

## National Retardant NEPA NMFS Reasonable and Prudent Alternative (RPA) Tracking Sheet

RPA Sub-Element Text	RPA Due Date	Assigned Lead	Accomplishments/Progress
<p>1. Provide evaluations on the two fire retardant formulations, LC 95-A and 259R, for which acute toxicity tests have not been conducted, using standard testing protocols. Although direct fish toxicity tests have not been conducted on three additional formulations, G75-W, G75-F, LV-R, studies are not warranted in light of the fact the USFS intends to phase out their use of these formulations by 2010. All formulations expected to be in use beyond 2010 shall be evaluated using, at a minimum, the established protocols to assess acute mortality to fish. Evaluations must be completed and presented to NMFS no later than two years from the date of this Opinion. Depending on the outcome of these evaluations and after conferring with NMFS, the USFS must make appropriate modifications to the program that would minimize the effects on NMFS' listed resources (e.g., whether a retardant(s) should be withdrawn from use and replaced with an alternative retardant(s)).</p>	<p><del>10/09/2009</del> 1/1/2009</p>	<p>Karyn Wood, Assistant Director for Fire Operations (with assistance from USGS-FS)</p>	<p>USGS completed the acute toxicity testing on LC 95-A and 259R. Results were shared with NMFS and USFWS at the May 29, 2008 joint meeting. No issues or concerns were raised.</p> <p>The revised USDA Forest Service Specification 5100-304c for Long-Term Retardant, Wildland Firefighting, June 1, 2007 includes the Acute Fish Toxicity testing requirements and established protocols. The process we use was explained to NMFS and accepted. The timing of a company submitting a product for evaluation against this specification varies, therefore the information provided to NMFS will be dependent upon that timeline which may be later than the two year's from accepting the Biological Opinion. NMFS recognizes this, as well as we do not utilize any product prior to it meeting the requirements of the specification.</p> <p>Testing was completed for LC</p>

			<p>95-A and 259R. There are no additional tasks under this sub-element unless formulations are changed that would require discussions with NMFS prior to adding a product to the QPL. Testing for P100 will be completed by the end of March 2010. This product is being formulated according to the specification that will be implemented January 2011. The additional acute fish toxicity tests have been completed. The product will only be added to the QPL if it meets the requirements of the specification. Testing was completed and the P100F was added to the QPL April 5, 2010.</p>
<p>2. Engage in toxicological studies on long-term fire retardants approved for current use in fighting fires, to evaluate acute and sublethal effects of the formulations on NMFS' listed resources. The toxicological studies will be developed and approved by both the USFS and NMFS. The studies should be designed to explore the effects of fire retardant use on: unique life stages of anadromous fish such as smolts and buried embryo/alevin life stages ranging in development from spawning to yolk sac absorption and the onset of exogenous feeding (approximately 30 days post-hatch); and anadromous fish exposed to fire retardants under multiple stressor conditions expected during wildfires, such as elevated temperature and low DO. Within 12 months of accepting the terms of this Opinion, USFS provide NMFS with a draft research plan to conduct additional toxicological studies on the acute and sublethal effects of the fire retardant</p>	<p>10/11/2008</p>	<p>Karyn Wood, Assistant Director for Fire Operations, (with assistance from USGS, NMFS)</p>	<p>Met with NMFS, USFWS, and USGS on May 29, 2008. Identified key elements for developing a toxicological study. Received proposed investigations of the toxicity of long-term retardants on the survival and health of smolting salmonid from NMFS and USGS. Accepted the proposal and have established an interagency agreement with NMFS to proceed.</p> <p>NMFS began testing and prepared preliminary information</p>

<p>formulations. Depending on the outcome of these studies described per the research plan and after conferring with NMFS, the USFS must make appropriate modifications to the program that would minimize the effects on NMFS' listed resources (e.g., whether a retardant(s) should be withdrawn from use and replaced with an alternative retardant(s)).</p>			<p>for USGS. This information was shared at the FS USGS June 16-17, 2009 meeting. A final report will be provided upon completion. NMFS has submitted a interim draft report for the testing to the Forest Service (January 14, 2010). The report will be discussed with USGS, NMFS, and FS in the near future, in order to determine if the recommended additional research should move forward. NMFS recommends examining the temporal lethal and sub-lethal effects of currently approved fire retardants on ocean-type Chinook, as well as characterizing the temporal sublethal effects on stream-type Chinook testing. The Forest Service has moved forward with the NMFS recommendations and NMFS has begun the next steps of the testing and this was concurred by USGS.</p>
<p>3. Develop guidance that directs the US Forest Service to conduct an assessment of site conditions following wildfire where fire retardants have entered waterways, to evaluate the changes to on site water quality and changes in the structure of the biological community. The field guidance shall require monitoring of such parameters as macro-invertebrate communities, soil and water chemistry, or other</p>	<p>None. (internal development of guidance to be completed by 12/31/08)</p>	<p>Karyn Wood, Assistant Director for Fire Operations, (with assistance from Watershed, Fish and Wildlife Staff)</p>	<p>Received proposal from USGS for assessment of site conditions. Reviewed at the May 29<sup>th</sup> meeting with USFWS and NMFS. Next step is to review and establish thresholds for when to initiate assessment. Will accomplish this step and</p>

