

PROTECTING CLEAN WATER FOR SALMON



NORTHWEST CENTER FOR
ALTERNATIVES TO PESTICIDES

A Preliminary Investigation in Oregon, Washington, and California: **Growers Learning About and Implementing Mandatory Streamside Pesticide Buffers**

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Since 1999, NCAP has worked to reduce the impact of harmful pesticides to salmon and their habitat.

In 2004, court-ordered no-spray streamside buffers were first put into place to protect endangered and threatened Pacific salmon and steelhead from the negative impacts of fifty-four pesticides. The restrictions, which were originally mandated as a temporary measure to protect salmon until the government enacts more permanent protections, apply to several commonly used insecticides, herbicides, and fungicides.

Over the years, the number of pesticides subject to the no-spray buffer requirements has decreased. Currently, growers must refrain from applying pesticides containing any of nine active ingredients along salmon waterways in Oregon, Washington and California, observing a 60-foot no-spray zone for ground applications and 300-foot for aerial applications (*see Table 1 on Page 3*).

Importantly, the no-spray buffers are considered mandatory but were never required to be displayed on pesticide product labels, nor were states required to enforce the buffers under FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act). This gap in information and enforcement created a need for states and the Environmental Protection Agency (EPA) to clearly communicate to growers and their advisors what the buffers entail, why the buffers are important, and where the buffers are necessary.

In 2015, NCAP undertook an effort to understand how well the buffers are being communicated. NCAP looked at state efforts to inform applicators of these requirements. In addition, NCAP conducted a survey of grower contacts and advisors to assess the level of understanding of the buffers among key farmer contacts.

We wanted to understand:

- *How effective are state pesticide regulatory agencies at getting the word out to applicators?*
- *Is the Salmon Mapper website (a mapping website set up by EPA to help growers understand where the buffers are required) being used by target audiences?*
- *What alternatives are growers using within the buffer areas?*
- *What kind of information or training on alternatives would be helpful to growers?*
- *What do growers think about the buffers?*

This report is a summary of what we learned. To our knowledge, this is the first investigation into communication and implementation of the buffers. Results should be considered preliminary at this time, due to the relatively small sample size, and the fact that we surveyed those who work closely with growers, not growers themselves.

NCAP WORKS TO PROTECT COMMUNITY AND ENVIRONMENTAL HEALTH AND INSPIRE THE USE OF ECOLOGICALLY SOUND SOLUTIONS TO REDUCE THE USE OF PESTICIDES.

In 2014 and 2015, Northwest Center for Alternatives to Pesticides (NCAP) began outreach to help growers understand the list of pesticides subject to current no-spray buffers designed to protect imperiled salmon.

The outreach began with widespread media coverage of re-instated buffers for three pesticides in August 2014. Outreach continued with a spring 2015 email from NCAP about the buffer requirements. The email was sent to over 500 Oregon and Washington contacts who work closely with Northwest farmers - including university extension agents, pesticide dealers, grower associations, conservation districts, farm worker organizations, and watershed councils. Some of these groups are traditionally responsible for disseminating pesticide recommendations.

In fall of 2015, NCAP conducted a survey of the same group of contacts to assess buffer awareness, and to learn how growers are adapting to the buffers. A 14-question anonymous survey was conducted with Survey Monkey. Targeted respondents were provided with three emails from NCAP in October and November 2015, requesting their completion

of the survey at the Survey Monkey site. Survey respondents were notified that their individual responses would be kept confidential, while the collective information could potentially be shared with policy-makers and the general public.

The survey was completed by 33 people, a response rate of 6.6%. Almost 60% of the respondents worked for conservation districts or watershed councils; the remaining respondents were split fairly evenly among the other categories. Results are summarized in Figures 1-5.

In addition to surveying people in close contact with grower communities, we also investigated State websites and made inquiries of State pesticide regulatory officials in Oregon, Washington, and California. Our goal was to discover the efforts each State had made to inform applicators of the buffer requirements. Results from that inquiry are summarized in Table 2 and graded A through F.

