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IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MARYLAND  
GREENBELT DIVISION

|  |   |                         |
|--|---|-------------------------|
| DOW AGROSCIENCES LLC, et al.,              | ) |                         |
|  | ) |                         |
| Plaintiffs,                                | ) |                         |
|  | ) |                         |
| v.   | ) |                         |
|  | ) | Case No. 8:09-cv-824-AW |
| NATIONAL MARINE FISHERIES SERVICE, et al., | ) |                         |
|  | ) |                         |
| Defendants                                 | ) |                         |
|  | ) |                         |
| and  | ) |                         |
|  | ) |                         |
| NORTHWEST CENTER FOR ALTERNATIVES TO       | ) |                         |
| PESTICIDES, et al.,                        | ) |                         |
|  | ) |                         |
| Defendant-Intervenors.                     | ) |                         |
|  | ) |                         |
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DEFENDANT-INTERVENORS' REPLY IN SUPPORT OF  
CROSS-MOTION FOR SUMMARY JUDGMENT

TABLE OF CONTENTS

INTRODUCTION .....1

ARGUMENT .....1

I. NMFS PROPERLY REPORTED AND CONSIDERED A RANGE OF DATA ON HARMFUL PESTICIDE CONCENTRATIONS.....3

A. NMFS Examined All Lethal Concentration Values in the Best Available Data, But Did Not Let a Single Value Drive Its Initial Assessment.....4

B. NMFS Did Not Rely on the Lowest-End Effects Concentrations in its Population Models. ....8

II. NMFS CONSIDERED THE BEST AVAILABLE SCIENCE ON SALMONID EXPOSURES.....11

A. NMFS Rationally Considered the Best Available Water Monitoring Data to Help Assess Exposure.....12

B. NMFS Properly Considered the Best Available Data From the Exposure Models.....18

III. NMFS EXPLAINED THE RATIONALE FOR THE REASONABLE AND PRUDENT ALTERNATIVES NECESSARY TO PROTECT THE FISH. ....21

IV. NMFS ADEQUATELY CONSIDERED AND, WHERE APPROPRIATE, RESPONDED TO COMMENTS. ....23

CONCLUSION.....25

TABLE OF AUTHORITIES

|  | <b>Page(s)</b> |
|--|----------------|
| <b>CASES</b>   |                |
| <u>Cabinet Resource Group v. U.S. Fish and Wildlife Service,</u><br>465 F. Supp. 2d 1067 (D. Mont. 2006).....          | 13             |
| <u>Defenders of Wildlife v. Babbitt,</u><br>958 F. Supp. 670 (D.D.C. 1997).....  | 2              |
| <u>Inova Alexandria Hosp. v. Shalala,</u><br>244 F.3d 342 (4th Cir. 2001) .....  | 10             |
| <u>Oregon Natural Desert Ass’n v. Tidwell,</u><br>716 F. Supp. 2d 982 (D. Or. 2010) .....                              | 24             |
| <u>San Luis &amp; Delta-Mendota Water Auth. v. Salazar,</u><br>760 F. Supp. 2d 855 (E.D. Cal. 2010).....               | 22             |
| <u>Sierra Club v. Marsh,</u><br>816 F.2d 1376 (9th Cir. 1987) .....  | 2, 19          |
| <u>South Yuba River Citizens League v. Nat’l Marine Fisheries Serv.,</u><br>723 F. Supp. 2d 1247 (E.D. Cal. 2010)..... | 23, 25         |
| <u>Southwest Center for Biological Diversity v. Babbitt,</u><br>215 F.3d 58 (D.D.C. 2000) .....                        | 13, 25         |
| <u>TVA v. Hill,</u><br>437 U.S. 153 (1978).....  | 19             |
| <b>STATUTES</b>  |                |
| 16 U.S.C. § 1536(a)(2).....  | 14             |

## INTRODUCTION

Salmon and steelhead are integral to the fabric of life in the Pacific Northwest and California. These fish support local economies from Northern California to Alaska and play a vital role in communities and ecosystems as far inland as central Idaho. It is undisputed that widespread use of the pesticides diazinon, chlorpyrifos, and malathion harm and kill west coast salmon and steelhead. The manufacturers of these three highly toxic pesticides, however, disagree with the National Marine Fisheries Service's ("NMFS") expert determinations about the extent of this harm and the need for protective measures to ensure that use of those pesticides does not jeopardize the survival and recovery of these iconic fish.

In their opening brief, the Registrants attacked several narrow and technical aspects of NMFS's analysis in the biological opinion ("BiOp"). Intervenors and Federal Defendants have demonstrated that these complaints, however, rely on a misunderstanding of the law and a mischaracterization of NMFS's comprehensive analysis in the BiOp. In response, the Registrants attempt to recast their arguments as merely seeking explanation for the choices NMFS made in the BiOp. But the fact is that NMFS explained its decision fully in the BiOp and no amount of repackaging can transmute the Registrants' disagreements with elements of the BiOp into legal deficiencies that undermine NMFS's conclusions.

## ARGUMENT

Though each of the Registrants' arguments fail on the particulars, it is significant that the Registrants fail even to acknowledge – let alone address – the vast majority of NMFS's multi-faceted quantitative and qualitative analysis of the data showing exposure to these chemicals and harm to salmonids and their prey, the agency's consideration of the lethal and multiple sublethal effects to salmonids, and its transparent explanation of the risks posed by data gaps and uncertainty. See

Defendant-Intervenors' Memorandum in Support of Cross-Motion for Summary Judgment ("NCAP SJ Mem.") (Dkt. 64) at 7-16. While the Registrants continue to attack several isolated pieces of the BiOp, NMFS's analysis in the BiOp did not depend on any single factor or any single value. Instead, the agency looked at a robust range of data, considered and explained the areas where that data may under or over-predict risk, and dealt with data gaps and uncertainty. This approach was both rational and required by the ESA's mandate that the agency ensure that the risk of uncertainty is "borne by the project, not by the endangered species." Sierra Club v. Marsh, 816 F.2d 1376, 1386 (9th Cir. 1987) (holding that "Congress clearly intended that [NMFS] give the 'highest of priorities' and the 'benefit of the doubt' to preserving endangered species.") (citations omitted). See also Defenders of Wildlife v. Babbitt, 958 F. Supp. 670, 679-80 (D.D.C. 1997) (ESA's "best scientific and commercial data available" mandate requires "far less than 'conclusive evidence'" to compel protection of species).

