

CHAPTER 5 AND 6:
DESCRIPTION OF THE PROPOSED ACTION AND ACTION AREA

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5 DESCRIPTION OF THE PROPOSED ACTION

“Action” means all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by federal agencies.

The Federal Action

Under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the purpose of the Environmental Protection Agency’s (EPA) proposed action is to provide pest control that “will not generally cause unreasonable adverse effects on the environment (40 CFR).” Under FIFRA, before a pesticide product may be sold or distributed in the U.S. it must be registered with a label identifying approved uses by EPA’s Office of Pesticide Programs (OPP). Once registered, a pesticide may not legally be used unless the use is consistent with directions on its approved label(s) (<http://www.epa.gov/pesticides/regulating/registering/index.htm>). EPA authorization of pesticide uses are categorized as FIFRA sections 3 (new product registrations), 4 (re-registrations and special review), 18 (emergency use), or 24(c) Special Local Needs (SLN).

The proposed action for this consultation is EPA’s registrations of all pesticides containing 1,3-dichloropropene (1,3-D) or metolachlor, including registrations for products containing racemic metolachlor and the enantiomerically enriched s-metolachlor.¹ The proposed action includes (1) approved product labels containing 1,3-D or metolachlor, (2) degradates and metabolites of 1,3-D or metolachlor, (3) formulations, including other ingredients within formulations, (4) adjuvants, and (5) tank mixtures. EPA’s is required to reassess each registered pesticide at least every 15 years. Thus the duration of the action considered in this consultation is for 15 years.

EPA’s pesticide registration process involves an examination of the ingredients of a pesticide, the site or crop on which it will be used, the amount, frequency and timing of its use, and its storage and disposal practices. Pesticide products may include active ingredients (a.i.s) and other ingredients, such as adjuvants, and surfactants (described in greater detail below). The EPA evaluates the pesticide to ensure that it will not have unreasonable adverse effects on humans, the environment, and non-target species. An unreasonable adverse effect on the environment is defined in FIFRA as, “(1) any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of the pesticide, or (2) a human dietary risk from residues that result from a use of a pesticide in or on any food inconsistent with the standard under” section 408 of the United States Federal Food, Drug, and Cosmetic Act (FFDCA) (21 U.S.C. §346a; 7 U.S.C. 136(bb)).

¹ EPA’s registrations are for separate actions that we have combined in one Opinion. We considered the effects of each of EPA’s actions separately and independently. For convenience, we will refer to one action.

After registering a pesticide, EPA retains discretionary involvement and control over such registration. EPA must periodically review the registration to ensure compliance with FIFRA and other federal laws (7 U.S.C. §136d). A pesticide registration can be canceled whenever “a pesticide or its labeling or other material does not comply with the provisions of FIFRA or, when used in accordance with widespread and commonly recognized practice, generally causes unreasonable adverse effects on the environment” (7 U.S.C. §136d(b)).

EPA, the National Marine Fisheries Service (NMFS), and the Fish and Wildlife Service (FWS) agreed on December 12, 2007 that the federal action for EPA’s FIFRA registration actions will be defined as the “authorization for use or uses described in labeling of a pesticide product containing a particular pesticide ingredient.” In order to ensure that EPA’s action will not jeopardize listed species or destroy or adversely modify critical habitat, NMFS’ analysis encompasses the impacts to listed species of all uses authorized by EPA, regardless of whether those uses have historically occurred. Because uses are authorized by EPA on labels, it is reasonable to assume each of these uses may occur in the future, and therefore potential affects to listed species must be analyzed for all approved uses.

Pesticide Labels. For this consultation, EPA’s proposed action encompasses all approved product labels containing 1,3-D and metolachlor, including their degradates, metabolites, and formulations, other ingredients within the formulations, adjuvants, and tank mixtures. The effects of these comprise the stressors of the action. These a.i.’s combined are labeled for a variety of uses including applications to crop and non-crop areas.