FINDINGS: SURVEY RESULTS

Awareness of the required buffers is reasonably widespread but confusion still exists. Twenty-one percent (21%) of survey respondents had not heard about the buffers prior to the NCAP outreach effort in Spring 2015. Respondents also mentioned confusion in their individual comments. This underscores the need for continued outreach about the buffers. However, only a minority of respondents visited the Salmon Mapper website, a good place to better understand the buffer requirements (See Figures 1 and 3).

Crop advisors may be undercommunicating the importance of adhering to the buffers. While overall, 40% of those surveyed said they passed on NCAP's flyer (see Figure 2), extension services, grower associations, pesticide dealers, and federal officials managing Farm Bill programs were less likely to pass on the information. Nearly two-thirds of the respondents in these jobs indicated that they did not pass on NCAP's flyer to growers.

Grower reaction to the buffers ranges between skepticism, concern, and acceptance. Selected comments from respondents about grower reaction included sentiments such as:

- Unnecessary. Regulatory over-reach.
- How do we afford some of these changes?
- Growers accept the need for salmon protection more than a decade ago.

FIGURE 1

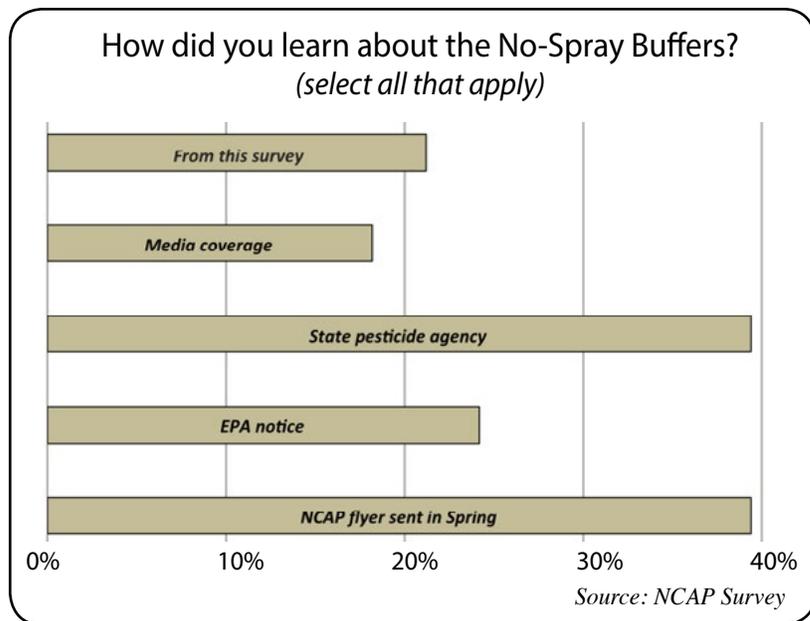


FIGURE 2

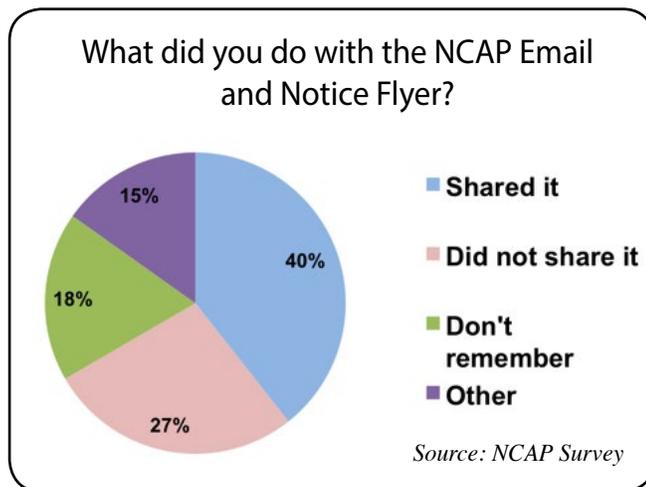


FIGURE 3

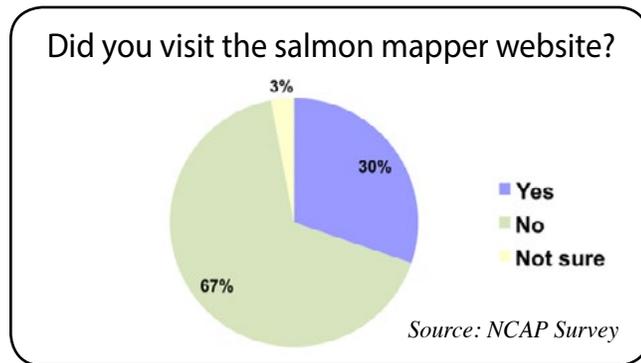


TABLE 1 - PESTICIDES PROHIBITED ADJACENT TO SALMON-BEARING WATERS

ACTIVE INGREDIENTS	SELECTED TRADENAMES	COMMONLY USED ON	TYPE
bromoxynil	Moxy 2E®, Bucril®, Maestro	Many crops. Largest use is on grain crops such as field corn, wheat, and barley	H
carbaryl	Sevin™	Wide variety of fruits and vegetables, residential, nursery	I
chlorpyrifos	Dursban®, Lorsban	Many crops - corn, fruit trees, residential	I
diazinon	Diazinon	Almonds, stone fruits, many vegetables	I
malathion	Malathion, Fyfanon	Cotton, alfalfa, hay, wide variety of fruits and vegetables, grains, public health, home and garden	I
methomyl	Annihilate, Corrida, Lannate, Nudrin	Vegetables, orchard, turf	I
metolachlor	Brawl, Dual, Stalwart, Pennant	Corn, orchards, potatoes, ornamentals	H