The Registrants' failure even to recognize the ESA's requirements, NMFS's explanations, and the breadth of the agency's analysis fatally undermines their complaints that NMFS, for example, "never explained" the values it used in a population model, or that it did not "discuss the reasoning of its choice[s] openly." Plaintiffs' Opposition to Motions for Summary Judgment and Reply in Support of Motion for Summary Judgment ("SJ Opp.") (Dkt. 73) at 23, 28.<sup>1</sup> While complaining that NMFS failed to explain itself or made incorrect choices, the Registrants tellingly do not – and cannot – demonstrate that the agency's explanations in the BiOp are in any way incomplete or inadequate. The Registrants may believe that NMFS should have relied exclusively on the studies and data the Registrants supplied

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<sup>1</sup> The Registrants' complaints about selected elements of the process NMFS followed to produce the BiOp are based largely on their disagreement with NMFS's decision to look beyond the set of data and concerns the Registrants presented in multiple comments, meetings, and exchanges with NMFS. See, e.g., NCAP SJ Mem. at 20-21. Moreover, the Registrants continue to base their challenge to a large extent on their concerns with the draft BiOp, rather than on the explanation and analysis in the final BiOp. See SJ Opp. at 1-7. But see infra at 18-19 (detailing NMFS's response to EPA's comments on modeling).

to the agency, or that it should have dismissed risks posed by factors that were not readily quantified, but no amount of massaging by the Registrants' lawyers can obscure that NMFS fully explained its methodology, meticulously detailed its quantitative modeling and analysis, and transparently demonstrated how it qualitatively considered uncertainty and weaknesses in the best available data.<sup>2</sup>

I. NMFS PROPERLY REPORTED AND CONSIDERED A RANGE OF DATA ON HARMFUL PESTICIDE CONCENTRATIONS.

In the BiOp, NMFS first considered numerous studies and data to assess the risks to salmon from concentrations of these three toxic pesticides. See NCAP SJ Mem. at 7-16. Some of these studies found that salmon and their prey would be harmed at very low concentrations, some found that harm would only occur at high concentrations, and others found harm at intermediate levels. In their opening brief, the Registrants expended considerable effort attacking NMFS's alleged "reliance" on the lowest-end reported harmful concentrations for each of these pesticides. NCAP and Federal Defendants have demonstrated that while NMFS reported these low concentrations in the BiOp when summarizing the wide range of available data on harmful concentrations, the agency did not employ those lowest-end concentrations in its quantitative modeling. NCAP SJ Mem. at 18-24. Instead, NMFS detailed how it qualitatively considered both the high-end and low-end harmful concentrations and transparently explained the concentrations that it did employ in its quantitative population models. The Registrants do

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<sup>2</sup> The Registrants' attempt to blame NMFS for the lack of information on inert ingredients is a red herring. See SJ Opp. at 2-3, 25 & n. 33. NMFS diligently pursued the complex clearance process to review what the Registrants guard as confidential business information, but misunderstandings with EPA, not lack of effort, hampered that process. See AR 750-751 (NMFS notes of Sept. 11, 2008 meeting where EPA notes that it had "[o]riginally said that NMFS had not completed the proper training, but that was not the problem. The training was completed. The hold up is that EPA requires a letter from NMFS office of G[eneral] C[ounsel]"). See also id. (NMFS observing that it often considers even classified information from Department of Defense). Moreover, to support the claim that the Registrants had nevertheless informed NMFS that their products did not contain problematic inert ingredients, the Registrants point to a statement that one formulation of chlorpyrifos did not contain nonylphenol. SJ Opp. at 3, n. 6 (citing AR 1493). Citing a single formulation – indeed just one of at least three chlorpyrifos products, AR 1486 – of one of the three chemicals at issue is a thin reed on which to base such a sweeping claim.

not – and cannot – demonstrate any problem with the values NMFS actually employed in its population modeling and do not take issue with the agency’s qualitative consideration of the range of available data.

In response to the unequivocal record demonstrating that these lowest-end concentrations did not drive NMFS’s analysis or conclusions, the Registrants de-emphasize their original argument. But in an effort to recast their argument as attacking what they now characterize as “discrepanc[ies]” in the BiOp, SJ Opp. at 23, the Registrants continue to distort the record to attack a caricature of NMFS’s analysis. First, the Registrants mistakenly assert that the lowest-end reported concentrations drove the “initial stage” of NMFS’s risk assessment, SJ Opp. at 23, where NMFS asked whether these pesticides would likely impact individual salmon. Second, contrary to the BiOp and the record, the Registrants continue to press the fiction that NMFS somehow relied on these lowest-end values in the population models NMFS used in the second step of its analysis. Neither of these characterizations accurately reflect NMFS’s analysis in the final BiOp.

A. NMFS Examined All Lethal Concentration Values in the Best Available Data, But Did Not Let a Single Value Drive Its Initial Assessment.

The Registrants first argue that the lowest-end harmful concentrations that NMFS reported in the BiOp improperly affected the initial phase of its analysis. SJ Opp. at 24, 27, 30. In that first step of its analysis, NMFS reported and considered all of the available evidence on (1) what concentrations of these pesticides would have adverse effects on individual fish (the “effects concentrations”) and (2) what concentrations of these pesticides individual fish were likely to be exposed to (the “exposure concentrations”). Where NMFS found likely effects and exposures to individual fish, it then proceeded to the second step to determine whether impacts to individual fish would collectively impact salmonid populations. See NCAP SJ Mem. at 8-10 (describing steps of NMFS’s analytical approach in BiOp).

To determine what concentrations would have adverse effects on individual fish, NMFS

considered whether these chemicals were likely to impact several biological “endpoints,” including acute lethality (immediate death), impacts to sense of smell, swimming, reproduction, growth, and impacts to prey. See, e.g., AR 1129-1154. When considering what concentrations were likely to cause immediate death (acute lethality), NMFS reported a wide range of lethal concentration or “LC50” values taken from the available scientific literature. These LC50 values represent the concentration of a pesticide that kills 50% of a test population.<sup>3</sup> The Registrants accuse NMFS of relying on the lowest-end LC50 values simply because it reported them in the BiOp and included them in graphs showing the range of available information. As NCAP has explained, however, reporting the lowest values in the BiOp and relying on them in the analysis are two very different things. NCAP SJ Mem. at 19-24.

NMFS did report the lowest LC50 values in the BiOp, but the agency made equally clear in the BiOp that it did not “rel[y] on,” SJ Opp. at 24 or “use[ ],” id. at 30, those low values. Indeed, after NMFS reported these LC50 values in the text of the BiOp, they appear again only in three graphs where NMFS displayed the range of available exposure data (from monitoring and models) and the range of available effects data. See AR 1158-1160 (Figures 39-41) (cited in SJ Opp. at 24 & n.32, 27, 30). NMFS explained in the BiOp that it used the information in these graphs for the limited purpose of gauging whether there was a likelihood that individual salmonids may be exposed to harmful

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<sup>3</sup> As NMFS emphasized in the BiOp, an LC50 value is “derived from the number of surviving individuals at each concentration tested following a 96 h exposure.” AR 1125. Most do not report at what level the first and most sensitive individual fish in the sample die and does not track how many fish are killed at doses lower than the LC50 value, and therefore likely underestimate risk. AR 1125-1126. Although LC50 values provide a commonly-accepted currency to model lethality, it is important to bear in mind that the BiOp evaluated the effects of these pesticides on fish threatened with extinction. Using a single LC50 value to drive the entire analysis, especially at the higher levels the Registrants would use, would set a level that accepts killing half of the fish in a population. This is hardly an appropriately precautionary standard to apply to species already on the brink of extinction. Cf. AR 756 (“By definition, an EC50 would be expected to impact ha[lf] of the test population which would not be an appropriate threshold for a nonjeopardy determination.”). NMFS properly considered multiple other factors in its analysis. NCAP SJ Mem. at 7-14.

concentrations of these chemicals. AR 1157 (discussing the “coarse analysis” accomplished by looking at overlap between available exposure data and the range of effects concentrations). If there was overlap between those two sets of data – i.e., if individual salmonids were likely to be exposed to harmful levels of these chemicals – NMFS then moved forward to examine those effects and to analyze harm at the population level. AR 1157 (detailing that “[w]here overlap occurs between exposure concentrations and effect concentrations[,] NMFS explores the likelihood of adverse effects. If data suggest exposure exceeds adverse effects thresholds, we discuss the likelihood and expected frequency of effects based on species information and results of the exposure and response analysis”).

