The plan shall not contradict any approved Solid Waste Management Plan. Any proposed revision or modification of the plan must be submitted to the Department of Ecology and the local Health Department (if applicable). The Permittee shall comply with the plan and any modification thereof.

The plan shall include how the solid and biological wastes are collected, stored, and their disposal methods. Among the solid wastes of concern are:

1. Sands, silts, and other debris collected from facility source water.
2. Accumulated settled solids in rearing and settling ponds.
3. Any fish mortality under normal hatchery operation.
4. Fish mortalities due to a fish kill involving more than 5% of the fish in any raceway or pond, or due to kill spawning operations.
5. Blood from kill spawning or harvesting operations.
6. Floating debris removed from ponds and raceways.

1. Materials such as sand, silt and other debris collected from facility source water (intakes) are collected and removed in a manner to avoid discharges or resuspension into waters of the state. Materials are removed and disposed in an upland disposal location. If materials are stored it is for temporary dewatering before permanent disposal.

*Check all boxes that apply to this facility.*

☐ Materials from intakes are not collected, stored or disposed.

Methods of collection of material in source water facility include:

☐ Hand shovel, rake, or brush removal

☒ Machine

☐ Other (*describe*):

Storage of materials:

☒ None (materials are disposed immediately following collection)

☐ On-site temporary (*describe*):

☐ Off-site (*describe*):

Disposal methods:

☒ Land application (on-site in upland location)

☐ Off-site (*describe*):

☐ Other (*describe*):

2. Accumulated settled solids from rearing and settling ponds.

Any material settled out into hatchery facilities is removed and disposed of at an appropriate upland site so that it will not reenter the waters of the state. Water levels are

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lowered in the rearing vessel to concentrate waste products, or vessels are designed for passive concentration of waste products into a collection site. These cleaning practices are performed regularly to reduce the disturbance and subsequent discharge of settled solids during cleaning event. See the Pollution Prevention Plan for designated cleaning practice(s) apply to this facility.

*Check all boxes that apply to this facility.*

☐ Accumulated settled solids from rearing and settling ponds are not collected, stored or disposed at this facility.

Methods of collection of material in ponds and or raceways:

- ☐ Hand shovel or rake  
☒ Machine  
☐ Brush and removal suspended  
☐ Other (*describe*):

Storage of materials:

- ☒ None (materials are disposed immediately following collection)  
☐ On-site temporary (*describe*):  
☐ Off-site (*describe*):  
☐ Other (*describe*):

Disposal Methods:

- ☒ Land application (on-site in upland location)  
☐ Off-site (*describe*):  
☐ Other (*describe*):

3. Any fish mortality under normal hatchery operation.

Fish that die normally are, where possible, collected and removed in a manner to avoid discharges or resuspension into waters of the state. Fish carcasses are removed and disposed in an upland disposal location. Fish carcasses may be temporarily stored out of the water to minimize disease transfer to healthy fish before permanent disposal to an approved location.

*Check all boxes that apply to this facility.*

Methods of collection of mortalities from ponds and or raceways:

- ☒ Hand removal from pond (net, rake, gaff, broom)  
☐ Hand removal from screens (brush)  
☐ Other (*describe*):

Storage of mortalities:

- ☐ None (mortalities are disposed immediately following collection)  
☒ On-site temporary (*describe*): **Daily mortalities stored in hatchery freezer for weekly transfer to landfill.**  
☐ Off-site (*describe*):  
☐ Other (*describe*):

Disposal methods - juvenile mortality:

- ☒ In earthen pits lined with quicklime  
☐ In landfills

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- ☐ Other (*describe*):
- Disposal methods - adult carcasses (mortalities):
- ☐ In on-site earthen pits lined with quicklime
- ☒ In landfills
- ☒ To contract buyer for food bank, sale, disposal
- ☒ Returned to stream (nutrient enhancement)
- ☐ Other (*describe*):

4. Fish mortalities due to a fish kill involving more than 5% of the fish in any raceway or pond, or due to kill spawning operations.

