

SALMON-SAFE INC.

SALMON-SAFE CERTIFICATION IMPLEMENTATION WORKBOOK FOR FARMS

Integrated Pest Management

May 2018



Salmon-Safe Inc.
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SALMON-SAFE IPM WORKSHEET

Farm

Farm Manager

Primary Pest Management Decision Maker(s)

Date

Certification Date

1. Describe IPM objectives.

Salmon-Safe promotes Integrated Pest Management to help owners establish a pest management plan that takes into account the environment, avoids unnecessary treatments, and makes best use of the “least toxic” products and methods available.

Please describe the IPM objectives, including the structure of decision making process for pest management on the farm. Include descriptions of (1) who makes the pest management decisions, (2) what resource types this person uses to make decisions, and (3) how decisions are evaluated after practices are implemented.

2. Pest-specific IPM Strategies (IPM Plan Framework).

Salmon-safe requires documentation of IPM strategies (including thresholds and monitoring protocols) for primary pests encountered on farm to ensure that prevention and physical, mechanical, or biological control methods are evaluated for use before pesticides are applied. Criteria for choosing any method of pest control, includes evaluation of potential negative environmental impacts, particularly to aquatic systems.

This section will be the basis of your IPM plan, a working document. For each IPM strategy that includes pesticide use, provide a pesticide reduction strategy that will be considered and implemented.

Pest	Pest Prevention Measures (physical, mechanical, biological)	Pest Monitoring Strategy and Control Thresholds

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Pest-specific IPM strategies will be re-evaluated a minimum of once a year. ☐

3. Pesticides approved for limited use on this site.

Salmon-Safe requires that the use of any pesticides on farm is limited in an IPM program.

These pesticides will only be used when there is no undue risk of harm to salmon and aquatic ecosystems. This list is established and reviewed on an annual basis by farm management to ensure that potential environmental harm is minimized.

Salmon-Safe maintains a “High Hazard List” list (HHL) of restricted pesticides that pose excessive risks to salmon and aquatic ecosystems, even when used carefully and in accord with product label directions. A Salmon-Safe site using any of the pesticides indicated as “High Hazard” can maintain certification only if written documentation is provided that demonstrates a clear need for one time or ongoing restricted use of the pesticide, that no safer alternatives exist, and that the method of application (such as timing, location and amount used) represents a negligible risk to water quality and fish habitat.

SALMON-SAFE LIST OF HIGH HAZARD PESTICIDES			
INSECTICIDES			
abamectin *	dimethoate (3)	methamidophos (3)	propargite * (7)
acephate	esfenvalerate *	malathion * (1)	spirodiclofen *
bifenthrin *	ethoprop (3)	methidathion	spirotetramat
carbaryl (2)	fenamiphos * (3)	methomyl (2)	tefluthrin *
chlorantraniliprole	fenbutatin-oxide ** (7)	methyl parathion	terbufos *
chlorpyrifos ** (2)	fenpyroximate *	naled * (3)	thiacloprid
cyfluthrin *	fipronil *	novaluron	tralomethrin *
cypermethrin *	imidacloprid	permethrin *	zeta-cypermethrin
diazinon ** (1)	indoxacarb	phorate ** (3)	
diflubenzuron (7)	lambda-cyhalothrin *	phosmet * (3)	
FUNGICIDES			
azoxystrobin *	fenarimol	picoxystrobin *	trifloxystrobin *
bensulide	folpet *	propiconazole	triflumizole
captan	iprodione	pyraclostrobin *	
carboxin	mancozeb	quintozene (PCNB)	
chlorothalonil * (4)	maneb *	thiram	
HERBICIDES			
2,4-D (4)	dithiopyr	norflurazon +	thiobencarb
alachlor	diuron + (4)	oryzalin (5)	triallate
atrazine	fluazifop-p-butyl	oxadiazon +	triclopyr BEE (4)
bromoxynil *	isoxaben	oxyfluorfen	trifluralin + (5)
dichlobenil	linuron (4)	pendimethalin + (5)	paraquat dichloride
diclofop-methyl	metolachlor	pentachlorophenol (PCP)*	simazine
<p>Very Highly Acutely Toxic and/or Highly Acutely Toxic¹ to fish and/or aquatic invertebrates. Based on EPA's Aquatic Life Benchmarks².</p> <p>Pesticide names followed by a number in parentheses indicates the specific NOAA /NMFS Biological Opinion where it was assessed for jeopardy and/or habitat destruction/modification to endangered salmonids in accordance with the Endangered Species Act (https://www.epa.gov/endangered-species) regarding the 37 pesticides listed in the Washington Toxics Coalition (WTC) court settlement. Completed BiOps listed below³.</p> <p>* Active ingredients being Very Highly Acutely Toxic (LC50 or EC50 <100 ug/L) to BOTH fish and aquatic invertebrates</p> <p>+ Active ingredients determined to generally have very high potential for risk of off target movement through surface runoff, based on the pesticide's adsorption to soil/sediment and it's field dissipation half-life (persistence) http://ccpestmanagement.ucanr.edu/files/237465.pdf</p>			

Salmon-Safe must approve any “High Hazard” variance (see attachment A).

If multiple chemistries are used on the farm, Salmon-Safe may run an analysis in the Pesticide Risk Mitigation Engine (PRiME). See Attachment B* for further details on this process.