Active and Other ingredients. 1,3-D and metolachlor are the a.i.’s that kill or otherwise affect targeted organisms (listed on the label). However, pesticide products that contain these a.i.’s also contain other ingredients (referred to as “inerts” or “other” ingredients on the labels). Inert ingredients are ingredients which EPA defines as not “pesticidally” active. The specific identification of the compounds that make up the inert fraction of a pesticide is not required on the label. However, this does not necessarily imply that inert ingredients are non-toxic, non-flammable, or otherwise non-reactive. EPA authorizes the use of chemical adjuvants to make pesticide products more efficacious. An adjuvant aides the operation or improves the effectiveness of a pesticide. Examples include wetting agents, spreaders, emulsifiers, dispersing agents, solvents, solubilizers, stickers, and surfactants. A surfactant is a substance that reduces surface tension of a system, allowing oil-based and water-based substances to mix more readily. A common group of non-ionic surfactants is the alkylphenol polyethoxylates (APEs), which may be used in pesticides or pesticide tank mixes, and also used in many common household products. Nonylphenol (NP), one of the APEs, has been linked to endocrine-disruption effects in aquatic animals.

Formulations. Pesticide products come in a variety of solid and liquid formulations. Examples of formulation types include dusts, dry flowables, emulsifiable concentrates, granulars, solutions,

soluble powders, ultra-low volume concentrates, water-soluble bags, powders, and baits. The formulation type can have implications for product efficacy and exposure to humans and other non-target organisms.

Tank Mix. A tank mix is a combination by the user of two or more pesticide formulations as well as any adjuvants or surfactants added to the same tank prior to application. Typically, formulations are combined to reduce the number of spray operations or to obtain better pest control than if the individual products were applied alone. The compatibility section of a label may advise on tank mixes known to be incompatible or provide specific mixing instructions for use with compatible mixes. Labels may also recommend specific tank mixes. Pursuant to FIFRA, EPA has the discretion to prohibit tank mixtures. Applicators are permitted to include any combination of pesticides in a tank mix as long as each pesticide in the mixture is permitted for use on the application site and the label does not explicitly prohibit the mix.

Pesticide Registration. In 2006, EPA commenced a new program called registration review to reevaluate all pesticides on a regular cycle. EPA is required to review each pesticide at least every 15 years to make sure that as the ability to assess risks to human health and the environment evolves and as policies and practices change, all pesticide products in the marketplace can still be used safely. Registration review includes Sections 3 and 24(c) labels. The label on a pesticide package or container is legally enforceable. The label provides information about how to handle and safely use the pesticide product and avoid harm to human health and the environment. Using a pesticide in a manner that is inconsistent with the use directions on the label is a violation of FIFRA and can result in enforcement actions to correct the violations; EPA's enforcement authorities are set forth in FIFRA §13 and §14. Pesticide registration is the process through which EPA evaluates product labels; EPA examines the ingredients of a pesticide; the site or crop on which it is to be used; the amount, frequency and timing of its use; and storage and disposal practices. Pesticide products (also referred to as "formulated products") may include active ingredients (a.i.s) and other ingredients, such as adjuvants and surfactants. The eligibility for continued registration may be contingent on label modifications to mitigate risk and can include phase-out and cancellation of uses and pesticide products. Registrants can submit applications for the registration of new products and new uses following re-evaluation of an active ingredient. Several types of products are registered, including the pure (or nearly pure) active ingredient, often referred to as technical grade active ingredient (TGAI), technical, or technical product. The technical product is generally used in manufacturing and testing, and not applied directly to crops or other use sites. Products that are applied to crops or other use sites (e.g., rights of way, landscaping), either on their own or in conjunction with other products or surfactants in tank mixes are called end-use products (EUPs). Sometimes companies will also register the pesticide in a manufacturing formulation, intended for sale to another registrant who then includes it into a separately registered EUP. Manufacturing formulations are not intended for application directly to use sites. The EPA may

also cancel product registrations. Section 6(b) of FIFRA authorizes EPA to take the initiative to cancel a pesticide registration when existing risks related to the use of the pesticide are unacceptable. EPA's procedures for non-voluntary cancellation are available at <https://www.epa.gov/pesticides>. EPA typically allows the use of canceled products, and products that do not reflect registration review label mitigation requirements, until those products have been exhausted. EPA's actions includes all authorizations for use of pesticide products including products containing the two a.i.s for the duration of the proposed action.

Duration of the Proposed Action. EPA is required to reassess registered pesticide active ingredients is at least every 15 years. Given EPA's timeframe for pesticide registration reviews, NMFS' evaluates effects to listed species that may result from the proposed 15-year action including any effects that may continue beyond the end of the 15 years.