In attempting to salvage their argument, the Registrants misrepresent those graphs and assign undue significance to the agency’s assessment of the overlap between the exposure data and the effects data. While the Registrants are correct that the agency’s qualitative determination of whether individual salmonids were likely to be exposed to harmful levels of these pesticides was an “essential” and “necessary” first step, it does not reflexively follow that this step was flawed because the agency reported the lowest LC50 values within the range of available information. To the contrary, the graphs cited by the Registrants demonstrate that NMFS looked to see whether the range of available exposure concentrations overlapped with the range of available effects concentrations– it did not focus on single data points. AR 1158-1160. While one end of that range is anchored by the lowest-end LC50 values reported in the literature, it is equally true that high-end reaches to the highest-end LC50 values reported in the literature. For example, while the Registrants focus on NMFS’s inclusion of a 2.8 ug/L concentration as the lowest-end reported LC50 for malathion, the agency also reported concentrations as high as 234 ug/L and used that number in its graphs. AR 1134, 1160. By reporting the lowest-end values in that assessment and including it within the range, NMFS no more “relied on” the lowest LC50

values than it “relied on” the highest-end LC50s values.<sup>4</sup>

The truth is that NMFS considered the full range of available information in the first step of its analysis, highlighted areas of “significant uncertainty” and “discuss[ed] its influence on [the agency’s] inferences and conclusions.” AR 1157. None of the agency’s conclusions about the impacts to individual fish rely on any one single data point; and tellingly, NMFS does not cite any of the lowest-end concentrations in its decisions to analyze these endpoints at the population level. See, e.g., AR 1169 (summarizing that a “large body of laboratory toxicity data indicates that anadromous salmonids die following short term (< 96 h) exposure to the three insecticides.... We therefore carry this endpoint into our population analysis and translate the reduced survival of individuals to potential population level consequences.”); 1170 (“The available information support that growth is likely reduced where salmonids are exposed to low ug/L concentrations of OPs. The weight of evidence supports the conclusion that fitness level consequences from reduced size are likely to occur in individual salmonids exposed to the three OPs. Therefore, we address the potential for population level repercussions due to reduced growth using a population model below.”); 1172 (finding that “the lines of evidence strongly support the overall hypothesis [that these pesticides affect prey populations]. Thus, we carry reduced prey impacts to the next level of analysis (i.e., the population level).”); 1173 (“Collectively, the available evidence supports this hypothesis [that these pesticides impact salmonids’ sense of smell] and we assess the potential for population-level consequences below.”).

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<sup>4</sup> In addition, rather than demonstrate that the lowest-end concentrations drove the agencies’ findings, these graphs demonstrate that even when dropping the lowest-end effects concentrations (and the highest end exposure concentrations the Registrants disagree with, see SJ Opp. at 20-21), there is still considerable overlap between the remaining effects and exposure concentrations. See, e.g., AR 1160 (Figure 41) (even setting lowest LC50 for malathion at 10 ug/L and setting highest exposure level at 10 ug/L still yields substantial overlap between all three sources of exposure data at top of graph and endpoints and effects concentrations at bottom); AR 1158 (dropping 0.8 ug/L value that Registrants attack for chlorpyrifos still yields substantial overlap with exposure data).

The Registrants' attack on NMFS's decision to report these lowest-end values for a single endpoint (death) cannot transform these values into an "essential" factor in the agency's determinations. Indeed, as discussed next, when NMFS had to choose what data to apply in its quantitative population models, it indisputably did not pick the lowest values, but instead applied values much higher – up to fifty times higher – than these lowest reported levels. See NCAP SJ Mem. at 21.

B. NMFS Did Not Rely on the Lowest-End Effects Concentrations in its Population Models.

The Registrants' related assertion that NMFS used the lowest-end values in its population modeling is also demonstrably incorrect. See NCAP SJ Mem. at 20-21, 23 (explaining that NMFS applied significantly higher LC50 values in its population models for each chemical). In the face of the clear record on this point, Registrants concede that the LC50 values NMFS used in its population models were far higher than the lowest-end values they attack. SJ Opp. at 23 (conceding that the BiOp identifies LC50 values used in population modeling at AR 1304). But the Registrants fail to appreciate that this concession resolves this issue and attempt to salvage their argument by dwelling on a single phrase from the BiOp. See SJ Opp. at 23, 27-28, 30-31 (chlorpyrifos) (repeatedly quoting statement from AR 1178 that NMFS "selected the lowest reported LC50 from the available information to ensure that risk is not underestimated"). Based on this isolated phrase, the Registrants now assert that NMFS must have either used these low values or else failed to explain the "discrepancy" between the language they quote and the actual models. SJ Opp. at 23. But a single narrative sentence viewed in isolation cannot change the fact that NMFS fully explained its population models throughout the BiOp.

NMFS crafted two different population models to assess the effects of these pesticides on salmon populations. AR 1176-1177; 1289-1290 (explaining the two models). In the first, NMFS translated a variety of sublethal impacts, such as reduced prey availability and juvenile fish growth, into population-

level effects.<sup>5</sup> In the second population model, NMFS translated the effects that immediate death (“acute mortality”) of individual young fish exposed to these pesticides would have on a salmonid population’s overall growth rate. The Registrants maintain that NMFS applied the lowest-end effects concentrations in this acute mortality model. See, e.g., SJ Opp. at 23 (emphasizing NMFS’s narrative statement about LC50s in acute mortality model). In that model, NMFS evaluated the corresponding population level effects associated with eight different exposure levels ranging between 0 ug/L to 100 ug/L for chlorpyrifos and malathion and between 0 ug/L to 400 ug/L for diazinon. AR 1179-1182 (Tables 62-65). NMFS displayed the results of this model in Tables 62-64 of the BiOp. AR 1179-1182. Contrary to the Registrants’ assertions, these tables show clearly that NMFS applied LC50 values (the amount that would kill 50% of the population) of 30.0 ug/L for malathion, 90 ug/L for diazinon, and 3.0 ug/L for the highly toxic chlorpyrifos, not the low values that Registrants allege (2.8 ug/L for malathion, 0.03 or 0.2 ug/L for diazinon, or the .08 ug/L for chlorpyrifos). See also AR 1297 (explaining that exposures in acute toxicity model are “defined by the LC50 and slope (Table 3)” reproduced at AR

