Amended Incidental Take Statement from National Marine Fisheries Service Endangered Species Act Section 7 Revised Conference and Biological Opinion on

THE ENVIRONMENTAL PROTECTION AGENCY'S REGISTRATION REVIEW OF PESTICIDE PRODUCTS CONTAINING CHLORPYRIFOS, MALATHION, AND DIAZINON

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Section Contents

1.1	Incie	dental Take Statement	1
1.1.	1	Introduction	1
1.1.	2	Amount or Extent & Effects of Take	2
1.1.	3	Reasonable and prudent measures	6
		Terms and Conditions	
1.2	Conservation Recommendations		. 10
1.3	Reir	nitiation Notice	. 10

1.1 Incidental Take Statement

1.1.1 Introduction

Section 7(b)(4) of the ESA requires that when a proposed agency action is found to be consistent with section 7(a)(2) of the ESA, either as proposed by the action agency or modified by a RPA, and the proposed action may incidentally take individuals of ESA-listed species, NMFS will issue a statement that specifies the impact of any incidental taking of endangered or threatened species ("incidental take statement" or "ITS"). To minimize such impacts, NMFS provides reasonable and prudent measures and terms and conditions that must be complied with by the Federal agency or any applicant in order to be exempt from the prohibitions against "take" of ESA-listed species. "Reasonable and prudent measures" are measures that are necessary or appropriate to minimize the impact of the amount or extent of incidental take." (50 CFR 402.02). Only incidental take resulting from the implementation of the action and any specified reasonable and prudent measures, and in compliance with the terms and conditions identified in the ITS, are exempt from the taking prohibition of section 9(a), pursuant to section 7(o) of the ESA. NMFS believes the reasonable and prudent measures described below are necessary and appropriate to minimize the impacts of incidental take on threatened and endangered species.

The measures described below must be undertaken by the U.S. Environmental Protection Agency and applicants for the exemption in section 7(0)(2) to apply.¹

Section 9(a)(1) of the ESA prohibits the taking of endangered species without a specific permit or exemption. Protective regulations adopted pursuant to section 4(d) of the ESA extend the prohibition to threatened species. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct (50 CFR 222.102). We interpret "harass" as meaning to create the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns with include, but are not limited to, breeding, feeding, or sheltering (Wieting 2016). Harm is further defined by NMFS as an act which actually kills or injures fish or wildlife, and may include significant habitat modification or degradation that results in death or injury to ESA-listed species by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering (50 CFR 222.102). Incidental take is defined as takings that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant (50 CFR 402.02). Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action, whether implemented as proposed or as modified by RPA, is not considered to be prohibited taking under the ESA provided that such taking is in compliance with the terms and conditions of this ITS. NMFS cannot issue an ITS to cover any take of marine mammals that would also be prohibited under the Marine Mammal Protection Act, unless such take has been authorized pursuant to section 101(a)(5) of that Act. Consequently, any exemption of incidental take of marine mammals under this ITS is conditional upon the issuance of an authorization for such take under the MMPA.

1.1.2 Amount or Extent & Effects of Take

Section 7 regulations require NMFS to specify the impact of any incidental take of endangered or threatened species; that is, the amount or extent, of such incidental taking on the species (50 C.F.R. § 402.14(i)(1)(i)). The amount of take represents the number of individuals that are expected to be taken by the action, which in this case would include implementation of the RPA.

For this opinion, NMFS anticipates the general direct and indirect effects that would occur from EPA's registration of pesticide products to 80 ESA-listed species under NMFS's jurisdiction during the 15-year duration of the proposed action. The RPA measures are designed to reduce exposure but not eliminate it. Pesticide runoff and drift of chlorpyrifos, diazinon, and malathion are most likely to reach streams and other aquatic sites when they are applied to crops and other land use settings located adjacent to wetlands, riparian areas, ditches, flood plain habitats, intermittent streams, or nearshore estuarine and marine habitats. The likelihood for these inputs into aquatic habitats are especially high when rainfall immediately follows applications, or if wind conditions exacerbate inputs from drift. The effects of pesticides and other contaminants found in urban runoff, especially from areas with a high degree of impervious surfaces, may also

