



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
1315 East-West Highway  
Silver Spring, Maryland 20910  
THE DIRECTOR

FEB - 5 2010

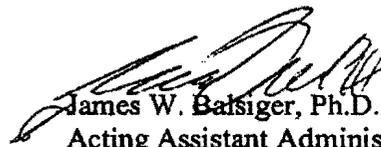
Mr. Dan Newhouse  
Director  
Washington State Department of Agriculture  
P.O. Box 42560  
Olympia, WA 98504-2560

Dear Mr. Newhouse:

Thank you for your follow-up letter to Secretary Gary Locke regarding Endangered Species Act consultation between NOAA's National Marine Fisheries Service and the U.S. Environmental Protection Agency on the registration of six pesticides. My January 11, 2010, correspondence (enclosed) addresses your concerns, and it appears my response crossed in the mail with your follow-up letter.

I appreciate your continued interest in these consultations.

Sincerely,

  
James W. Balsiger, Ph.D.  
Acting Assistant Administrator  
for Fisheries

Enclosure





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JAN 11 2010

Mr. Dan Newhouse  
Director, Washington State Department  
of Agriculture  
P.O. Box 42560  
Olympia, WA 98504-2560

Dear Mr. Newhouse:

Thank you for your letter to Secretary Locke regarding Endangered Species Act (ESA) consultation between the National Marine Fisheries Service (NMFS) and the Environmental Protection Agency (EPA) on the registration of six pesticides (chlorpyrifos, diazinon, malathion, carbaryl, carbofuran, and methomyl) and the resulting biological opinions NMFS provided to EPA. You expressed concern about: (1) the assumptions NMFS used to determine population level effects to listed species; (2) the application of reasonable and prudent alternatives (RPAs) to a variety of aquatic habitats and; (3) the transparency of the Opinions with regard to the economic impact of implementing RPAs.

**Population Level Responses.** Your letter indicated you are concerned about the lack of transparency regarding the population model used and that it had not been released for external peer review. Population models used in the biological opinions are presented in their entirety (including all assumptions, model inputs, and mathematical equations) in the appendix of each of those biological opinions. Those biological opinions are publically available and can be found on our website at: <http://www.nmfs.noaa.gov/pr/consultation/>. Additionally, the genesis of the population models is now available in the peer-reviewed journal *Ecological Applications* (Baldwin *et al.* 2009).

NMFS recognizes that there will be different levels of exposure among individuals of listed salmonids. Due to uncertainty regarding exposure, they opted for the most protective assumption for that portion of the analysis, which is exposure of an entire population of juveniles. The model is a tool for evaluating what is likely to occur under a specific set of circumstances. It was but one piece of the analysis NMFS used to evaluate effects to listed salmonids of these pesticides. Washington State Department of Agriculture (WSDA) monitoring data were utilized in the Opinions along with several other sources of exposure information. The utility and limitations of this particular data set are thoroughly discussed in the biological opinions. Other monitoring data and fate and transport models were also utilized to characterize pesticide exposure to listed salmonids.



**Definition of Applicable Water Bodies.** As you are aware, NMFS concluded in its biological opinions that the six pesticides were likely to jeopardize the continued existence of several species of endangered and threatened Pacific salmonids and destroy or adversely modify their critical habitat. The RPAs were established to alleviate the likelihood of jeopardy to these species and to reduce the likelihood of adversely modifying their designated critical habitat. The RPAs and the definition of salmonid habitat reflect the range of freshwater habitats utilized by the listed salmonids and the known mechanisms of transport of pesticides (spray drift, runoff [including those from irrigation returns], groundwater/surface water transport). The specified buffers to salmon habitats allow for use of these pesticides within watersheds inhabited by listed species. Larger buffers (up to 1000 feet) were specified for the most toxic pesticides and the most risky application methods.

**Economic Impacts to Agriculture.** Reasonable and prudent alternatives identified during the consultation process are alternative actions that can be implemented in a manner consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technically feasible and that NMFS believes would avoid the likelihood of jeopardizing the continued existence of listed species or resulting in the destruction or adverse modification of critical habitat. NMFS believes the reasonable and prudent alternatives contained in each biological opinion met these criteria. NMFS will continue to try to work with EPA to develop RPAs cooperatively for future consultations should they be necessary. The involvement of WSDA and other parties in the development of RPAs and the consultation process is determined by the action agency (*i.e.* EPA).

We appreciate WSDA's interest in these consultations.

Sincerely,

  
James W. Balsiger, Ph.D.  
Acting Assistant Administrator  
for Fisheries

Baldwin, D.H., J.A. Spromberg,, T.K. Collier, and N. L. Scholz. 2009. A fish of many scales: extrapolating sublethal pesticide exposures to the productivity of wild salmon populations. *Ecological Applications* 19(8): 2004-2015.