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<sup>5</sup> In its population model evaluating the effects of diazinon’s indirect and sublethal effects to salmonid populations, NMFS employed an “EC50” value of 1.38 ug/L for impacts to salmonid prey and explained how it arrived at that figure. See NCAP SJ Mem. at 21-22 (demonstrating that NMFS did not use lowest-end values of .03 or .2 ug/L for prey impacts in model). The Registrants attempt to cast doubt on this figure with the sweeping assertion that NMFS “fail[ed] to explain” why it employed that value in its models. SJ Opp. at 28 (incorrectly asserting that NCAP’s citations to BiOp do not contain that explanation). To the contrary, NMFS specifically detailed that the 1.38 ug/L value for diazinon was calculated by “multiplying the chlorpyrifos EC50 by ... 0.6 for diazinon.” AR 1304 (Table 3, n.4). As that Table shows, the EC50 value for chlorpyrifos 2.3 ug/L. Multiplying that value by .6 yields a value of 1.38 ug/L. See also AR 1293 (explaining that “[t]he EC50 values and slopes for invertebrate prey were estimated using empirical data from an experiment examining the effects of chlorpyrifos on aquatic invertebrate communities ... and using that value and other EC50 values from the literature for malathion and diazinon, we were able to estimate a relative toxicity of those compared to chlorpyrifos (Table 3)”); AR 756 (explaining why effects to salmonid prey are a key value). NMFS also detailed that all of the EC50 values for prey were derived by applying a commonly-accepted “sigmoidal slope” and references the text for further explanation of the mathematical process used to do so. See AR 1291, 1292, 1293. The Registrants’ assertion that NMFS “fail[ed] to explain itself” is simply not credible. While the Registrants would have preferred that NMFS utilize a value of 2.0 ug/L drawn from the single Hall study they repeatedly invoke, they have not demonstrated how or why NMFS erred by using the slightly lower 1.38 ug/L in this population model.

1304, which includes the same values).<sup>6</sup>

Despite this explanation and the clear model results displayed in the BiOp, the Registrants maintain that NMFS's introductory statement must mean that the agency nevertheless used the lowest-end LC50 values in its acute mortality. SJ Opp. at 23, 27 & n.36, 30. Whatever the precise meaning of the single phrase that Registrants isolate from the rest of the BiOp, the model results – and the agency's thorough explanation of the model elsewhere in the BiOp – belie any assertion that NMFS relied on the lowest LC50 values.<sup>7</sup> The BiOp more than adequately details how NMFS constructed its population models, reproduces the results of those models, and demonstrates that NMFS based its analysis of population growth rate effects on LC50 values of 30.0 ug/L for malathion, 90 ug/L for diazinon, and 3.0 ug/L for chlorpyrifos.<sup>8</sup>

The Registrants seek to force NMFS to select higher concentrations or accept greater risk to the species – based on data the Registrants prefer – but their arguments ignore NMFS's explanation and

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<sup>6</sup> These LC50 values were taken from EPA's biological evaluation submitted to NMFS for these chemicals. AR 1304 (Table 3, n.2).

<sup>7</sup> Indeed, none of the eight values displayed in the model results correspond to the lowest level LC50s that the Registrants contest. For example, NMFS reported 2.8 ug/L as the lowest-end LC50 for malathion, AR 1134, but NMFS assessed malathion concentrations of 0, 1, 10, 25, 30, 50, 75, and 100 ug/L in its model, AR 1179-1182. If NMFS had "used" or "relied on" the 2.8 ug/L value in its population model, it is reasonable to expect that it would at least be displayed in the model results. Moreover, according to the model results, 10 ug/L of malathion – a value three times higher than the 2.8 ug/L value Registrants target – was expected to kill 1.8% of the population but have no significant effect on the population's growth rate. AR 1179 (Table 62). In contrast, the model shows that exposure to the 30 ug/L LC50 value that NMFS actually used would be expected to kill 50% of the population and would result in an 18% reduction in the population growth rate. Id.

<sup>8</sup> Given NMFS's otherwise consistent description of the model and its results elsewhere in the BiOp, the Registrants miss the mark with their last-ditch attempt to turn what may be an errant word choice into a legal problem. SJ Opp. at 23 (arguing that lack of explanation for any "discrepancy" between NMFS's narrative statement and the models themselves requires remand). The Court is not reviewing NMFS's BiOp for editing errors or word choice, but rather to determine whether its decision-making was arbitrary and capricious. Under this standard of review, the Court "uphold[s] a decision of less than ideal clarity if the agency's path may reasonably be discerned." Inova Alexandria Hosp. v. Shalala, 244 F.3d 342, 350 (4th Cir. 2001) (citing Bowman Transp., Inc. v. Arkansas-Best Freight Sys., 419 U.S. 281, 286 (1974)). That standard is easily met here, where the model results and other discussion in the BiOp contradict Registrants' focus on a single phrase.

analysis in the BiOp as a whole. See AR 756 (NMFS noting that “The majority of the pushback for the response characterization NMFS is encountering is focused on the use of particular studies rather than the scientific procedures used for analysis. The applicants are also pushing to use certain monitoring data rather than modeling data and monitoring data they claim are not applicable.”). The agency’s approach and explanation complies with both the ESA’s substantive mandate to err on the side of the species and with the APA’s requirement that NMFS rationally explain its decision-making.

## II. NMFS CONSIDERED THE BEST AVAILABLE SCIENCE ON SALMONID EXPOSURES.

As discussed above, in the first step of its analysis, NMFS analyzed both (1) what concentrations of pesticides cause harmful effects on salmon, and (2) what concentrations of pesticides salmon were likely to be exposed to. See supra at 4-6. To answer this second question, NMFS explained in the final BiOp that it relied on both monitoring data and extensive exposure modeling to determine the levels of pesticides present in salmon waters. AR 1076-1119 (“Exposure Analysis”). Some of this monitoring data pre-dated recent use changes in the pesticides at issue; NMFS recognized this limitation in the best available data, and compensated for it by supplementing the available monitoring data with detailed modeling based on the most current available labels for these pesticides. See NCAP SJ Mem. at 25-32.

In response, the Registrants continue to insist that NMFS should have disregarded the vast majority of the best available monitoring data and relied exclusively on a small handful of more recent studies. SJ Opp. at 9-18. But NMFS clearly did not err by considering all available monitoring data, taking into account any limitations in that data as appropriate. The Registrants’ arguments reflect little more than their displeasure that NMFS chose to comprehensively consider all of the available and relevant data, as the ESA’s best available science requirement mandates, rather than selectively rely on a small number of industry-preferred studies that might have led NMFS to less accurate conclusions.