¹ EPA has identified the companies that hold registrations of technical products to be the applicants for this consultation. Technical products are defined as those products that are used solely to manufacture or formulate other pesticide products, which are referred to as end-use products. RPMs that describe label changes in this opinion apply to technical registrants. As indicated below, those label changes for technical products will in turn require changes in labels of end-use products that are formulated with those technical products.

exacerbate degraded water quality conditions of receiving waters. Urban runoff is also generally warmer in temperature, and elevated water temperature poses negative effects to many ESA-listed species. The range of effects of the three a.i.s on ESA-listed species includes killing or injuring individuals directly, and reductions in prey leading to starvation and impaired growth. For example, impaired growth lends juveniles prone to becoming prey to predators, and starvation may make species more susceptible to disease. In addition, exposed individuals may change normal behaviors (e.g. feeding, sheltering, breeding, etc.). These results are not the purpose of the proposed action. Therefore, incidental take of ESA-listed species is reasonably certain to occur over the 15-year duration of the proposed action.

Given the variability of real-life conditions, the broad nature and scope of the proposed action, and the wide-ranging distributions of individuals of ESA-listed species, the best scientific and commercial data available are not sufficient to enable NMFS to directly estimate a specific amount of incidental take associated with the proposed action. As explained in the Description of the Proposed Action and the Effects of the Proposed Action sections, NMFS identified multiple uncertainties associated with the proposed action. Areas of uncertainty include:

- 1. Limited use and exposure data on stressors of the action for non-agricultural uses of these pesticides;
- 2. Minimal information on exposure and toxicity for pesticide formulations, adjuvants, and other/inert ingredients within registered formulations;
- 3. Minimal information on tank mixtures and associated exposure estimates;
- 4. Limited data on toxicity of environmental mixtures;
- 5. Variability in annual land use, crop cover, and pest pressure;
- 6. Temporal and spatial variability of individuals;
- 7. Uncertainty about pesticide concentrations that may occur in nearshore estuarine and marine habitats; and
- 8. Uncertainty about pesticide concentrations resulting from non-agricultural uses.

Additionally, NMFS recognizes there are multiple impediments that reduce the likelihood of detecting take to ESA-listed species from the use of pesticides. It is important to place the significance of mortality incidents in the proper context. Vyas (1999) concluded that most wildlife mortality is unaccounted for as only a small fraction are likely observed, reported, and confirmed; data show that most effects on wildlife are not observed, the majority of incidents observed are not reported, only a portion of those that are reported are investigated, and of those investigated confirmation of pesticides is challenging given a general lack of resources for such investigations and the need to immediately secure samples for analysis prior to chemical dissipation. The likelihood of detecting impacts becomes even more difficult in species with limited abundance. Sublethal impacts such as reduced reproduction are nearly impossible to detect without rigorous environmental monitoring. Additionally, there are generally no mandates requiring investigation or reporting of pesticide incidents. The exception is that pesticide registrants are required to report incidents of adverse effects to EPA under FIFRA 6(a)(2). EPA maintains an incident database (the Ecological Incident Information System, or EIIS) to document reported incidents. The EIIS uses criteria to categorize incidents as "major" or "minor" depending on the scale of effect observed. Additionally, the EIIS also characterizes the likelihood that the incident was caused by a particular pesticide using defined criteria (https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/guidance-using-incidentdata-evaluating-listed-and#eiis). For these reasons, NMFS uses surrogates for the allowable extent of take of ESA-listed species, as described below within each of the species groupings.