Monitoring and Reporting. The current Federal Action does not include any specific provision for monitoring. However, Section 6(a)(2) of the Federal Insecticide, Fungicide and Rodenticide Act requires pesticide product registrants to report adverse effects information, such as incident data involving fish and wildlife to EPA (40 CFR part 159, <https://www.ecfr.gov/> Title 40).

The following description of 1,3-D and metolachlor registrations (the action) represents information acquired from EPA and Applicants.

5.1 1,3-D

1,3-D is a soil fumigant used to kill insects, fungi, nematodes, and weeds. Product labels describe allowable application methods, application rates, and where pesticides can legally be applied (use sites). Product labels allow for the application of 1,3-D to sites characterizes as cropland. These products primarily authorize soil treatments to control nematodes and manage certain soil-borne diseases prior to planting. 1,3-D is applied through drip irrigation or various soil injection methods that require covering the applied product with soil and/or tarping material. 1,3-D product labels do not generally provide crop specific application rates; rather application rates for various use sites are listed by crop categories (

Table 1; vegetable crops, field crops, fruit and nut crops, and nursery crops). Maximum single and annual application rates for general crop categories range currently authorized range between 296 and 580 lbs a.i./acre. The label restrictions summarized here do not incorporate the changes proposed in EPA's 1,3-Dichloropropene (1,3-D) Proposed Interim Registration Review Decision (Docket Number EPA-HQ-OPP-2013-0154). See chapter 18 for information on how the interim registration review decision was incorporated into the Opinion.

Table 1. Summary of FIFRA section 3 uses authorized for 1,3-D products in the United States.

Use Site	Maximum Single Application Rate (lbs a.i./A)	Maximum Annual Application Rate (lbs a.i./A)	Section 3 label example
Vegetable Crops	580.29	580.29	Telone C-15 Registration 11220-20
Field Crops	580.29	580.29	Telone C-15 Registration 11220-20
Fruit and Nut Crops	580.29	580.29	Telone C-15 Registration 11220-20
Nursery Crops	580.29	580.29	Telone C-15 Registration 11220-20
Mint ^a	295.5	295.5	Telone II Registration 95290-1

^aTo suppress *Verticillium* wilt

There are currently active registrations for 22 end use products that contain 1,3-D as an active ingredient. Additionally, there are five FIFRA 24(c) - SLN labels that authorize geographically-specific use of 1,3-D in states where listed Pacific salmonids reside (

Table 2). SNL CA-120006 allows for two applications of 1,3-D to California field-grown nursery stock with a minimum retreatment interval of 14 days. While section 3 labels limit the maximum rate in potato to 255.6 lbs a.i./A (vegetable crops), ID-070015 allows for two applications of 1,3-D at rates up to 354.6 lbs/A in Idaho. Additionally, Idaho, Oregon, and Washington, all allow for the use of 1,3-D as an herbicide to all crop lands to control certain weeds (SLN ID-90001, OR-940038, WA-940038). Approximately 82% of the 1,3-D products currently available for use also include chloropicrin (Table 3). Chloropicrin is a broad-spectrum fumigant that can be used as an antimicrobial, fungicide, herbicide, insecticide, and nematocide (EPA 2008). Four end use products include 1,3-D as the only active ingredient (EPA registrations: 11220-1, 95290-1, 95290-3, and 95290-6).

Table 2. Summary of 1,3-D Special Local Needs (SLN) use authorized within the states of California, Idaho, Oregon, and Washington.

Use Site and SLN label #	Method	Maximum Single Application Rate (lbs a.i./A)	Maximum Annual Application Rate (lbs a.i./A)	Number of Applications	Minimum Re-treatment Interval (days)
Idaho potato – USDA Potato Cyst Nematode Eradication Program ID-070015 ^a	Soil injection	354.6	709.2	2	45
Unspecified cropland in Idaho – certain weed control ID-090001 ^a	Soil injection	246.25	394	2	7
Unspecified cropland in Oregon – certain weed control OR-940038 ^a	Soil injection	394	541.75	2	7
Unspecified cropland in Washington – certain weed control WA-940038 ^a	Soil injection	246.25	394	2	7

^a Also subject to restrictions of Telone II label: registration number 62719-32 (now 95290-1)

Table 3. Currently registered formulated products containing 1,3-D and at least one other active ingredient.