As NMFS explained in the final BiOp, monitoring data provides useful information that models may not. AR 1108-09. While much of this data predates the most recent label changes, NMFS and NCAP have explained why this data is still relevant. NCAP SJ Mem. at 25-32. Confronted with this clear explanation for NMFS's comprehensive analysis, the Registrants resort to the claim that this rationale is all post-hoc and so may not be considered by this Court. See, e.g., SJ Opp. at 11-12. But these are the same explanations NMFS offered in the final BiOp; only by selectively quoting, misinterpreting, and outright ignoring NMFS's explanations in the final BiOp can the Registrants characterize NMFS's and NCAP's explanations as post-hoc rationalizations.

A. NMFS Rationally Considered the Best Available Water Monitoring Data to Help Assess Exposure.

NMFS explained in the BiOp that it considered both the results of comprehensive exposure modeling and the best available water monitoring data to determine the concentrations of pesticides likely to be present in salmon streams. 1076-1119. NMFS detailed why it was important to consider monitoring data in addition to modeling to assess exposure – for example, NMFS explained that monitoring data “can provide useful information regarding real-time exposure and the occurrence of environmental mixtures.” AR 1108; see also AR 1032; AR 1115 (“The likelihood of exposure to multiple pesticides throughout a listed salmonids’ lifetime is great.... In a three-year monitoring study conducted by the Washington DOE, pesticide mixtures were found to be common in both urban and agricultural watersheds.”); NCAP SJ Mem. at 26-27. The Registrants attempt to paint NMFS's explanation of the value of monitoring data as a post-hoc rationalization, even as they cite to the pages in the final BiOp where NMFS explained this very point. SJ Opp. at 14 & n.18 (citing AR 1108-09).<sup>9</sup>

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<sup>9</sup> The Registrants' real complaint appears to be that NMFS did not rely exclusively on the concentrations found by the Anderson and Burke studies, see SJ Opp. at 14 n.18, but as NMFS explained in the BiOp, those studies would

While noting that monitoring data provided valuable real-world information, NMFS also openly acknowledged that the best available water monitoring data was limited in several important ways. AR 1109. For example, NMFS noted that much of the available monitoring data was gathered in studies that were not designed to evaluate exposure in listed salmonids and were not designed to capture peak concentrations of pesticides. AR 1108-09.<sup>10</sup> NMFS also specifically noted that monitoring data was limited because it might not be “representative[] of current and future pesticide uses and conditions.” AR 1109. The Registrants continue to attack the monitoring data as “irrelevant” and “nonrepresentative” because of this latter limitation, SJ Opp. at 17, but courts have squarely held that NMFS is allowed – indeed, obligated – to consider data that is less than perfect so long as NMFS acknowledges and accounts for such limitations. See, e.g., Cabinet Resource Group v. U.S. Fish and Wildlife Service, 465 F. Supp. 2d 1067, 1083 (D. Mont. 2006) (finding that Service could rely on study even though “there are problems with the study, and it might have been better to have higher population numbers from which to work”); Southwest Center for Biological Diversity v. Babbitt, 215 F.3d 58, 60 (D.D.C. 2000) (“[e]ven if the available scientific and commercial data were inconclusive, [the agency] may – indeed, must – still rely on it at that stage.”); see also NCAP SJ Mem. at 27-28. The issue is not whether the available monitoring data is perfect; rather, it is whether NMFS accounted for the known

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not capture the highest concentrations because they “did not target specific applications of pesticides nor did they target salmonid habitats that would be expected to produce the highest concentrations of pesticides (e.g., shallow off-channel habitat in close proximity to pesticide application sites).” AR 1109. NMFS, however, did not reject these studies, it properly considered them along with other data in assessing exposures; but only after discussing and recognizing the various limitations in the available data.

<sup>10</sup> Notably, limitations such as these indicate that historical water monitoring data underpredicts the concentrations of pesticides present in salmon water bodies, rather than overpredict concentrations as the Registrants fear. See, e.g., AR 1117 (“Exposure Conclusions”) (“Several authors have utilized monitoring data to predict exposure distributions to aquatic species (Geisy et al. 1999; Giddings et al. 2000; Hall 2002a; Hall 2002b; Hall and Anderson 2000; Poletika et al. 2002). A major limitation of these assessments is that the monitoring data utilized were not designed to determine exposure to listed salmonids. Therefore, caution should be exercised in using these data for that purpose.”).

benefits and limitations of this data, as NMFS did here.

Indeed, NMFS would have failed to satisfy its duty to consider the best available data had it disregarded all monitoring data collected prior to the recent label changes. For example, the National Water Quality Assessment Program of the U.S. Geological Survey is the most comprehensive look at pesticide contamination in our nation's waterways. AR 1109. In those studies, for 10 consecutive years the USGS scientists regularly analyzed water samples from 186 stream sites, bed sediment samples from 1,052 stream sites, and fish from 700 stream sites across the continental United States. AR 1031. No other set of data comes close to being as comprehensive or as useful in assessing annual fluctuations in pesticide concentrations and in documenting occurrences of pesticide mixtures – yet the Registrants believe NMFS should have disregarded it entirely because it pre-dates recent label changes. See NCAP SJ Mem. at 27, 34 (monitoring data useful to identify watersheds where two or more pesticides are likely to be found together). The Registrants make the perfect the enemy of the good by insisting that NMFS may consider only the most recent data, but such a result cannot be squared with the ESA's requirement that NMFS consider and base its decisions on the best available data. 16 U.S.C. § 1536(a)(2).<sup>11</sup>

The Registrants' belief that NMFS should have disregarded the vast majority of the best available monitoring data is premised on the mistaken belief that all monitoring data that predates recent label changes is "irrelevant." But this belief is based on several flawed assumptions.

First, the Registrants appear to believe that all label changes lead to dramatic decreases in

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<sup>11</sup> Indeed, even the scant recent data is limited as well – for example, the Anderson and Burke studies that the Registrants point to “did not target specific applications of pesticides nor did they target salmonid habitats that would be expected to produce the highest concentrations of pesticides,” AR 1109. But despite this limitation, NMFS properly still considered the studies because they were useful in “the detection of multiple pesticides.” Id. By discarding all data that was in any way limited, NMFS would have been forced to discard recent data as well and would have been left with no real-world monitoring data to consider at all.

pesticide use – and so studies that predate label changes become irrelevant after the change. See SJ Opp. at 16. The Registrants are mistaken. NMFS clearly explained in the BiOp that changes in use are linked to a number of factors, not just the authorized uses on the labels, and so restrictions on use do not necessarily lead to decreases in use because these other factors may change as well. AR 1109-10 (“Pesticide use varies annually depending on regulatory changes, market forces, cropping patterns, and pest pressure. Recent data show a decrease in use of chlorpyrifos and diazinon in California that may be associated with restrictions on residential uses of those active ingredients. However, pesticide use patterns change and may result in either increases or decreases in use of pesticide products.”). Because there are multiple factors that influence use, it is simply not true that all label changes immediately lead to dramatic reductions in pesticide use that render all existing data “irrelevant.”<sup>12</sup>

