

## Regulators' Comments on the NMFS' 2008 BiOp Draft

The following are comments from regulatory authorities regarding a draft of NMFS' evaluation of chlorpyrifos, malathion and diazinon's impact on Pacific Coast Salmon, issued earlier in the year.

### EPA Office of Prevention, Pesticides and Toxic Substances, September 15, 2008

"The Draft lacks a level of transparency necessary for EPA to understand NMFS' rationale for its opinion that any of these pesticides will jeopardize the continued existence of any of the species at issue. It is generally not transparent as to what methodology NMFS employed to collect information.... It is also unclear how NMFS undertook specific analyses and how NMFS integrated or reconciled apparently conflicting information."

"Use of these pesticides has been ongoing for decades and has actually declined over the past several years. If the threatened status of the species has not changed appreciably during this considerable period, it would appear to provide some indication that use of these pesticides are not appreciably reducing the likelihood of both survival and recovery of these ESUs [*i.e.*, *Evolutionarily Significant Units*] and DPSs [*i.e.*, *Distinct Population Segments*] – which is the standard for jeopardy – yet the Draft makes no effort to address this empirical evidence. Additionally, the Draft makes no mention of the fact that agriculture [*sic*] chemicals are secondary stressors and therefore are considered to be a minor factor in species survival relative to other factors."

"[T]he draft is not consistent in describing the findings in EPA's consultation packages.... Our assessment for malathion found *No Effect* for the California Coastal Chinook Salmon and the Northern California Steelhead for both residential and nonresidential uses and we did not initiate consultation on these findings. Similarly for chlorpyrifos, there were two ESUs [*Evolutionarily Significant Units*] for which EPA found *No Effect* and for which we did not initiate consultation (the Columbia River Chum and the Ozette Lake Sockeye Salmon).... EPA believes the Draft should be limited to the actions on which we initiated consultation."

"The Draft also appears to reflect a misunderstanding of currently labeled uses in spite of the fact that it acknowledges mitigations EPA put in place to reduce potential exposure.... EPA's consultation packages for both chlorpyrifos and diazinon, in fact, included the label mitigation...approved for all new production of these products. We understand your concern that some existing stocks of old products may still exist in the hands of users and that you may therefore want to address these existing stocks in your Biological Opinion. However, EPA does not understand why the Draft did not also address the impact of the label mitigations.... It seems to be a poor use of both our agencies' resources to limit the scope of this consultation to addressing only old product labels rather than currently approved labeling."

"[T]he Draft appears to assume that if an application scenario is not specifically excluded on the label, it should be assessed as part of the Action. For instance, the Draft evaluates direct overspray to water bodies for chlorpyrifos even though it acknowledges this would be a misuse. Misuse of a pesticide is an unlawful act, is not a component of the federal Action and therefore should not be evaluated as such. The Draft also assumes risk from the use of all three pesticides at their maximum application rates at the same location and time, because such practice is not prohibited on the label. The Draft does not provide analyses that establish the extent to which this assumption is realistic or reasonable, nor does the Draft articulate to what extent the finding of jeopardy is dependent on this assumption."

"The Draft seems to draw conclusions based on a body of data that fails to include certain studies and information provided by EPA in its consultation package while including other information. There seems to be no explanation of the criteria that were used to determine what information was included or excluded. For example, it does not appear that NMFS considered the considerable information provided in our

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consultation packages regarding actual usage of these pesticides in CA and WA, the timing of use, or the locations on which these products are used. Further, much of the historical water quality monitoring data relied upon is outdated and inappropriate in the context of the use of these pesticides. These historical data more appropriately reflect pesticide use prior to substantive mitigation that has been put in place by EPA.”

“The Draft contemplates direct pesticide overspray as a potential exposure scenario in off-channel habitats. In addition to direct overspray being an illegal use, and not part of the Action, the exposure modeling tables in the Draft present instantaneous concentrations in water, for applications as high as 10 lbs./acre. The Draft does not document how NMFS determined this high application rate could be assumed from the labels of these three pesticides. It is not clear how such high application rates were derived for all uses of all three chemicals.”

“[W]e do not believe the available data support NMFS’ draft jeopardy conclusion.”

### California Department of Pesticide Regulation, September 15, 2008

“DPR disagrees with NMFS’ finding that U.S. EPA’s proposed authorization for the registration of pesticide products containing the active ingredients chlorpyrifos, diazinon and malathion is likely to jeopardize the continued existence of the 10 Salmonid Evolutionarily Significant Units (ESUs) occurring in California. DPR also disagrees with NMFS’ conclusions that U.S. EPA’s proposed authorization for the registration of pesticide products containing the active ingredients chlorpyrifos, diazinon and malathion is likely to destroy or adversely modify designated critical habitat for the above mentioned salmonid ESUs.”