Registration number	Product Name	A.I. %	Active Ingredient
95290-5	In-Line	60.8% 33.3%	1,3-dichloropropene Chloropicrin
8536-21	Pic-Clor 15	82.9% 14.9%	1,3-dichloropropene Chloropicrin
8536-22	Pic-Clor 30	68.3% 29.8%	1,3-dichloropropene Chloropicrin
8536-42	Pic-Clor 40 EC	55.6% 37.8%	1,3-dichloropropene Chloropicrin
8536-8	Pic-Clor 60	39.0% 59.6%	1,3-dichloropropene Chloropicrin
8536-43	Pic-Clor 60 EC	56.6% 37.1%	1,3-dichloropropene Chloropicrin
11220-20	Telone C-15	82.9% 14.9%	1,3-dichloropropene Chloropicrin
95290-2	Telone C-35	63.4% 34.7%	1,3-dichloropropene Chloropicrin
11220-21	Tri-form 30	68.3% 29.8%	1,3-dichloropropene Chloropicrin
11220-22	Tri-form 35	63.4% 34.8%	1,3-dichloropropene Chloropicrin
11220-37	Tri-form 40	58.5% 39.9%	1,3-dichloropropene Chloropicrin
11220-34	Tri-form 40 EC	55.6% 37.8%	1,3-dichloropropene Chloropicrin
11220-33	Tri-form 60 EC	37.1% 56.7%	1,3-dichloropropene Chloropicrin
11220-38	Tri-form 70 EC	27.8% 66.3%	1,3-dichloropropene Chloropicrin
11220-35	Tri-form 80 EC	18.5% 75.8%	1,3-dichloropropene Chloropicrin
11220-15	Tri-form 60	39.0% 59.6%	1,3-dichloropropene Chloropicrin
11220-39	Tri-form 70	29.2% 69.8%	1,3-dichloropropene Chloropicrin
11220-36	Tri-form 80	19.5% 79.8%	1,3-dichloropropene Chloropicrin

5.2 Metolachlor

Metolachlor (racemic metolachlor and s-metolachlor) is a broad-spectrum herbicide that controls plants by inhibiting seedling shoot and meristematic growth. Metolachlor products can be applied pre-plant, pre-emergence, or early post-crop emergence to control seedling grasses or certain broadleaf weeds in a wide range of crops. Maximum single application rates range from 0.64 to 3.75 lbs a.i./A (Table 4). Labels allow up to two applications per crop cycle, and multiple crop cycles per year, with maximum annual application rates up to 5.97 lbs a.i./A/year in certain crops. Metolachlor products are formulated as emusifiable concentrates, flowable concentrates, soluble concentrates, granules, and ready to use mixtures. Metolachlor products can be applied through a variety of ground applications methods including broadcast sprays, banded applications, soil incorporation methods, and co-application with dry bulk granular fertilizer. Metolachlor can also be applied using aircraft and chemigation equipment (EPA 2019).

There are approximately 100 end use metolachlor products with active registrations. A majority of metolachlor products contain multiple active ingredients. While many contain two or three active ingredients, some products contain up to four pesticides (Table 5). The products that contain a single active ingredient routinely recommend tank mixtures with other herbicides and fertilizers. The label restrictions summarized here do not incorporate the changes proposed in EPA's Metolachlor/S-metolachlor Proposed Interim Registration Review Decision (Docket Number EPA-HQ-OPP-2014-0772). See chapter 18 for information on how the interim registration review decision was incorporated into the Opinion.

Table 4. Summary of metolachlor use authorized within the states of California, Idaho, Oregon, and Washington.