Fish that die due to a fish kill are, where possible, collected and removed in a manner to avoid discharges or resuspension into waters of the state. Juvenile fish carcasses are removed and disposed in an upland disposal location. Fish carcasses may be temporarily stored out of the water to minimize disease transfer to healthy fish before permanent disposal to an approved location. Adult fish carcasses are removed and disposed in an upland disposal or nutrient enhancement location.

*Check all boxes that apply to this facility.*

Methods of collection of fish kill mortalities from ponds and or raceways:

- ☒ Hand removal from pond (net, rake, gaff, broom)
- ☒ Hand removal from screens (brush)
- ☒ Drawdown pond water and remove
- ☐ Other (*describe*):

Storage of fish kill/ spawn mortalities:

- ☒ None (mortalities are disposed immediately following collection)
- ☐ On-site temporary (*describe*):
- ☐ Off-site (*describe*):
- ☐ Other (*describe*):

Disposal of fish kill mortalities - juvenile mortality:

- ☐ In on-site earthen pits lined with quicklime
- ☒ In landfills
- ☒ Other (*describe*): **Rendering plant**

Disposal of fish kill/ spawn mortalities - adult carcasses:

- ☐ In on-site earthen pits lined with quicklime
- ☒ In landfills
- ☒ To contract buyer for food bank, sale, disposal
- ☒ Returned to stream (nutrient enhancement)
- ☒ Other (*describe*): **Rendering plant**

5. Blood from kill spawning or harvesting operations.

Adult fish are killed and/or spawned in a manner that minimizes the entry of blood, eggs, and carcass parts into the waters of the state. These materials are transported to a waste treatment facility or off-line settling basin, where available, or to an upland site for disposal.

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*Check all boxes that apply to this facility.*

☐ No kill spawning or harvesting operations at this facility.

Methods of collection of blood from spawn/harvest:

☐ Drains to pollution abatement

☒ Brush and removal

☒ Other (*describe*): **Loose eggs collected onto screens. Ovarian fluid drained into buckets and disinfected prior to disposal in upland location.**

Storage of materials:

☒ None (materials are disposed immediately following collection)

☐ On-site temporary (*describe*):

☐ Off-site (*describe*):

☐ Other (*describe*):

Disposal methods:

☒ Land application (on-site in upland location)

☐ Waste treatment - pollution abatement pond

☐ Off-site (*describe*):

☐ Other (*describe*):

6. Floating debris removed from ponds and raceways.

The discharge of floating solids to waters of the state is to be prevented as much as possible. Floating debris such as algae leaves, or other objects are to be removed and disposed in the pollution abatement pond or to an upland site.

*Check all boxes that apply to this facility.*

Methods of collection of floating debris in ponds and or raceways:

☒ Hand brush, net, or rake

☐ Machine

☒ Brush and removal from screens

☐ Other (*describe*):

Storage of materials:

☒ None (materials are disposed immediately following collection)

☐ On-site temporary (*describe*):

☐ Off-site (*describe*):

☐ Other (*describe*):

Disposal methods:

☒ Land application (on-site in upland location)

☐ Waste treatment - pollution abatement pond

☐ Off-site (*describe*):

☐ Other (*describe*):

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**POLLUTION PREVENTION PLAN**

The Pollution Prevention Plans is described in the general permit.

This plan addresses operating, spill prevention, spill response, and stormwater discharge practices that will prevent or minimize the release of pollutants from the facility to the waters of the state.

**A. FEEDING PRACTICES**

Feeding is conducted in a manner that ensures maximum consumption of fish food, minimum wastage, and will minimize the release of uneaten food to the environment. The food formulations used contribute the lowest amount of waste material (solids, nutrients) consistent with good fish cultural practices. Feeding regimes include consideration of species, age, size, water temperature, water clarity, etc.