“A number of environmental factors believed to negatively impact salmonids are listed in the Biological Opinion. These include water flow, water temperature, removal of riparian habitat, urbanization, bank erosion, decreased base flow, sediment loadings, chemical pollutants from automobile traffic, wastewater treatment plants overflows (sic), water chemistry, biota, canalization, heavy metals such as zinc, copper, lead, arsenic, mercury, infectious diseases, parasites, fertilizers, manures (nitrates), VOCs [*i.e. volatile organic compounds*], nutrients, pathogenic bacteria, old organochlorines, reduced dissolved O<sub>2</sub>, and pesticides. Considering that the affected populations range from Southern California to the Canadian border (and beyond), these various factors should be accounted for in some manner. It is likely that in some habitats, pesticides are not a significant factor while urbanization, high water temperature or sediment loading is. It is not clear from reading the Biological Opinion that pesticides are a factor in any of the habitats.”

“[A] major shortcoming of this Biological Opinion: it must be based on the best available data and it isn’t.” *[Underlining appears in the original.]*

– California Department of Pesticide Regulation

“Another critical point to note is that the Biological Opinion is based on data and pesticide labels that date from before 2002. Chlorpyrifos and diazinon labels have changed significantly since that time. Changes include fewer use sites, lower application rates, and buffer zones, among others. Furthermore, DPR conducted several studies since 2002 that reflect current water concentrations after the advent of new use restrictions on diazinon and chlorpyrifos.... These new data should be considered in this opinion.”

“[A] major shortcoming of this Biological Opinion: it must be based on the best available data and it isn’t.” *[Underlining appears in the original.]*

“With ever decreasing detection levels, there must be some level below which the impact to salmonids would be negligible, but none are provided.”

“The report uses modeling that provides information of field runoff (immediately adjacent to the treated field) to justify the conclusions rather than available monitoring data from streams and rivers inhabited by the various salmonids. However, given the large volume of data that exists throughout California from the USGS [U.S. Geological Service], DPR [Department of Pesticide Regulation], CDFG [California Department of Fish and Game], and State and Regional Water Board programs, it is unclear why NMFS chose to use modeled data for California instead.” *[Underlining appears in the original.]*

“The report lists many factors for the declines in salmonids. They (sic) make no effort to weight these various factors. While the argument for jeopardy to the various salmonids from pesticides is relatively weak, there are specific cases reported where low or no water prevented salmonids from reaching spawning habitat. Claiming that the three pesticides uniformly impact each salmonid population in every river and stream from Central California to the Washington – Canada border is not supported.”

“Considering the potential impact of this opinion, the authors should have evaluated each biological unit and each river or stream containing biological units. The report should have listed monitoring results, by river or stream, and some attempt to weight the other factors should be made. It does no good to prevent chlorpyrifos use in an area where sampling has shown no or minimal chlorpyrifos levels, where there are no fish, or where other factors are responsible for salmonid reductions.”

### Washington State Department of Agriculture, October 1, 2008

“WSDA has compiled pesticide use summaries that detail: the crop treated; percent acres treated; application rates, intervals, and timing; and application method. The pesticide use summaries detail the practices and uses that are specific to agricultural practices in Washington State. NMFS notes on multiple occasions...the lack of a complete set of pesticide labels for assessments. While the pesticide label provides the upper bound of pesticide use ...pesticide use summaries compiled by WSDA detail the actual use practices and add the temporal component of when a pesticide is applied. WSDA is willing to compile updated pesticide use summaries for the upcoming biological opinions if NMFS will provide a deadline for submitting data.”

“WSDA in cooperation with the Washington Department of Ecology...has an ongoing surface water monitoring program to assess the exposure of salmonids to pesticides in Washington State. This monitoring program collects weekly samples during the pesticide use season...from fixed monitoring locations on known salmon habitat. Sites are selected from watersheds from around Washington State that represent different major agricultural cropping patterns and climatic regions.... Agricultural monitoring locations are typically on first or second order streams or agricultural drains that are designated as salmon bearing.”

“The assumption of exposures presented in the biological opinion...appear to build on the ‘worst case’ scenario used by EPA. However, there is no attempt to compare and contrast the worst case scenario with habitat conditions throughout the geographic/spatial range of listed salmonids. WSDA strongly suggests that exposure assumptions be made using the best available data. In the case of Washington State, this would include assessing the proximity of water bodies to potential site of pesticide use based upon agricultural land use data that is [sic] available.”

“NMFS has relied upon exposure scenarios based largely on monitoring and modeling related to California agriculture. Pesticide use practices vary greatly from region to region based upon local pest pressures. Within Washington State there are different pest pressures.... Relying upon exposure assumptions based on California agriculture to draw conclusions across all ESUs [*Evolutionarily Significant Units*] is not appropriate.”

“What are the minimum concentrations of chlorpyrifos, diazinon and malathion NMFS considers acceptable in surface water? Without specifying concentrations of concern it is not possible to determine an appropriate Reasonable Prudent Alternative or Measure.”

“NMFS assumptions regarding product misuse or accidental overspray is problematic in that these occurrences are illegal according to the product labels. Is it the intent to evaluate legal, regulated uses or all circumstances that may occur? Better defined sideboards are necessary in order to conduct an accurate assessment of pesticide use allowed... [by the label].”

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