The Registrants attempt to undermine NMFS’s conclusion that use levels depend on multiple factors by making much of the fact that NMFS assumed use patterns would remain consistent in making its no jeopardy determination for Ozette Lake Sockeye. SJ Opp. at 15. But the Registrants overlook the critical fact that “Ozette Lake is in a sparsely populated area, with less than 1% of developed area ... and no crop land.” AR 1225. NMFS accordingly concluded that the application of pesticides for the fifteen-year term of the BiOp would have minimal effect on this particular species, since neither agricultural nor urban uses are prevalent in this discrete and undeveloped area close to the ocean. AR 1225. NMFS rationally assumed that changes in pesticide use would not be substantial in this remote area given the lack of any substantial urban or agricultural land uses; this assumption clearly does not apply to the rest

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<sup>12</sup> The Registrants again inexplicably claim that this is a post-hoc rationalization while in the same sentence citing to the page in the final BiOp where NMFS provided this explanation. SJ Opp. at 15 (citing AR 1109).

of the analysis in the BiOp, which considers areas with substantial urban and/or agricultural uses.<sup>13</sup>

The Registrants also attempt to undermine NMFS's conclusion that use levels depend on more than just label changes by claiming that diazinon concentrations have decreased since recent use cancellations. SJ Opp. at 13-14. But the very study the Registrants tout as demonstrating that label changes lead to dramatic decreases in use and exposure shows instead that concentrations of diazinon dramatically increased in tributaries in 2006 – two years after the use cancellations. AR 1446. Indeed, the 2006 concentration is comparable to and in some instances higher than observed concentrations in years prior to the label changes. AR 1446.<sup>14</sup> The Registrants' own data supports NMFS's conclusion that use levels depend on multiple factors, and that while label changes may lead to decreases in use, label changes are but one of many relevant factors. AR 1109-10.

The Registrants' second mistaken assumption is that if reductions in use have in fact occurred, those reductions render the concentrations observed in prior water monitoring data "irrelevant." See SJ Opp. at 12-13. The Registrants fail to appreciate the importance of another key limitation of much of the available monitoring data: that it was collected in studies that were not designed to capture peak exposure. AR 1109. NMFS has explained that data collected by studies designed to capture peak concentrations – those most harmful to fish – are the most valuable. AR 1109. But much of the available monitoring data was collected in studies that relied on regular collection schedules, rather than sampling immediately following pesticide application; moreover, sampling did not target the slow-moving shallow water habitat most likely to contain the highest concentrations of pesticides. AR 1109.

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<sup>13</sup> For this same reason, the Idaho data that the Registrants highlight is not representative. See NCAP SJ Mem. at 26 n.13 (explaining that those populations migrate through, feed, and grow in areas of high agricultural and urban development).

<sup>14</sup> The record illustrates that these concentrations likely reflect use of existing stocks. NCAP SJ Mem. at 26-27.

Because pesticides dissipate in flowing water, pesticide concentrations captured in such regular collection schedule studies generally do not capture peak concentrations. AR 1109. This means that even after decreases in pesticide use, the new peak concentration levels could still be higher than the levels measured in the older studies – because the older studies never captured the older peak values.<sup>15</sup>

For example, NMFS explained that the study of exposures to chlorpyrifos from golf course was not designed to capture peak exposure. See AR 1086. The Registrants complain that NMFS mischaracterized this study, SJ Opp. at 12-13, but NMFS clearly stated that “it is unlikely that the concentrations measured in this study (incidental observations associated with a terrestrial field study) represent maximum concentrations that might be observed with golf course applications.” AR 1085-86. Accordingly, both NMFS and EPA concluded that golf course applications may still pose risks to salmon, even after a label change that likely led to reductions in use. AR 1086.

Finally, the Registrants appear to believe that NMFS would have had ample monitoring data to assess the exposure of many species of salmon at multiple life stages in water bodies throughout Washington, Oregon, California, and Idaho if it had entirely disregarded all studies conducted prior to the most recent label changes. SJ Opp. at 15-17. In support of this sweeping assertion, the Registrants identify only three studies they deem sufficiently recent for NMFS to have properly considered: a study in the Yakima River basin in Washington examining exposure in “one of 17 independent populations that comprise the Middle Columbia River steelhead ESU,” AR 1109; a study of a forested area in the Clearwater River watershed in Idaho, see NCAP SJ Mem. at 26 n.13; and a study of the Sacramento and

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<sup>15</sup> To illustrate with a hypothetical, assume concentrations prior to a use change varied between 3 units and 10, and a study that was based on samples at regular intervals and not designed to capture peak concentrations found a concentration of 6 units. A subsequent decrease in use then leads to concentrations that vary between 1 unit and 8. While overall use and concentrations decreased, it would be incorrect to extrapolate from the old study that all new concentrations would be below 6 units because that old study did not capture the old peak.

Feather River watershed in California, AR 1456. This limited set of data does not even examine concentrations in every state at issue, let alone every watershed or water body, or even those with the greatest numbers or populations of salmonids. Certainly none of these studies is even close to as comprehensive as the 10-year U.S. Geological Survey study that constituted the “largest data set” available. AR 1109; see also AR 1031-32. Given the fact that monitoring data has “limited utility as a surrogate for other non-sampled surface waters,” AR 1109, NMFS did not err by refusing to limit its analysis to such a narrow and unrepresentative handful of studies.

B. NMFS Properly Considered the Best Available Data From the Exposure Models.

In addition to the water monitoring data, NMFS also considered the output from two different exposure models to help it determine if harmful levels of pesticides were likely to be present in salmon waters. As NCAP has explained, these models were based on the uses legally permitted by product labels – which reflect any recent use changes, NCAP SJ Mem. at 28-30 – and NMFS transparently discussed and qualitatively considered the instances where these models may under-predict or over-predict risk to the species, id. at 30-32. NMFS then based its exposure conclusions on both the output from these models and the best available water monitoring data.

While the Registrants argue that NMFS erred by considering data from EPA’s PRZM-EXAMS model, each of their complaints are directly contradicted by NMFS’s explanation in the BiOp. SJ Opp. at 9-10, 18-19. The Registrants first allege that “NMFS never responded to EPA’s” comments that the model produced unrealistically high concentrations. SJ Opp. at 9-10 (reproducing EPA’s comments). But NMFS responded to these very comments in the final BiOp. See AR 1089 (quoting the same EPA comments Registrants reproduce). NMFS explained that it did not share EPA’s concerns that the model predicted concentrations that were too high, and cited monitoring data showing higher concentrations

than those predicted by the model. Id. NMFS concluded that “[t]hese findings demonstrate that E[stimated] E[nvironmental] C[oncentration]s generated using PRZM-EXAMS can underestimate peak concentrations that actually occur in some aquatic habitats. Therefore peak exposure experienced by some individuals of listed species may be underestimated.” AR 1089.<sup>16</sup> While the Registrants – or even EPA – may have different tolerances for risk, the ESA requires NMFS to take a precautionary approach, giving the benefit of the doubt to endangered species and placing the burden of risk and uncertainty on the action. Sierra Club v. Marsh, 816 F.2d at 1386. See also TVA v. Hill, 437 U.S. 153, 185 (1978).