prometryn	Caparol, Vegetable Pro	Celery, cotton, parsley	H
1,3-dichloropropene	Telone®, Pic-Clor, Tri-Form, Inline	Major uses for preplanting, orchard, carrots, grapes, strawberry, and potato	SF, I, F

I-Insecticide, H-Herbicide, F-Fungicide, SF-Soil Fumigant

FINDINGS: STATES' EFFORTS TO INFORM PESTICIDE APPLICATORS: A REPORT CARD

Pesticide restrictions and regulations that are not on product labels are particularly difficult to explain. Because of this, states have an important job to do in informing pesticide applicators about court-ordered restrictions – especially when regulators are unable to carry out enforcement. We asked the state agencies responsible for pesticide regulation what they have done to inform applicators, dealers and others about the mandatory buffers.

The information provided by the states was graded A, B, C, D, F to indicate the relative quality and thoroughness of agency efforts to inform pesticide applicators of the buffers.

States were generally unable to document all outreach efforts made since 2004, so the Outreach parameter is weighted more heavily towards State's reports of their efforts in the last year or two.

TABLE 2 - STATE REPORT CARD

States	WEBSITE: BUFFER INFORMATION			OUTREACH		LICENSING/CERTIFICATION	
	Posted	Current and Accurate?	Easy to Find?	Notices in Newsletters or Advisories to Licensees	Presentations to Other Groups	Included in Certification Exams or Study Materials	Included in Recertification Continuing Ed Seminars
Oregon	A	A	C	B ¹	A	B ²	A
Washington	A	B	A	D	B	D ³	A
California	A	D	B	C ⁴	A	C ⁵	A

¹ Oregon has sent at least two advisories on the buffers and has included information about the buffers in several newsletters. All newsletters and advisories are mailed to all licensed applicators, dealers, operators, and OSU extension.

² Oregon is strongly considering including information about the buffers in state-specific study materials after 2016.

³ Washington stated that they do not include materials on the buffers in exams or study materials because they cannot enforce the buffers.

⁴ California sends notices only to County Agricultural Commissioners (CACs). It is unclear if CACs have provided advisories to individual applicators.