The following designated feeding practice(s) apply to this facility:

- ☐ Demand feeders: filled or checked at least once per day, depending upon consumption.
- ☐ Automatic electric feeders: filled once per day, set to discharge on an interval designed to maximize consumption. Fish feeding shall be observed through at least one feeding cycle to ensure fish are "on feed".
- ☒ Blowers: feed is delivered to fish one to several times per day, at a rate that ensures maximum consumption.
- ☒ Hand feeding: fish are fed one to several times per day, at a rate that ensures maximum consumption.
- ☐ Other (*describe*):

**B. CLEANING FREQUENCY**

The goal of cleaning operations is to remove uneaten food, silt, and fish wastes from the rearing vessel while preventing entry of these materials into the waters of the state. Rearing vessels are cleaned at a frequency to ensure good fish health. A determination of cleaning frequency is made based on fish size, water temperature, amount of feed fed, and sediment load of incoming water.

For this facility, the frequency of cleaning is as follows:

- ☒ Raceways are cleaned **1** times per week, on average.
- ☐ Troughs are cleaned \_\_\_\_\_ times per week, on average.
- ☒ Rearing Ponds are cleaned **1** times per year, on average.
- ☒ Other (*describe*): **Rearing pond 9 is vacuumed prior to fish release.**

**C. CLEANING PRACTICES**

Water levels are lowered in the rearing vessel to concentrate waste products, or vessels are designed for passive concentration of waste products into a collection site. These cleaning practices are performed regularly to reduce the disturbance and subsequent discharge of settled solids during cleaning event. Screens pulled from raceways are preferably cleaned in a paved area with a berm around it and filter fabric placed in the

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collection basin to capture solids, which are disposed at the landfill or in an upland location.

The following designated cleaning practice(s) apply to this facility:

- ☐ Troughs and raceways are cleaned by sweeping with brushes/brooms.
- ☐ Baffles are placed in raceways to improve the efficiency of cleaning.
- ☐ Concentrated wastes are removed by vacuuming or flushing to an off-line settling basin.
- ☐ Wastes are settled in an inline settling basin.
- ☐ Constructed wetland is used to treat effluent (*describe what portion*):
- ☒ Other (*describe*): **Concentrated wastes are removed with a trash pump and discharged to an upland site where they cannot re-enter the waters of the state. Off line settling basin will be inspected annually and solids removed as needed.**

**D. FISH HANDLING PRACTICES**

Fish are not fed for a day or two prior to handling or transfer. Rearing vessels are cleaned just prior to handling fish to minimize the amount of waste released into waters of the state.

**E. FISH RELEASE PRACTICES**

Rearing vessels are cleaned within one week of release; closer to release time if practical. For fish which are released volitionally, stop logs are removed in a manner that prevents disturbance of bottom sediments. If it is necessary to force fish out, the rearing vessel is cleaned immediately prior to forcing fish out. Any remaining sediments are dried and removed to an upland disposal site.

**F. PATHOGEN TREATMENT METHODS**

Disease control medications and chemicals are used only under the direction of an agency Fish Health Specialist, Pathologist, or Virologist. Only those materials approved for use on the species and life stage of fish in question are used. Exceptions are those therapeutants in use under a USFDA Investigative New Animal Drug (INAD) permit. All chemicals are used in accordance with label directions, INAD protocols, or veterinarian prescription. Agency Fish Health Specialist, Pathologist, or Virologist ensure that the amounts and frequency of application are the minimum necessary for effective disease treatment and control, and that the concentration of disease control chemicals in the facility discharge are minimized to the maximum extent possible. The amount of chemotherapeutant used is kept to a minimum by reducing the amount of water in the treated rearing vessel, reducing flow rate, treating individual ponds instead of banks of ponds, etc. An operational log for disease control chemicals is maintained as required under Section S4.F of the NPDES General Permit.

**G. CHEMICAL STORAGE AND DISPOSAL**

Chemicals are stored in appropriate, labeled containers. Chemicals are stored and handled in a manner that prevents accidental spillage. Personnel wear appropriate personal protective gear when handling chemicals. The disposal of any chemical is done

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following precautionary guidelines on the Material Safety Data Sheet (MSDS), and in a manner consistent with state and federal regulations.

**H. SPILL / EMERGENCY RESPONSE**

All employees have available, and are trained in the use of, personal protective gear. Prevent and respond to spills and discharges of oil and hazardous materials immediately.