Use Site	Application Method ^a	Maximum Single Application Rate (lbs a.i./A) ^b	Maximum Annual Application Rate (lbs a.i./A)	Maximum Number of Applications	Minimum Re-treatment Interval (days)	Source
Beans and other pod crops	G, A, C	2.0	2.93	NS ^c	NS	Registration 19713-549
Corn	G, A, C	2.68	3.87	NS	NS	EPA 2
California Cotton	A, C	1.60	3.98	NS	NS	EPA 2019
Horseradish	G, A, C	1.3	NS	NS	1 per crop cycle	Registration 1381-207
Potato	G, A, C	2.75	3.61	NS	NS	Registration 19713-549
Pumpkin	G	1.3	NS	NS	NS	Registration 1381-207
Rhubarb	G, A, C	1.3	NS	NS	1 per crop cycle	Registration 89167-42
Safflower	G, A, C	2.0	NS	NS	NS	Registration 89167-42
Sorghum	G, A	1.68	1.67 - NS	NS	NS	EPA 2019

Use Site	Application Method ^a	Maximum Single Application Rate (lbs a.i./A) ^b	Maximum Annual Application Rate (lbs a.i./A)	Maximum Number of Applications	Minimum Re-treatment Interval (days)	Source
Soybean ^d	G, A, C	2.75	2.75	NS	NS	EPA 2019
Sugarbeets	G, A, C	1.60	2.48	NS	60	Registration 100-818
Sunflower	G, A, C	1.91	NS	NS	NS	Registration 89167-42
Tomato	G	2.0	5.97 - NS	NS	NS	EPA 2019
Sod farms	G, A, C	2.48	4.00	2	NS	EPA 2019
Commercial/residential	G	3.75	3.75	NS	NS	Registration 070506-344
Nursery and landscape plantings	G, A, C	3.75	3.75	NS	NS	Registration 070506-344
California - Pepper	G	1.60	1.60	NA	NS	SLN CA-010022 Registration 100-816
California - Seeded and transplanted tomato	G	1.59	1.59	1	NS	SLN CA-030004 Registration 100-816
California - Swiss chard	G	1.27	1.27	1	NS	SLN CA-060019 Registration 100-816
California - Spinach	G	0.95	0.95	1	NS	SLN CA-080006 Registration 100-816

Use Site	Application Method ^a	Maximum Single Application Rate (lbs a.i./A) ^b	Maximum Annual Application Rate (lbs a.i./A)	Maximum Number of Applications	Minimum Re-treatment Interval (days)	Source
California - Dry bulb onion	G	1.27	2.54	NS	21	SLN CA-080017 Registration 100-816
California - Celery	G	1.27	1.905	NS	NS	SLN CA-080019 Registration 100-816
California - Subgroup 1-B (beet, carrot, turnip, etc.) and 1-C (artichoke, ginger, yam, etc.)	G	1.27	1.27	1	NS	SLN CA-100004 Registration 100-816
Idaho - Carrot, collard, radish, beet, kale, mustard, parsnip, rutabaga, turnip	G	0.64	0.64	1	NS	SLN ID-150006 Registration 100-816
Idaho - Pepper	G	1.60	1.60	1	NS	SLN ID-170006 Registration 100-816
Idaho - Dry bulb onion	G	1.27	2.54	NS	21	SLN ID-990016 Registration 100-816
Oregon - Alfalfa for seed	G	3.20	3.20	1	NS	SLN OR-040007 Registration 100-816
Oregon – Seed crops including radish, spinach, beets, and Swiss chard	G	1.27	1.27	1	NS	SLN OR-040010 Registration 100-816

Use Site	Application Method ^a	Maximum Single Application Rate (lbs a.i./A) ^b	Maximum Annual Application Rate (lbs a.i./A)	Maximum Number of Applications	Minimum Re-treatment Interval (days)	Source
Oregon – Transplanted bell pepper	G	1.60	1.60	1	NS	SLN OR-070004 Registration 100-816
Oregon – blueberry, blackberry, and raspberry	G	1.91	1.91	1	NS	SLN OR-110005 Registration 100-816
Oregon – Sweet potato	G	1.27	NS	NS	NS	SLN OR-160006 Registration 100-816
Oregon - Strawberry	G	0.95	1.95	NS	NS	SLN OR-180010 Registration 100-816

^aApplication Methods: C (chemigation), G (ground spray), A (aerial spray)

^bRates conveyed by EPA to NMFS in review of preliminary draft materials (August 12, 2020)

^cNS (Not Specified)

^dNot allowed in some California counties

Table 5. Currently registered formulated products containing metolachlor and at least one other active ingredient.