Anadromous and Marine Fish

NMFS identifies, as a surrogate for the allowable extent of take of anadromous and marine fish, the ability of this action to proceed without any fish kills within the action area attributed to the legal use of chlorpyrifos, diazinon or malathion, or any compounds, degradates, or mixtures affecting aquatic habitats containing ESA-listed species. Because of the difficulty of detecting mortality or other adverse effects on ESA-listed species of fish, individuals killed do not have to be ESA-listed species in order for their death to be considered a relevant surrogate for take. In addition, fish kills of other species of fish provide an acceptable surrogate because they are causally linked to effects on the ESA-listed fish species. For example, salmonids are relatively sensitive to pesticides compared to other species of fish, so that if there are kills of other freshwater fishes attributed to use of these pesticides, it is likely that salmonids have also died, even if no dead salmonids can be located. In addition, if stream conditions due to pesticide use kill less sensitive fishes in certain areas, the potential for lethal and non-lethal takes in downstream areas increases. Because fish mortalities can easily go unobserved or unaccounted for, we consider an exceedance of take to have occurred when any fish mortality is reported to EPA and attributed by EPA to the lawful use of these active ingredients according to EPA's guidelines for evaluating ecological incident data (https://www.epa.gov/pesticide-science-andassessing-pesticide-risks/guidance-using-incident-data-evaluating-listed-and#eiis). Both "minor" and "major" incidents involving fish kills are considered attributable to one of these active ingredients, its metabolites, or degradates, if the available information suggests a certainty index of "probable" or "highly probable" as defined in EPA's guidance for using incident data (EPA October 13, 2011; https://www.epa.gov/pesticide-science-and-assessing-pesticiderisks/guidance-using-incident-data-evaluating-listed-and#guidance).

Marine Invertebrates

NMFS identifies, as a surrogate for the allowable extent of take of marine invertebrates, the ability of this action to proceed without any mortality or adverse reproductive effects to corals or mollusks within the action area attributed to the legal use of chlorpyrifos, diazinon or malathion, or any compounds, degradates, or mixtures affecting aquatic habitats containing ESA-listed species. Because of the difficulty of detecting adverse effects on ESA-listed species of marine invertebrates, an exceedance of take occurs when any coral or mollusks mortality or adverse reproductive effect is reported to EPA and attributed by EPA to the lawful use of these active ingredients according to EPA's guidelines for evaluating ecological incident data (https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/guidance-using-incidentdata-evaluating-listed-and#eiis). In addition, mortality or adverse reproductive effects on other species of coral or mollusks provide an acceptable surrogate because they are causally linked to similar effects on the ESA-listed species. For example, species that are taxonomically similar tend to have similar toxicological sensitivities to pesticides. Therefore, if there are kills or adverse reproductive effects on other species of coral or mollusks, it is likely that listed marine invertebrates have also been adversely affected, even if these effects were not observed and reported. Reproductive effects, and both "minor" and "major" incidents involving marine invertebrate corals or mollusks are considered attributable to one of these active ingredients, its

metabolites, or degradates, if the available information suggests a certainty index of "probable" or "highly probable" as defined in EPA's guidance for using incident data (EPA October 13, 2011; https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/guidance-using-incident-data-evaluating-listed-and#guidance).

Sea Turtles

NMFS identifies, as a surrogate for the allowable extent of take to each listed sea turtle species, the ability of this action to proceed without any mortality or sublethal effects to any sea turtles including adverse impacts to swimming or reproduction within the action area attributed to the legal use of chlorpyrifos, diazinon or malathion. Because of the difficulty of detecting adverse effects on ESA-listed species, an exceedance of take occurs when any sea turtle mortality or adverse reproductive effect is reported to EPA and attributed by EPA to the lawful use of these active ingredients according to EPA's guidelines for evaluating ecological incident data (https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/guidance-using-incident-data-evaluating-listed-and#eiis). Reproductive effects, and both "minor" and "major" incidents involving marine invertebrate sea turtles are considered attributable to one of these active ingredients, its metabolites, or degradates, if the available information suggests a certainty index of "probable" or "highly probable" as defined in EPA's guidance for using incident data (EPA October 13, 2011; https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/guidance-using-inciderrisks/guidance-using-inciderrisks/guidance-using-incidert-data-evaluating-listed-and#eiles).

Pinnipeds

NMFS identifies, as a surrogate for the allowable extent of take of pinnipeds, the ability of this action to proceed without any mortality or adverse effects to pinniped swimming or reproduction attributed to the legal use of chlorpyrifos, diazinon or malathion, or any compounds, degradates, or mixtures affecting aquatic habitats containing ESA-listed species. Because of the difficulty of detecting mortality or other adverse effects to ESA-listed species of pinnipeds, an exceedance of take occurs when any pinniped mortality or adverse reproductive effect is reported to EPA and attributed by EPA to the lawful use of these active ingredients according to EPA's guidelines for evaluating ecological incident data (https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/guidance-using-incident-data-evaluating-listed-and#eiis). Impacts to swimming, reproductive effects, and both "minor" and "major" incidents involving pinnipeds are considered attributable to one of these active ingredients, its metabolites, or degradates, if the available information suggests a certainty index of "probable" or "highly probable" as defined in EPA's guidance for using incident data (EPA October 13, 2011; https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/guidance-using-incident-data-evaluating-listed-and#guidance).