**1. Response and Reporting**

In the event of a reportable spill or unplanned discharge of oil or hazardous material, the first person at the scene will maintain personal safety and take immediate action to stop, isolate, and/or contain the spill to prevent contact with hatchery or state waters. Immediately after this action, this person will contact the complex manager or other person in authority. All emergency numbers will be kept next to the telephone.

The order of contact is as follows:

<b>Name</b>	<b>Position</b>	<b>Phone Number</b>
James Jenkins	Hatchery Operation Manager	360-664-0383 (work)
Jorge Villarreal	Fish Hatchery Specialist 4	360-877-2737 (work) 360-401-5710 (cell)
Kevin Kitchell	Fish Hatchery Specialist 3	360-427-2161 (work)
Bret Hachtel	Fish Hatchery Specialist 2	360-427-2161 (work)
Justin Iwen	Fish Hatchery Specialist 2	360-427-2161 (work)

The person in authority will assess the spill situation, identify the substance spilled, and estimate the amount spilled and approximate time of the spill.

In the event of an oil spill, contact the following:

- National Response Center (NRC) at 1-800-424-8802 **AND** the
- WA State Emergency Management Division (EMD) at 1-800-258-5990.

(Both numbers are available 24 hours a day, 7 days per week.)

To the best of your ability please be ready with the following information:

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Who is reporting the spill?	
What are your phone numbers? (office, cell, pager)	
Where is the location of the spill?	
Is the spill on water or land?	
What was spilled?	
How much was spilled?	
How did it happen?	
Is anyone cleaning up the spill?	
Is the spill under control or stopped?	
Is the spill contained?	
Are there resource damages?	

WA State Emergency Management Division will then call The Department of Ecology 24-Hour Spill Response Team and report this information. If the actual or potential spill volume threat to State waters is greater than 25 gal, Ecology will notify WDFW's Oil Spill Team via their 24-hr emergency pager (360-534-8233).

For spills of hazardous materials other than oil, contact one of Ecology's Regional Offices:

Southwest Region...	1-360-407-6300	Northwest Region...	1-425-649-7000
Central Region.....	1-509-575-2490	Eastern Region.....	1-509-329-3400

After the EMD and Ecology have been notified, (and the NRC if applicable), hatchery personnel will implement the actions recommended by these offices.

If a fish kill occurs as a result of a non-oil hazardous material spill, Ecology will contact the regional fish program manager at the appropriate Department of Fish and Wildlife regional office. The Complex Manager will contact their Regional Fish Program Manager no later than the following workday. The Complex Manager will do written documentation of the event. Copies of the documentation will be submitted to the Department of Ecology in their region and to their Regional Fish Program Manager.

**a. Formalin / Toxic Spill Response**

Effective until further notice, hatchery staff no longer respond to unintentional spills of undiluted formalin (Parasite-S). If an unanticipated release of undiluted (37%) formalin occurs, hatchery staff are hereby directed to:

- evacuate the danger area including downwind from the spill and notify other staff to evacuate
- take only the minimum actions necessary to ensure fish health and only if these actions do NOT place the employee in the danger area

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- close the hatchery grounds to visitors
- report the situation to supervisory chain
- the person in charge shall report the spill to National Response Center, Dept. of Ecology, and/or WA State Emergency Management Division at the phone numbers at the phone numbers provided above
- in the event of a required evacuation, all hatchery employees, families and visitors will meet at a designated area. This area is located at: **Parking lot by hatchery mailbox.** (Site specific location)
- if any action in the danger area is recommended by these offices, a hazardous waste contractor must be called in to conduct those activities.

WDFW is committed to preventing possible hazardous exposure of staff during formalin spill response activities.

**b. Injury Response**

If an employee or visitor is injured, administer appropriate first aid. If the injury is serious, call 911 or call for local ambulance, fire or police assistance. If the injury seems minor but symptoms persist, take the injured person to a physician or hospital. Fill out and submit an accident report form.

