

Factsheet on RPAs and RPMs in the NMFS Biological Opinion (BiOp) for Chlorpyrifos, Malathion, and Diazinon

The following information has been taken from the NMFS BiOp.

Reasonable and Prudent Alternatives (RPAs)

Definition: Mitigations to reduce exposure “to ensure that the action is not likely to jeopardize ESA-listed species or destroy or adversely modify critical habitat”.

What are the elements of the RPAs related to chlorpyrifos?

According to the BiOp, RPAs will have to appear on either product labeling or in EPA Endangered Species Protection Plan Bulletins (the “Bulletins Live!” system). NMFS defined five RPA elements:

1. Reduce pesticide loading for all high risk use sites¹. There are three options within this element
 - a. Remove the use from product labels (or modify labels to reduce the risk to acceptable levels)
 - b. Impose spray drift buffers to bodies of water of 1000’ for aerial applications; 500’ for all ground-based applications (including ground boom and airblast). Impose runoff mitigation of a 20’ vegetative filter strip for all applications.
 - c. Implement a points-based mitigation systems (more details below)
2. Allow only one application per year of chlorpyrifos
3. Restrict mosquito adulticide uses to residential and developed areas Restrict wide-area uses to spot treatment only
4. EPA must develop a plan to monitor the feasibility, effectiveness and implementation of the above RPAs

The point-based RPA system to mitigate exposure

Under this system, the end-user can select single or combinations of measures and add up the points assigned. A total of 80 points for both drift and runoff reduction is required. NMFS choose these measures and their point values from a European-based report. No consultation was done with growers, registrants or other government agencies (NRCS, for example), so it is not known if any or all these measures are feasible or effective.

The measures are shown in the table below. According to the BiOp, the measure would need to be applied around every water body in the area where a product is used, irrespective of its size or flow.

¹ High Risk Use Sites are any areas within NMFS-defined “evolutionarily significant units” (ESU) and “distinct population segment” (DPS) that the BiOp determined to be a risk. See the attached map.

RPA 1(c) table

Drift Reduction			Runoff Reduction	
Drift Buffers		Point value		Point value
	ground boom/chemigation buffer distance		Overall Buffer of >1000 ft	80
	35'	5	Vegetated filter strip width	
	65'	40		
	325'	70	15'	20
	650'	75	35'	45
	1000'	80	65'	60
	Air blast buffer distance		between rows	30
	65'	20	dikes/water diversions	
	325'	80	at field edge	20
	Aerial buffer distance		in-field	30
	325'	40		
	1000'	80		
Drift Reduction nozzles (EPA DRT program)			Vegetated ditches	30
	One-star	20	No-till/reduce tillage	30
	Two-star	45	Retention pond installed	55
	Three-star	65		
	Four-star	75		
Use a granular product		80		
Use spot application only (<0.1 A)		80	Use spot application only (<0.1 A)	80
Riparian Plantings		10		
Participation in a recognized stewardship program		80	Participation in a recognized stewardship program	80
Functional Riparian system in place, >30' wide		80	Functional Riparian system in place, >30' wide	80

Notes on measures:

- DRT nozzles – EPA has not assigned any DRT ratings as of March 2018.
- Riparian plantings and riparian systems – not clearly described

- Recognized stewardship programs – not clearly defined; the Washington “SalmonSafe” program is cited as an example. SalmonSafe is a grower certification program – certification allows a grower to label products as SalmonSafe for marketing purposes.
- For the physical runoff mitigations, the engineering and maintenance requirements are not defined in the BiOP.

Reasonable and Prudent Measures (RPMs)

RPMs are the actions that EPA must undertake to minimize “incidental take” of the listed species, and are targeted at protecting end-users from liability when they use the products (with full implementation of the RPAs). The RPMs require the Agency to make the product label changes to reflect the RPAs and develop ES Bulletins, along with developing training for end-users and deploying a system to report any issues to NMFS.

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