The Registrants then argue that NMFS should not have relied on this model because EPA had once described its results as “‘worst case’ or even ‘unrealistic’” for use with salmon. SJ Opp. at 18 (citing AR 1088). Here again, the Registrants have mischaracterized the BiOp. As is clear from the very next page, EPA later changed its tune; “[r]ather than worst case, EPA has clarified that PRZM-EXAMS estimates are protective for the vast majority of applications and aquatic habitats. NMFS agrees....” AR 1089 (citing later EPA comments). In other word, EPA later admitted that the PRZM-EXAMS results were protective of salmon and agreed that it was proper to consider them. This is a far cry from opposing NMFS’s use of these model results. The Court should examine NMFS’s explanations in the BiOp itself and reject the Registrants’ attempt to cast doubt based on selected and self-serving characterizations of the agency’s decision.

The Registrants continue to argue that NMFS should not have utilized the AgDrift model to understand salmonid exposures, based on similarly selective evidence. But see NCAP SJ Mem. at 31-32 (explaining that NMFS properly applied the AgDrift model and discussed and disclosed additional factors that it considered in applying the results). The Registrants contend, for example, that “it is

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<sup>16</sup> NMFS noted that even EPA “acknowledged that measured concentrations in the environment sometimes exceed PRZM-EXAMS” estimates. AR 1088-0189.

**impossible** using the AgDrift model to reach 1,000 ug/L value using legal rates for diazinon.” SJ Opp. at 19 (emphasis in original). This categorical statement is simply wrong. To reach this conclusion, the Registrants assume that the maximum amount of diazinon applied would be ground application of 4 pounds per acre. SJ Opp. at 20 (citing AR 1099). But the label for diazinon legally allows some aerial applications of diazinon at up to 4 pounds per acre. See, e.g., Label for EPA Reg #66222-10 MANA, Diazinon 50W at 17, 22, available at <http://www.cdms.net/LDat/ld5RD004.pdf> (label allows aerial applications of 4 pounds per acre on lettuce crops). Using the AgDrift model results in the BiOp, aerial application of 4 pounds per acre would result in 1,332 ug/L exposure in shallow off-channel habitat (4 lbs. multiplied by 333 ug/L in shallow water 0.1 meter habitat).<sup>17</sup> It is thus not only “possible” to reach that 1,000 ug/L concentration that NMFS considered in the BiOp, it is possible to exceed it.

The Registrants’ arguments about the potential levels of chlorpyrifos and malathion suffer from similar flaws. The Registrants point to EPA’s reregistration decisions as evidence that pesticide uses have changed. But NMFS explained in the BiOp that “these documents present only summary information and do not include all relevant information found on pesticide labels. Additionally, it is unclear when restrictions outlined in the RED and IRED documents will be fully implemented.... Consequently, there is a great deal of uncertainty on whether PRZM-EXAMS scenarios encompass the full range of use rates, number of applications, etc. currently authorized....” AR 1090. Given this uncertainty, it is the labels that are the ultimate guide of what uses, application rates, and protective measures are required. NCAP SJ Mem. at 29-30. NMFS therefore properly based its consideration of

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<sup>17</sup> This same diazinon product can be used for “dormant spray” of almonds at up to 6 lbs. per acre in California. Label for EPA Reg #66222-10 MANA, Diazinon 50W at 9, available at <http://www.cdms.net/LDat/ld5RD004.pdf>. According to Table 44, that dormant airblast spray use results in concentrations of 1,284 ug/L in shallow water off-channel salmon habitat of 0.1 meter. AR 1099 (214 ug/L per pound multiplied by 6 pounds). Almonds represent the largest use of diazinon. AR 886.

AgDrift modeling on the most current labels it could obtain.<sup>18</sup> Id. at 30.

The Registrants' final allegation – that NMFS “used” or relied on this 1,000 ug/L value from the AgDrift model in the first stage of its risk assessment – is infected by the same problems that plague its identical argument about the effects concentrations. See supra at 4-8. Rather than rely on any single data point, the agency based its assessment of risk to individual salmonids on a range of exposure data from multiple sources. See AR 1158-60. As with the low harmful effects concentrations, NMFS reported these highest-end exposure estimates in its graphs, but did not use them as the sole factor to determine exposure, nor did it employ those numbers in its population models. NMFS properly considered this result from the AgDrift model, and other exposure concentrations, in its overall qualitative assessment of risk and combined them with other factors that likely increased risk (such as the risks posed by inerts, synergistic effects, mixtures, sublethal effects, and harm to prey) to determine whether these pesticides were likely to cause jeopardy.<sup>19</sup>

### III. NMFS EXPLAINED THE RATIONALE FOR THE REASONABLE AND PRUDENT ALTERNATIVES NECESSARY TO PROTECT THE FISH.

Because its comprehensive analysis demonstrated that the use of these three pesticides is jeopardizing the continued existence of nearly every species of listed Pacific coast salmon and steelhead, NMFS proposed Reasonable and Prudent Alternatives (“RPAs”) that would protect the species and mitigate the harm from the use of these toxic chemicals. The Registrants attempt to poke holes in the RPAs by arguing that NMFS failed to explain whether the no-spray buffers it established to protect salmon and steelhead were “technologically and economically feasible.” SJ Opp. at 40-42. NCAP has

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<sup>18</sup> At the same time, despite NMFS's requests, EPA could not provide NMFS with a comprehensive list of all labels for these pesticides. See NCAP SJ Mem. at 29 (citing AR 746, 844, 879, 1090).

<sup>19</sup> The Registrants also ignore the fact that the 1,000 ug/L figure they focus on comes from both the AgDrift model and the monitoring data. NCAP SJ Mem. at 32 & n.16.

already explained that the Registrants' thinly-veiled attempt to inject an economic analysis into the ESA Section 7 consultation process violates the ESA. NCAP SJ Mem. at 36-38. In response, the Registrants protest that they merely seek some discussion of the financial impacts of the buffers with which they may agree or disagree. SJ Opp. at 42. Not only is this a distinction without a difference, the Registrants' argument again ignores what NMFS explained in the BiOp.

The Registrants overlook that NMFS explicitly discussed in the BiOp the feasibility of buffers and their widespread use to protect species from pesticides. AR 1251-52. In its rationale, NMFS found that "[p]esticide buffers are recognized tools to reduce pesticide loading into aquatic habitats from drift. EPA, USFWS, NMFS, courts, and state agencies routinely enlist buffers as pesticide load reduction measures." Id. at 1251. NMFS recognized that "EPA requires the use of buffers on end-use product labels for ground and/or aerial applications for some products that pose risk to aquatic systems." Id. The agency went on to explain that "NMFS has prescribed a range of buffers in ESA consultations for herbicide and insecticide application actions by agencies such as the U.S. Forest Service and Bureau of Land Management overlapping with ESA-listed salmonid habitats. Herbicide buffers ranged from 0 ft to 500 ft depending on application type, rate, and frequency. Insecticide buffers ranged from 0 ft to 200 ft depending on application type, rate, and frequency." Id. at 1252.