Cetaceans - Southern Resident Killer Whale (SRKW)

NMFS identifies, as a surrogate for the allowable take of SRKW, the ability of this action to proceed without any mortality to Pacific Salmonids attributed to the legal use of chlorpyrifos, diazinon, or malathion. Mortality of salmon is causally linked to take on SKRW. Salmon, in particular Chinook salmon, are the prey for SRKW. The reduction in production of Pacific salmon throughout their range that would occur under the Proposed Action would therefore result in harm to SRKW by further reducing prey availability, which may cause animals to forage for longer periods, travel to alternate locations, or abandon foraging efforts. These effects

are difficult to directly observe. The extent of take from the Proposed Action is not anticipated to cause direct take by serious injury or mortality to SRKWs. However, the Proposed Action is expected to result in take in the form of harm to SRKWs through a reduction in the availability of their prey which can impact individual survival and reproductive success. An exceedance of take occurs when any Pacific salmonid mortality is reported to EPA and attributed by EPA to the lawful use of these active ingredients according to EPA's guidelines for evaluating ecological incident data (https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/guidance-using-incident-data-evaluating-listed-and#eiis). Both "minor" and "major" incidents involving Pacific salmonids are considered attributable to one of these active ingredients, its metabolites, or degradates, if the available information suggests a certainty index of "probable" or "highly probable" as defined in EPA's guidance for using incident data (EPA October 13, 2011; https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/guidance-using-incident-data-evaluating-listed-and-assessing-pesticide-risks/guidance-using-incident-data-evaluating-listed-and-assessing-pesticide-risks/guidance-using-incident-data (EPA October 13, 2011; https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/guidance-using-incident-data-evaluating-listed-and-assessing-pesticide-risks/guidance-using-incident-data-evaluating-listed-and-assessing-pesticide-risks/guidance-using-incident-data-evaluating-listed-and-assessing-pesticide-risks/guidance-using-incident-data-evaluating-listed-and-assessing-pesticide-risks/guidance-using-incident-data-evaluating-listed-and#guidance).

1.1.3 Reasonable and prudent measures

RPMs are measures to minimize the amount or extent of incidental take (50 C.F.R. 402.02). Only incidental take resulting from the agency actions and any specified RPMs, and terms and conditions identified in the ITS are exempt from the taking prohibition of section 9(a), pursuant to section 7(o) of ESA.

NMFS believes the RPMs described below are necessary and appropriate to minimize the impacts of incidental take on threatened and endangered species:

- RPM 1. Revise and approve all chlorpyrifos, diazinon, and malathion product labels and develop relevant EPA Endangered Species Protection Plan Bulletins to conserve ESA-listed species.
- RPM 2. Improve ecological incident reporting, develop ESA educational materials, and report label compliance.

1.1.4 Terms and Conditions

In order for any incidental take to be exempt from the prohibitions of section 9 of the ESA, EPA and applicants must comply with the following terms and conditions that are applicable to them, which implement the Reasonable and Prudent Measures described above. These include the take minimization, monitoring and reporting measures required by the section 7 regulations (50 C.F.R. §402.14(i)). If EPA or applicants fail to ensure compliance with these terms and conditions and their implementing reasonable and prudent measures, the protective coverage of section 7(o)(2) may lapse.

RPM 1: Revise product labels and develop relevant EPA Endangered Species Protection Plan Bulletins to conserve ESA-listed species

A. Terms and Conditions for Applicants

To address RPM number one, applicants with registrations for products containing

diazinon, malathion, and chlorpyrifos shall submit to EPA the following label amendments. Label amendments shall be submitted to EPA within 60 days of the issuance date of this biological opinion.

a. Amendments to implement those Conservation Measures requiring label modifications that are listed in the Description of the Proposed Action.

b. Other Amendments to minimize incidental take.

i. For diazinon

Do not apply this product within 300 m of ESA-listed species habitat when:

- Soil is saturated, or when a storm event is likely to produce runoff from the treated area is forecasted (by NOAA/National Weather Service, or other similar forecasting service) to occur within 48 hours following application; AND
- Wind speeds exceed 10 mph when applying the product via airblast, or wind speeds exceed 15 mph when applying via ground boom or other methods; AND
- Tank mixing with other neurotoxic pesticides (i.e., organophosphate, carbamate, pyrethroid, and neonicotinoid pesticides) at application rates that exceed 50 percent the maximum labeled rate of any pesticide active ingredient used in the tank mixture.

ii. For malathion

Do not apply this product within 300 m of ESA-listed species habitat when:

- Do not apply this product within 300 m of ESA-listed species habitat when soil is saturated, or when a storm event is likely to produce runoff from the treated area is forecasted (by NOAA/National Weather Service, or other similar forecasting service) to occur within 48 hours following application;
 - AND Tonk mivir
- Tank mixing with other neurotoxic pesticides (i.e., organophosphate, carbamate, pyrethroid, and neonicotinoid pesticides) at application rates that exceed 50 percent the maximum labeled rate of any pesticide active ingredient used in the tank mixture.

iii. For chlorpyrifos

Do not apply this product within 300 m of ESA-listed species habitat when:

• Soil is saturated, or when a storm event is likely to produce runoff from the treated area is forecasted (by NOAA/National Weather Service, or other similar forecasting service) to occur within 48 hours following application; AND

- Wind speeds exceed 10 mph when applying the product with fine or finer droplet sizes, or when wind speeds exceed 15 mph when applying the product with medium or courser droplet sizes (ASABE); AND.
- Tank mixing with other neurotoxic pesticides (i.e., organophosphate, carbamate, pyrethroid, and neonicotinoid pesticides) at application rates that exceed 50 percent the maximum labeled rate of any pesticide active ingredient used in the tank mixture.
- c. Amendments to reference EPA's Endangered Species Protection Bulletins. Applicants shall submit to EPA the following label amendments for all technical and manufacturing use products:

The following statement shall be placed at the beginning of the Directions for Use section:

"This product may only be formulated into end-use products that contain the following language on their labeling (to be placed at the beginning of the Directions for Use section of all end-use product labels) when they are released for shipment:

"ENDANGERED SPECIES PROTECTION REQUIREMENTS": It is a Federal offense to use any pesticide in a manner that results in an unauthorized "take" (e.g., kill or otherwise harm) of an endangered species, and certain threatened species, under the Endangered Species Act section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult http://www.epa.gov/espp/, call 1-844-447-3813, or email ESPP@epa.gov. You must use the Bulletin valid for the month in which you will apply the product.""

d. Amendments to improve ecological incident reporting

Applicants shall submit to EPA the following label amendments for all technical and manufacturing use products containing chlorpyrifos, diazinon, and malathion. Label amendments shall be submitted to EPA within 60 days of the issuance date of this biological opinion.

The following statement shall be placed in the Directions for Use section:

"This product may only be formulated into end-use products that contain the following language on their labeling when they are released for shipment:

"Reporting Ecological Incidents: To report ecological incidents, including mortality, injury, or harm to plants and animals, call [registrant phone number].""

B. Terms and Conditions for EPA

To address RPM number one, EPA shall:

a. Within 60 days of the issuance date of this biological opinion

EPA shall notify all end-use product registrants of diazinon, malathion, and chlorpyrifos to submit, within 60-days of EPA's notification, the necessary amendments to their end-use product labels, to be consistent with the technical/manufacturing use product label amendments described in RPM 1 (a, b, c, d) Terms and Conditions for Applicants.

b. No later than March 29, 2024 for malathion and diazinon and no later than September 30, 2024 for chlorpyrifos:

- i. EPA shall review and act on all of the registrants' request to amend labels.
- ii. EPA shall develop Endangered Species Protection Bulletins to incorporate the registrants label amendments described above.

RPM 2. Ecological incident reporting, develop ESA educational materials, and report label compliance

A. Terms and Conditions for EPA

To address RPM number two, EPA shall:

a. Label modification for Ecological Incidents

Within 60 days of the issuance date of this biological opinion EPA shall notify all end-use product registrants of diazinon, malathion, and chlorpyrifos to submit, within 60-days of EPA's notification, the necessary amendments to their end-use product labels, to be consistent with the technical/manufacturing use product label amendments described above (RPM 1.A.d.), Terms and Conditions for Applicants. EPA shall review and act on the registrants' requests to amend labels as described above within 18 months of the issuance date of this biological opinion.