*Attachment B is currently under development and will be distributed as soon as it is completed.

List of pesticides approved for limited use on this site

Product Name and EPA Registration #	Active Ingredient(s)	Method of Use <i>application type–rate–frequency–location–amount–crop</i>	Confirmed <i>not high risk in PRiME or HHL</i>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

To list additional pesticides approved for limited use at this site, please attach an additional form.

4. Precautions taken to prevent pesticide drift.

Salmon-Safe IPM requires adoption of drift management strategies. Salmon-Safe requires that great care be taken to ensure that pesticide drift does not reach non-targeted areas by using appropriate equipment and methods. Spray applications are not allowed in the buffer area when wind speed is above 5 mph or wind direction would carry pesticides toward open water. The buffer zone is defined as a corridor of land on the sides of a stream or other body of water as specified on the pesticide label. Measurement of this buffer zone begins at the edge of the water line at the time of application. Please describe pesticide drift management strategies for this site.

5. Precautions taken to prevent runoff.

Some pesticides have potential to be transported via runoff due to rainfall events that occur after application. Please describe steps taken to minimize risk of runoff to aquatic habitats.

6. Pesticide tracking system and plan for verifying compliance with Salmon-Safe requirements.

Salmon-Safe requires that detailed records are maintained for all pesticide applications, including applications to aquatic areas and buffer zones, consistent with state requirements. Please describe pesticide tracking and attach a sample summary report that will be provided to Salmon-Safe as part of the re-certification process.

Sample summary report is attached. ☐

7. Pesticide applicator licensing requirements.

Salmon-Safe requires that all persons applying pesticides must be licensed as pesticide applicators as applicable by the state department of agriculture. Licensed personnel must be specifically endorsed for any of the state defined categories of pest control they undertake, such as aquatic endorsement for all aquatic pest control activities. Please describe pesticide applicator licensing policies.

All pesticide applicators are licensed. ☐

8. Pesticide storage, mixing, rinsate and disposal policies.

Salmon-Safe requires that policies be in place to ensure that no contamination of stormwater or streams occurs due to storage, mixing or filling equipment, cleaning of equipment, or disposal of pesticides and these policies are adhered to by all farm employees. Please describe pesticide storage, mixing, rinsate and disposal strategies.

Policy is attached. ☐

9. Spray equipment calibration.

Please describe spray equipment calibration practices and calibration schedules. Describe how you ensure the correct application rate is used when spraying target crops.

10. Training and education in pest management techniques and IPM plan.

IPM is knowledge intensive. Farm Manager, spray equipment operators and anyone performing pesticide application should have working knowledge of the Salmon-Safe approved IPM plan. Please describe training and continuing education undertaken to improve IPM strategies, review spray practices and ensure proper equipment calibration. Please describe strategies used to ensure ongoing compliance by all spray applicators on the farm.



ATTACHMENT A: HIGH HAZARD VARIANCE REQUEST FORM

Site Name		Project Manager		Email	
Primary IPM Contractor		Key Contact		Email	
Date of Variance Request					

Salmon-Safe has designed this form to assist in achieving the desired results of a particular solution to a problem that cannot be addressed with the options available under Salmon-Safe guidelines. A Salmon-Safe site using any of the pesticides indicated as “High Risk/High Hazard” can maintain certification only if this documentation is provided that demonstrates a clear need for one time or ongoing restricted use of the pesticide, that no safer alternatives exist, and that the method of application (such as timing, location and amount used) represents a negligible risk to water quality and fish habitat.

VARIANCE REVIEW FEE SCHEDULE

\$350 per variance for one or two chemistries

(includes independent technical research and review plus Salmon-Safe Staff costs)

\$900 for 3 or more chemistries or IPM Plan review

(includes independent technical research and review plus Salmon-Safe Staff costs)

\$250 for expedited review (3–5 work days for decision)

Number of Chemistries for Variance Consideration x \$350 =

Expedited Review @ \$250 =

IPM Plan Review @ \$900 =

TOTAL VARIANCE FEE

☐ Check sent to Salmon-Safe, 1001 SE Water Ave, Suite 450, Portland, OR 97214

☐ Please send invoice for variance review fee.

1. Pest(s) / Problem(s) and Justification for High Hazard Variance

2. IPM Strategies Considered / Solutions Attempted

3. Proposed Solution

A variance is requested for the following “High Hazard” pesticide product and method of application.

Product Name	Active Ingredient(s)	Method of Use <i>application type–rate– frequency–location–amount</i>	Reduction Strategy

To list additional pesticides for “High Hazard” variance at this site, please attach an additional form.

4. Assessment of Risk to Water Quality and Fish Habitat

Describe any potential impacts to water quality and fish from the proposed variance described above, including proximity to sensitive habitats and proposed strategies to ensure negligible risk to salmonids and other aquatic life.

Describe your research efforts including references and consultation with university extension or other technical experts.

Outside IPM experts/university extension have been consulted. ☐

Note any other potential hazards of selected pesticides beyond hazards to aquatic environment (e.g., hazard to non-target organisms such as bees and birds, worker health and safety precautions, etc.). Describe mitigation measures for minimizing each potential hazard.

ADMIN USE ONLY *Salmon-Safe Variance Decision*

Approved ☐ Not approved ☐

Name

Date