⁵ California stated it only includes materials related to competencies required by federal law, but indicated it may revise its exams in 2016.

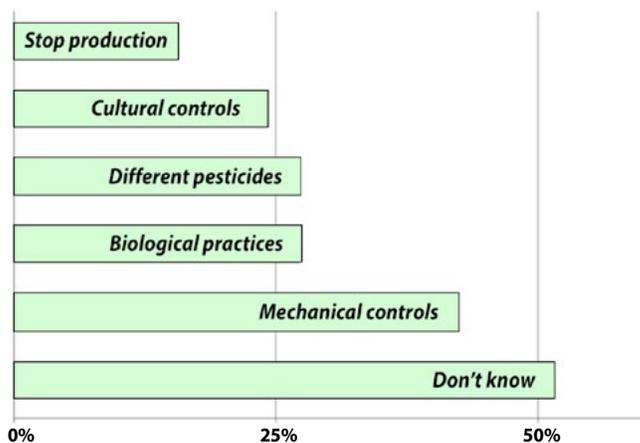
OTHER FINDINGS OF INTEREST:

Alternative Practices Underway

The survey suggest growers are using a variety of means to manage pest pressures in designated court-ordered buffer areas along salmon streams, and desire more information about alternative practices, as shown in Figures 4 and 5 below.

FIGURE 4

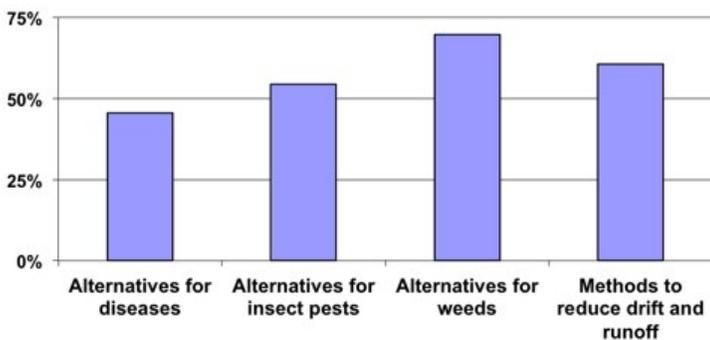
What kinds of alternative practices have you heard or observed growers using in the buffer zones? (select all that apply)



Source: NCAP Survey

FIGURE 5

What kind of information/training on alternative methods would be helpful for growers and applicators? (select all that apply)



Source: NCAP Survey

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POLICY RECOMMENDATIONS

Communication: We recommend that States strengthen their efforts to inform pesticide applicators about the buffer requirements. State websites should be current and free of conflicting or outdated information. State regulators should conduct regular oral and written outreach about the buffers, and send yearly notices to all applicators, as well as pesticide dealers, crop advisors, extension officials and other entities with traditional responsibilities for informing and advising growers and applicators. Applicators should receive information about the buffers in study materials for certification exams. States should strongly encourage all pesticide dealers and crop consultants to post information about the buffers at sales outlets, including information about using the Salmon Mapper website. A short brochure that could be distributed to buyers of affected pesticides at dealerships may be a helpful tool. Additionally, EPA should make sure to update the Salmon Mapper website with current and accurate information.

Training in Alternatives Methods: The survey revealed a strong interest in training on alternative methods for pest management. We recommend that states, universities, and the EPA invest in research and technology for ecologically sound solutions to salmon-toxic pesticides. The list of toxic pesticides reaches far beyond the short list of those covered by the buffers here.

Pesticide Regulatory Reform: EPA must uphold its responsibilities to protect public and environmental health by requiring labeled, scientifically-based, achievable and clear methods to protect Pacific salmon and steelhead and other vulnerable species from pesticide harm.

Incentivize Farmer Actions to Protect Vulnerable Species: Growers who need financial assistance to implement the buffers should be able to access federal Farm Bill programs that help cover the costs of protecting our wildlife and water resources. Protecting Pacific salmon and steelhead, and other natural resources, is an important investment of tax dollars.