- b. Annual Reporting of Ecological Incidents. Within two years of this biological opinion, EPA shall commence annual reporting to NMFS the occurrence of all minor and major ecological incidents involving fish kills and adverse impacts to marine species attributable to the use of products containing chlorpyrifos, diazinon, and malathion.
- c. **ESA Conservation Educational Materials.** EPA shall amend the Endangered Species Protection Bulletin to include a link to generic ESA conservation educational materials. This material is to be jointly developed by NMFS and EPA and maintained on either a NMFS or EPA website. In addition to providing a link, the Endangered Species Protection Bulletins should include an advisory note encouraging applicators to review the information. This information should be provided to users who make inquiries regarding the geographic area associated with range and/or designated critical habitat of ESA-listed Pacific salmonid

habitat. EPA shall work with NMFS to further develop these materials with the goal of amending the Endangered Species Protection Bulletin within one year of the date of this biological opinion.

d. Label Compliance Monitoring. EPA shall work with NMFS to determine a feasible means by which EPA will report to NMFS a summary of relevant compliance data on an annual basis. The goal of this term and condition is to establish a process by which NMFS can better access information regarding label compliance for pesticides subject to ESA Section 7 consultations. EPA shall work with NMFS to develop a process of effectiveness monitoring which utilizes existing FIFRA compliance monitoring strategies.

1.2 Conservation Recommendations

Section 7(a)(1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on ESA-listed species or critical habitat, to help implement recovery plans or develop information (50 C.F.R. §402.02).

The following conservation recommendations would provide information for future consultations involving future authorizations of pesticide active ingredients that may affect ESA-listed species:

- 1. Develop models that more accurately quantify pesticide exposure in estuarine and near-shore ocean environments.
- 2. Work with other appropriate federal, state, and local partners to determine efficacy of riparian area management methods in reducing pesticide loading from authorized uses especially the types of vegetation and width of riparian areas needed.
- 3. Identify and implement other methods that eliminate or significantly reduce pesticide loading into species' habitats.
- 4. Carryout educational outreach on pesticide risks to threatened and endangered species.
- 5. Develop improved methods for characterizing exposure from non-agricultural uses.

In order for NMFS's Office of Protected Resources Endangered Species Act Interagency Cooperation Division to be kept informed of actions minimizing or avoiding adverse effects on, or benefiting, ESA-listed species or their critical habitat, the Environmental Protection Agency should notify the Endangered Species Act Interagency Cooperation Division of any conservation recommendations they implement in their final action.

1.3 Reinitiation Notice

This concludes formal consultation for the Environmental Protection Agency's proposed registration of pesticide products containing chlorpyrifos, diazinon, and malathion to ESA-listed species under the jurisdiction of the NMFS. As 50 C.F.R. §402.16 states, reinitiation of formal

consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if:

- 1. The amount or extent of taking specified in the ITS is exceeded.
- 2. New information reveals effects of the agency action that may affect ESA-listed species or critical habitat in a manner or to an extent not previously considered.
- 3. The identified action is subsequently modified in a manner that causes an effect to ESAlisted species or designated critical habitat that was not considered in this opinion.
- 4. A new species is listed or critical habitat designated under the ESA that may be affected by the action.

NMFS's analysis and conclusions are based on EPA's action. If changes to product labeling result in modifications to the action that were not considered in this opinion, including but not limited to label modifications authorizing pesticide application to new locations, additional application methods, or increased application rates or numbers of applications, EPA must contact NMFS to discuss reinitiation. If reinitiation of consultation appears warranted due to one or more of the above circumstances, EPA must contact NMFS Office of Protected Resources, ESA Interagency Cooperation Division. In the event reinitiation conditions (1), (2), or (3) are met, reinitiation will be only for the a.i.(s) which meet that condition, not for all three a.i.s considered in the opinion. If none of these reinitiation triggers are met within the next 15 years, then reinitiation will be required because the opinion only covers the action for 15 years. It is recommended that EPA request reinitiation with sufficient time prior to reaching 15 years to allow sufficient time to consult and to prevent lapse of coverage for the active ingredients in this opinion.