Registration number	Product Name	A.I. %	Active Ingredient
100-1282	Halex GT Herbicide	20.50%	S-metolachlor
		20.50%	Glyphosate
		2.05%	Mesotrione
100-1466	Acuron Herbicide	23.40%	S-metolachlor
		10.93%	Atrazine
		2.60%	Mesotrione
		0.65%	Bicyclopyrone
100-1623	A21472 Plus VaporGrip Technology	17.7%	Diglycolamin salt of dicamba
		24.0%	S-metolachlor
100-1660	A22089	31.0%	S-metolachlor
		3.1%	Mesotrione
91234-48	A308.09	7.55%	Sulfentrazone
		68.25%	S-metolachlor
91234-185	A335.05	58.2%	S-metolachlor
		13.8%	Metribuzin
91234-183	A335.07	46.4%	S-metolachlor
		10.2%	Sodium salt of fomesafen
91234-123	A335.08	36.8%	S-metolachlor
		3.68%	Mesotrione
1381-208	Agrisolutions Charger Max ATZ Lite	28.1%	Atrazine
		0.6%	Atrazine related compounds
		35.8%	S-metolachlor
279-3442	F7583-3 Herbicide	7.55%	Sulfentrazone
		24.20%	S-metolachlor
89167-41	AX ATZ S-MET HERBICIDE	33.0%	Atrazine
		0.7%	Atrazine related compounds
		26.1	S-metolachlor

Registration number	Product Name	A.I. %	Active Ingredient
89167-57	AX SULF-SMET Herbicide	7.55% 68.25%	Sulfentrazone S-metolachlor
100-1568	Acuron Flexi	0.87% 3.47% 31.24%	Bicyclopyrone Mesotrione S-metolachlor
100-817	Bicep II Magnum Herbicide	33.0% 0.7% 26.1%	Atrazine Atrazine related compounds S-metolachlor
100-827	Bicep Lite II Magnum Herbicide	28.1% 0.6% 35.8%	Atrazine Atrazine related compounds S-metolachlor
100-886	Bicep Magnum	32.0% 1.7% 26.1%	Atrazine Atrazine related compounds S-metolachlor
100-1162	Boundary 6.5EC Herbicide	58.2% 13.8%	S-metolachlor Metribuzin
87373-24	A308.06	7.55% 68.25%	Sulfentrazone S-metolachlor
352-624	Dupont Cinch ATZ Herbicide	33.0% 0.7% 26.1%	Atrazine Atrazine related compounds S-metolachlor
70506-338	Coyote Herbicide	36.8% 3.68%	S-metolachlor Mesotrione
1381-199	Charger Max ATZ	33.0% 0.7% 26.1%	Atrazine Atrazine related compounds S-metolachlor
352-623	DuPont Cinch ATZ Lite	28.1% 0.6% 35.8%	Atrazine Atrazine related compounds S-metolachlor
100-1161	Expert Herbicide	22.5% 0.4%	Atrazine Atrazine related compounds

Registration number	Product Name	A.I. %	Active Ingredient
		18.65%	S-metolachlor
		10.8%	Glyphosate
100-1414	Lexar-622 Herbicide	19.00%	S-metolachlor
		18.61%	Atrazine
		0.39%	Atrazine related compounds
		2.44%	Mesotrione
100-1442	Lumax EZ Herbicide	27.1%	S-metolachlor
		9.94%	Atrazine
		0.21%	Atrazine related compounds
		2.71%	Mesotrione
100-1410	Zemax Selective Herbicide	36.80%	S-metolachlor
		3.68%	Mesotrione
5905-603	HM-1507 Herbicide	45.85%	S-metolachlor
		10.04%	Fomesafen
34704-1065	Intimidator	36.29%	S-metolachlor
		8.05%	Metribuzin
		7.16%	Fomesafen
70506-344	Intermoc Herbicide	27.30%	S-metolachlor
		11.65%	Glufosinate-ammonium
89168-79	Liberty M & M	36.80%	S-metolachlor
		3.68%	Mesotrione
89168-81	Liberty MAM	19.00%	S-metolachlor
		18.61%	Atrazine
		0.31%	Atrazine related compounds
		2.44%	Mesotrione
89168-87	Liberty PFO	46.4%	S-metolachlor
		10.2%	Sodium salt of fomesafen
89168-82	Liberty S-MOC ATZ	33.0%	Atrazine
		0.5%	Atrazine related compounds
		26.1%	S-metolachlor