<p>possible surrogates for examining the direct and indirect effects of fire retardants on the biological community within and downstream of the retardant drop area as supplemental to observations for signs of dead or dying fish. The guidance may establish variable protocols based upon the volume of retardants expected to have entered the waterway, but must require site evaluations commensurate with the volume of fire retardants that entered the waterway.</p>			<p>finalize plan by June 30, 2009. FS met with USGS June 16-17, 2009 to identify the monitoring protocols and data to be collected in order to establish a national sampling and monitoring template. The proposed process will be completed and shared with NMFS and USFWS by July 2, 2009. Each impacted forest already has established a process to engage with USFWS or NMFS concerning monitoring in the event of a retardant application. FS, USGS and USFWS met in September to discuss establishing standard reporting/monitoring elements. It was identified that the best approach would be to develop national minimum requirements for monitoring and that each unit would add to that based upon their current situation and needs. This discussion was held with NMFS through a conference call in December 2009. The USGS has developed a dispersal/toxicity calculator that will be beta tested this fire season (2010) in order to determine if it meets the needs for determining area potentially affected and the degree of monitoring required. A copy of the calculator and subsequent direction for the field</p>
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<p>4. Provide policy and guidance to ensure that USFS local unit resource specialist staff provide the local NMFS Regional Office responsible for section 7 consultations with a summary report of the site assessment that identifies: (a) the retardant that entered the waterway, (b) an estimate of the area affected by the retardant, (c) a description of whether the retardant was accidentally dropped into the waterway or whether an exception to the 2000 Guidelines was invoked and the reasons for the accident or exception, (d) an assessment of the direct and indirect impacts of the fire retardant drop, (e) the nature and results of the field evaluation that was conducted following control and abatement of the fire, and any on site actions that may have been taken to minimize the effects of the retardant on aquatic communities.</p>	<p>None. (internal development of guidance to be completed by 12/31/08)</p>	<p>Karyn Wood, Assistant Director for Fire Operations, (with assistance from Watershed, Fish and Wildlife Staff)</p>	<p>A memo to Regional Foresters was sent on June 2, 2008 providing direction for reporting requirements for retardant and foam in waterways and T&amp;E species habitats. A form was included with the direction for reporting requirements. All information was posted to the Forest Service web site relative to the Environmental Assessment, Decision notice, and the Biological Opinions. The form included all the elements cited in the RPA sub-element.</p> <p>Reports were submitted as directed and a summary table has been created.</p> <p>A memo for 2009 with a revised reporting form has been sent to the field and posted to the Fire and Aviation web page as well as the Wildland Fire Chemical Systems web page. In addition the Interagency Standards for Fire and Fire Aviation Operations has been updated to include the reporting</p>

			<p>requirements. A memo for 2010 was sent to the field in May to remind them of the reporting requirements and the monitoring that needs to occur in the event of the 2000 guidelines being violated.</p>
<p>5. Provide NMFS Headquarter’s Office of Protected Resources with a biannual summary (every two years) that evaluates the cumulative impacts (as the Council on Environmental Quality has defined that term pursuant to the National Environmental Policy Act of 1969) of their continued use of long-term fire retardants including: (a) the number of observed retardant drops entering a waterway, in any subwatershed and watershed, (b) whether the observed drops occurred in a watershed inhabited by NMFS’ listed resources, (c) an assessment as to whether listed resources were affected by the misapplication of fire retardants within the waterway, and (d) the USFS’ assessment of cumulative impacts of the fire retardant drops within the subwatershed and watershed and the consequences of those effects on NMFS’ listed 139 resources. The evidence the USFS shall use for this evaluation would include, but is not limited to: (i) the results of consultation with NMFS’ Regional Offices and the outcome of the site assessment described in detail in the previous element of this RPA (Element 4) and (ii) the results of new fish toxicity studies identified within Element 2; and (d) any actions the USFS took or intends to take to supplement the 2000 Guidelines to minimize the exposure of listed fish species to fire retardants, and reduce the severity of their exposure.</p>	<p>10/11/2009 (and every 2 years thereafter) 2/1/2010  Recommend this date in order to close-out a fire season and have time to pull together the records.</p>	<p>Karyn Wood, Assistant Director for Fire Operations, (with assistance from Watershed, Fish and Wildlife Staff)</p>	<p>Will complete this requirement in 2010, however we will be summarizing the reports received from 2008 and provide the information to NMFS for adjusting the reporting form if necessary prior to 2009 fire season.</p> <p>We have reported the 2008 mixed gallons of retardant that entered the 300ft buffer or waterway. We will report the 2009 separately as well as meet the requirement of the Biannual Summary.</p> <p>The 2009 report has been finalized and submitted for reference. The 2008 report included whether resources were affected and the potential impacts of the fire retardant drops within the subwatershed and watershed and the consequences. Based on the information reported in 2008 there are not reported impacts.</p>

			The 2009 report shows 13 instances for exposure on Forest Service lands and 5 instances for other lands (DOI, State, and County).
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