**2. Prevention and Control**

All oil and hazardous materials are stored in original or well-labeled containers, inaccessible to the public, away from both the hatchery and state waters. Each container is labeled with the appropriate warnings and an HMIS label if required. Every effort is made to prevent spillage and to limit employee exposure during storage, use and disposal.

Medications, including medicated feed, are stored away from drains and public access. Fish chemotherapeutants are stored away from the hatchery or state waters in locked storage facilities inaccessible to the public. Absorbents are readily available. Those chemicals that cannot be kept inside are stored in a covered area. Where possible, outdoor chemical storage is located in an area that does not drain to waters of the state, or it is bermed to prevent spills from entering waters of the state. Substances are kept on hand to neutralize chemicals in the case of spills.

Diesel fuel and heating oil are stored in below or above ground tanks. Those tanks requiring permits are tested annually. Absorbents are kept on hand to use in case of spills. Above ground tanks are sited over impervious surfaces and are bermed to prevent accidental spills. Gasoline and oil tanks not on impervious surfaces or without containment are scheduled for replacement or modification.

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Small amounts of petroleum products such as gas cans, motor oil, etc. are stored in lockable flammable storage closets inside hatchery buildings away from public access.

Pesticides are stored inside hatchery buildings, away from public access, in areas that do not drain to waters of the state. At those facilities where the storage area contains a floor drain, absorbent booms are on hand to prevent the accidental spillage of the pesticide into the drain. Laboratory analysis chemicals are kept on hand in very small quantities and are stored inside hatchery buildings in areas where they cannot enter the water and are inaccessible to the public.

Miscellaneous substances such as solvents, detergents, paints, resins, adhesives and cleaners are kept in well-labeled containers. When possible, they are stored in lockable storage closets inside hatchery buildings. They are stored in leak-proof containers away from all drains. Absorbents are on hand to use in case of spills.

For all chemicals, Material Safety Data Sheets (MSDS) are readily available to all personnel. Proper precautions and actions in the event of a spill are outlined in the each MSDS. A chemical inventory list is kept with the MSDS's. This document, after thorough review by all personnel, is filed with the MSDS sheets. In addition, the chemical use manual is available to all personnel. This information is reviewed by all personnel and is updated quarterly.

Any secondary containment must be checked periodically to see if a spill has occurred and if so, cleaned up promptly. Aqueous solutions should be stored where they will not be subject to temperatures below freezing. Lockable, outdoor sheds may be used for storage of gasoline and gasoline-powered equipment.

All storage areas for flammable materials should be approved by the fire marshal.

Attach an overall facility site plan (*or refer to the facility sampling plan*).

**3. Hazardous materials list**

The facility uses, processes, and/or stores the following hazardous materials that have the potential to spill directly or indirectly into state waters:

- ☒ Formalin, (Parasite-S 37% formaldehyde)
- ☒ Diesel fuel (Diesel #2)
- ☒ Gasoline
- ☒ Oil
- ☐ Propane
- ☒ Chlorine
- ☐ Sodium Hypochlorite
- ☐ Ozone
- ☒ Potassium Permanganate

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- ☐ Hydrogen peroxide (concentration >52%)
- ☐ Diquat
- ☐ Other (*specify*):

**I. STORMWATER POLLUTION CONTROL**

This facility will use best management practices to prevent the discharge of any contaminant into the stormwater system. Best management practices will assure that petroleum contaminants will be contained in an appropriate manner.

BMPs include, but are not limited to, dry sweeping of any solids before hosing down and/or washing, or other practices which minimize contact between solids and water. All work that may result in contamination of the ground or other outdoor surface will be performed indoors if possible. If not possible, any spilled substance is cleaned and disposed of in an appropriate manner. Projects that have the potential of a large quantity spill shall be done within a bermed or otherwise isolated area. Routine maintenance is conducted so that discharges do not go directly to surface waters. Every effort is made to prevent the accumulation of small amounts of contaminants on impervious surfaces that may later flush into the stormwater discharge system during rain events. Any spill of petroleum products or other contaminants is immediately cleaned up. Accumulated contaminants seen to be washing into the stormwater system, or surface waters, are treated as a spill and absorbent material is put in place to contain the contaminants.