Registration number	Product Name	A.I. %	Active Ingredient
89168-86	Liberty X- METCHLORBUZIN	44.59% 10.94%	S-metolachlor Metribuzin
89168-89	Liberty X-Sulfent - SMOC	5.67% 51.20%	Sulfentrazone S-metolachlor
34704-1070	LPI S-Metolachlor + Atrazine	33.0% 0.7% 26.1%	Atrazine Atrazine related compounds S-metolachlor
34704-1067	Matador-S	37.08% 8.23% 1.83%	S-metolachlor Metribuzin Imazethapyr
70506-335	Moccasin MTZ Herbicide	38.94% 12.98%	S-metolachlor Metribuzin
100-1268	Prefix Herbicide	46.4% 10.2%	S-metolachlor Sodium salt of fomesafen
100-1618	Sequence CS	18.2% 24.2%	Glyphosate S-metolachlor
100-1185	Sequence Herbicide	21.8% 29.0%	Glyphosate S-metolachlor
92647-7	Tigris Sulfen Elite	7.55% 68.25%	Sulfentrazone S-metolachlor
34704-1127	Tribal	36.25% 6.85% 3.87	S-metolachlor Metribuzin Sulfentrazone
19713-547	Drexel Trizmet II	33.1% 0.6% 26.1%	Atrazine Atrazine related compounds Metolachlor
19713-663	Drexel Trimet Lite	17.0% 0.3% 13.2%	Atrazine Atrazine related compounds Metolachlor
19713-677	Up-front Herbicide	46.4% 10.2%	Metolachlor Fomesafen

Registration number	Product Name	A.I. %	Active Ingredient
19713-686	Drexel Trizar Herbicide	19.00% 18.61% 0.34%	Metolachlor Atrazine Atrazine related compounds
19713-688	Trizmax Herbicide	29.40% 11.00% 2.94%	Metolachlor Atrazine Mesotrione
19713-694	Mes-O-Sate Herbicide	20.50% 20.50% 2.05%	Metolachlor Atrazine Atrazine related compounds
19713-704	Drexel Me-Too-Lachlor MTZ	58.2% 13.8%	Metolachlor Metribuzine
34704-1054	Matador	43.72% 6.14% 1.38%	Metolachlor Metribuzin Imazethapyr

6 ACTION AREA

Action area means all areas affected directly or indirectly by the Federal action and not just the immediate area involved in the action (50 C.F.R. §402.02). For an ESA consultation on EPA's nationwide authorization of pesticides, the action area would encompass all areas directly or indirectly affected by the use of these a.i.'s throughout the entire U.S. and its territories, and would encompass all ESA-listed species and designated critical habitat under NMFS jurisdiction.

However, in this instance, as a result of the 2002 order in Washington Toxics Coalition v. EPA, EPA initiated consultation on its authorization of 37 pesticide a.i.s regarding their effects on listed Pacific salmonids under NMFS' jurisdiction and associated designated critical habitat in the states of California, Idaho, Oregon, and Washington. Given the geographic scope of the areas in which EPA is authorizing the use of these a.i.s., and anticipated chemical transport following application, the action area for purposes of this Opinion consists of the entire range and most life history stages of listed salmon and steelhead and their designated critical habitat in California, Idaho, Oregon, and Washington. The action area encompasses all freshwater, estuarine, marsh, swamps, nearshore, and offshore marine surface waters of California, Oregon, and Washington. The action area also includes freshwater surface waters in Idaho (Figure 1).

NMFS' analysis focuses only on the effects of EPA's action on listed Pacific salmonids in the above-mentioned states. It includes the effects of these pesticides on the recently listed Lower Columbia River coho salmon, Puget Sound steelhead, and Oregon Coast coho salmon. The Lower Columbia River coho salmon was listed as endangered in 2005. The Puget Sound steelhead and the Oregon Coast coho salmon were listed as threatened in 2007 and 2008, respectively. This Opinion also analyzes the effects of EPA's proposed action on recently proposed designated critical habitats for Puget Sound steelhead and Lower Columbia River coho salmon (January 14, 2013, 50 CFR Part 226).