This discussion in the BiOp distinguishes this case from San Luis & Delta-Mendota Water Auth. v. Salazar, 760 F. Supp. 2d 855, 955-56 (E.D. Cal. 2010), where the district court faulted the agency because it "articulated absolutely no connection between the facts in the record and the required conclusion that the RPA is (1) consistent with the purpose of the underlying action; (2) consistent with the action agency's authority; and (3) economically and technologically feasible." While in that case, the court found that there was simply "no explanation at all," id., the same cannot be said here. To the

extent the Registrants seek only a discussion of feasibility with which to agree or disagree, they already have it. See SJ Opp. at 42.

Moreover, despite sharing the draft RPA with EPA and the Registrants, see AR 761, the Registrants have not pointed to any place in the record where they raised economic or technological feasibility concerns with the buffers in their comments or in their multiple meetings with NMFS.<sup>20</sup> While there is no legal requirement that the Registrants exhaust arguments in comments on the draft BiOp, their previous silence undermines their post-decisional attack on this aspect of the final BiOp.

IV. NMFS ADEQUATELY CONSIDERED AND, WHERE APPROPRIATE, RESPONDED TO COMMENTS.

In their response brief, the Registrants vigorously reiterate their claim that NMFS erred by failing to respond in detail to each and every one of the comments they submitted on the draft BiOp, but then fail to identify any way in which NMFS failed to fulfill this alleged obligation. SJ Opp. at 44. With broad assertions that tellingly lack both detail and citation, the Registrants simply state that they “offered comments directed at many aspects of NMFS’ analysis” and that “[t]he record is silent as to whether NMFS actually considered the issues raised by most of these comments.” SJ Opp. at 44. But NCAP has already identified the specific places in the record demonstrating that NMFS did thoroughly consider the issues raised by the Registrants’ comments and studies, see NCAP SJ Mem. at 38-40, and the Registrants make no attempt to identify any additional comments or issues that were allegedly overlooked. The Registrants’ vague assertion that their comments on “many aspects” of the BiOp were ignored cannot meet their burden to show that any allegedly overlooked comments and studies are “in some way better than’ the evidence NMFS actually relied on.” South Yuba River Citizens League v.

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<sup>20</sup> As NCAP highlighted in its opening brief and in opposition to the Registrants’ motion to strike, much of the information the Registrants present regarding alleged economic effects is drawn from extra-record evidence. It is hard to justify second-guessing NMFS on information presented after the BiOp was developed.

Nat'l Marine Fisheries Serv., 723 F. Supp. 2d 1247, 1273 (E.D. Cal. 2010) (internal citation omitted).

The Registrants next attempt to paint as a post-hoc rationalization NMFS's conclusion that some of the studies the Registrants presented were irrelevant. See SJ Opp. at 44. But the Registrants conveniently overlook the specific record support for NMFS's determinations that certain of the Registrants' comments and studies were irrelevant, see, e.g., AR 753 (NMFS concluded that substantial revisions would not be necessary in light of the data provided by the applicants because "most of the objections relate to non-ag uses of the products"); see also NCAP SJ Mem. at 39-40, as well as the ways in which NMFS modified the draft BiOp in response to the comments it determined were relevant, see NCAP SJ Mem. at 39. The Registrants evidently disagree with NMFS's conclusions, but that does not render them post-hoc.

In a final attempt to undermine NMFS's thorough analysis, the Registrants assert that even if NMFS did consider their comments and studies, NMFS did not adequately explain or justify on the record the conclusions it reached. SJ Opp. at 44. But as NCAP has demonstrated, the final BiOp contains an exhaustive explanation of NMFS's conclusions and each step of its analysis, including its reliance on the best available science and the instances where scientific uncertainty threatened to either under-predict or over-predict risk to salmonids from the use of these toxic pesticides. See NCAP SJ Mem. at 7-14. The Registrants apparently believe that they are entitled to a detailed summary and discussion of each and every study or comment they provided to NMFS – but this is not the law. As NCAP has already explained, NMFS is not even required to cite to every potentially relevant study, let alone discuss each and every study at length. Oregon Natural Desert Ass'n v. Tidwell, 716 F. Supp. 2d 982, 997 (D. Or. 2010) ("While the NMFS cannot ignore relevant biological information, it is another thing altogether to require that they cite every potentially relevant study, especially such studies that do

not constitute the best available science in the estimation of the expert agency.”). NMFS fully considered the information provided by the Registrants, and properly relied on the best available science in the final BiOp. It is incumbent on the Registrants to explain why specific information was in some way better than what NMFS relied on and to demonstrate that the agency’s failure to rely on that information undermines its decisions. The Registrants have failed to carry that burden and do not make even a threshold showing that NMFS erred by declining to rely solely on their comments or the studies they proffered. South Yuba River Citizens League, 723 F. Supp. 2d at 1273; Southwest Ctr. for Biological Diversity, 215 F.3d at 60.

#### CONCLUSION

In evaluating the effects of these broad-spectrum and highly toxic pesticides on the West Coast’s imperiled salmon and steelhead, NMFS was faced with a complex and challenging task. The agency, however, detailed every step in its analysis, painstakingly reviewed all of the best available scientific information (including data provided by the Registrants), transparently disclosed and explained where uncertainty or gaps in the available data required it to make decisions about risk, and combined this information with sophisticated population models and information on the status of the species in their real-world habitat to analyze the effects of these chemicals. This Court’s review must focus on that analysis and NMFS’s explanation in the final BiOp and the record as a whole rather than on the Registrants’ narrow characterizations. That the Registrants would have given greater weight to selected data, and accepted greater risk is clear, but they have failed to demonstrate that NMFS’s analysis and its conclusions were arbitrary and capricious.

NCAP therefore respectfully requests that this Court deny the Registrants’ motion for summary judgment, grant NCAP’s and Federal Defendants’ cross-motions for summary judgment, and dismiss the

Registrants' complaint.

Respectfully submitted this 21st day of October, 2011.

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CERTIFICATE OF SERVICE

I am a citizen of the United States and a resident of the State of Washington. I am over 18 years of age and not a party to this action. My business address is 705 Second Avenue, Suite 203, Seattle, Washington 98104.

I HEREBY CERTIFY that on October 21, 2011, I electronically filed the following documents:

1. Defendant-Intervenors' Reply in Support of Cross-Motion for Summary Judgment.  
with the Clerk of the Court using the CM/ECF system, which will send notification of such filing to the following:

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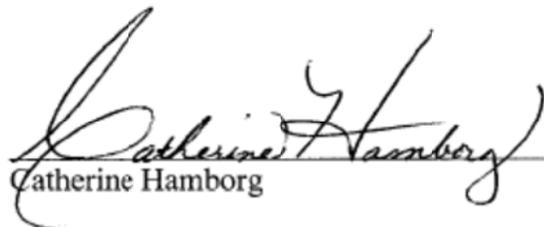
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AND I FURTHER CERTIFY that I have mailed by United States Postal Service the documents to the following non-CM/ECF participants:

None

I, Catherine Hamborg, declare under penalty of perjury that the foregoing is true and correct.

Executed this 21st day of October, 2011, at Seattle, Washington.

  
Catherine Hamborg