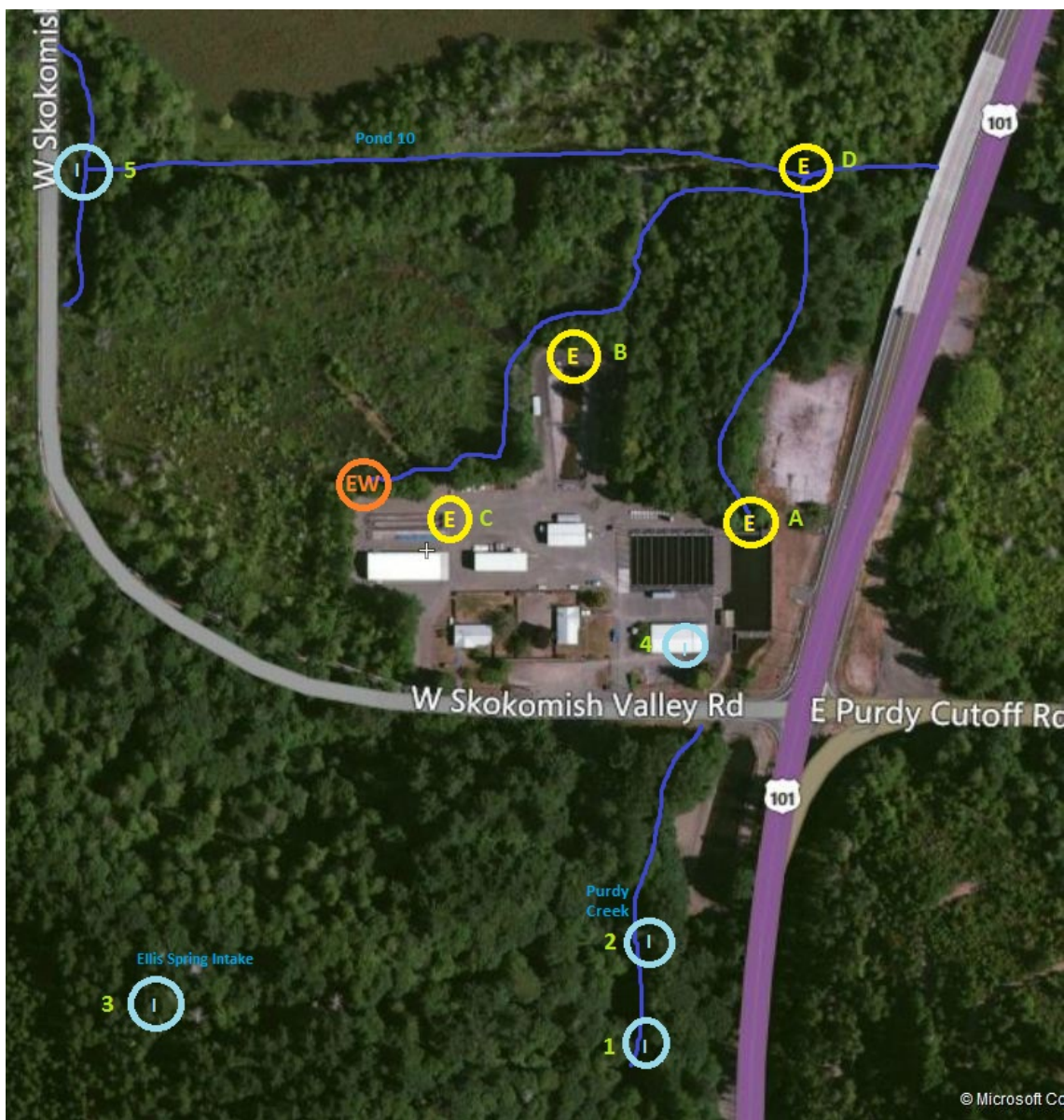
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*Aerial photo illustrating and identifying sampling locations. Diagram 1*

*I- Influent- five locations*

*E- Effluent- four locations*

*EW- Effluent Waste- one location*



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*Aerial photo illustrating and identifying sampling locations. Diagram 2*