EPA's consultation with NMFS remains incomplete until it analyzes the effects of its authorization of pesticide product labels with these two compounds for all remaining threatened and endangered species under NMFS' jurisdiction. EPA must ensure its action does not jeopardize the continued existence or result in the destruction or adverse modification of critical habitat for other listed species and designated critical habitat under NMFS' jurisdiction throughout the U.S. and its territories.

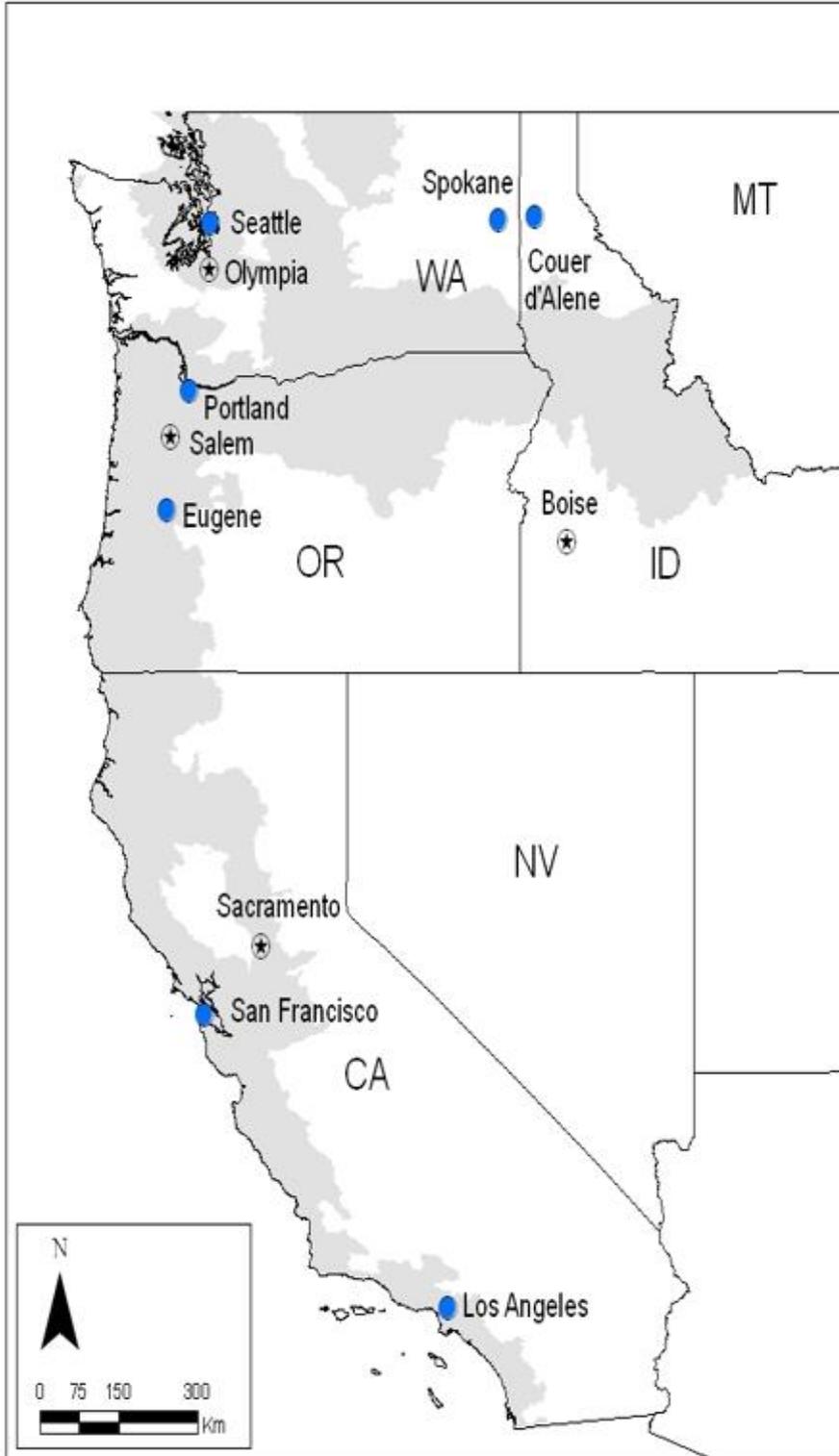


Figure 1. Map showing extent of inland action area with the range of all ESU and DPS boundaries for ESA listed salmonids highlighted in gray.