Appendix N

SRRD Verification Memo and Master Label

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

PC Codes: 030001, 030019, 030063,
030053, 030035, 030025,
030016, 030004, 030066

DATE: February 11, 2009

SUBJECT: Confirmation of 2,4- D (030001 +) Active Section 3 Registrations and Section 24c Registrations (California Only) and Use Sites for Use in California Red-Legged Frog Effects Determination

FROM: Jose Gayoso, Chemical Review Manager
Reregistration Branch 2
Special Review and Reregistration Division (7508P)

AND

Philip Errico, Product Reviewer
Joanne Miller, Product Manager
Registration Division (7505P)

THRU: Margaret Rice
Reregistration Branch 2
Special Review and Reregistration Division (7508P)

TO: Nancy Andrews, ERB1
Environmental Risk Branch 1
Environmental Fate and Effects Division

AND

Rafael Prieto
Usage and Label Use Team
Biological Economic and Analysis Division (7503P)

In response to your request for concurrence on the active registrations and approved uses of 2,4-D for the effects determination assessment for the California red-legged frog and San Francisco Bay Endangered Species, this memo serves as confirmation from SRRD and RD. Due to the large number of labels for 2,4- D, the effects determination should be based on the Final Master Label (06/06/05). The master label includes all active registrations, maximum application rates, maximum numbers of applications, application methods, etc. and includes the maximum use/usage information, with the exceptions mentioned below. In addition, the 2005 2,4-D RED

label table is the basis for all new labels for 2,4-D (registered after June 2005); all labels are being revised to reflect these rates.

The following mitigation measures were required in the 2,4-D RED. However, not all currently approved labels have made these changes:

1. Maximum ornamental turf rate (including golf courses, cemeteries, parks, sports fields, turfgrass, lawns and other grass areas) is reduced from 2.0 lb ae/acre to 1.5 lb ae/acre.

2. Implementation of the application rates set forth in the Master Label will reduce rates (as compared to current rates on existing labels) for field corn, popcorn, sweet corn, small grains, fallowland/stubble, non-cropland, turf, aquatic applications (surface), pasture, and soybean.

Attachments:

- Master Label for 2,4-D Uses Supported by Industry and IR-4, 06/06/2005

Master Document

For

Reregistration of

2,4-Dichlorophenoxyacetic Acid Uses

Supported by the

2,4-D Industry and IR-4

2,4-D Chemical Forms supported

- **030001 2,4-dichlorophenoxyacetic acid (2,4-D)**
- **030019 Dimethylamine Salt of 2,4-D (DMA)**
- **030063 2-Ethylhexyl Ester* of 2,4-D (2-EHE)**
- **030053 Butoxyethyl Ester** of 2,4-D (BEE)**
- **030035 Triisopropanolamine Salt of 2,4-D (TIPA)**
- **030025 Isopropylamine Salt of 2,4-D (IPA)**
- **030016 Diethanolamine Salt of 2,4-D (DEA)**
- **030004 Sodium Salt of 2,4-D (Na)**
- **030066 Isopropyl Ester of 2,4-D (IPE)**

*** 2-ethylhexyl ester is considered one of three isooctyl esters. Studies and/or records relating to 2-EHE may be listed under two additional chemical numbers:**

- 030064 2,4-D Isooctyl Ester (2-ethyl-4-methylpentyl);
- 030065 2,4-D Isooctyl Ester (2-octyl);

** May be listed as: 2,4-D Butoxyethanol Ester (same number - 030053)

The Master Label is based on data submitted for reregistration of 2,4-D:

- Residue: Metabolism, RACs, processed commodities, meat/milk, fish / shellfish
- Environmental fate laboratory studies: Analytes
- Field dissipation: Terrestrial, aquatic, forestry
- Rates / use patterns refined by extensive testing
- Industry Task Force, companies, commodity groups, IR-4 supported uses

The Master Label includes:

- Bounds of use patterns
- Forms of 2,4-D supported
- Timing / crop growth stage limitations
- Maximum rates: per use / seasonal
- Minimum intervals between applications
- Preharvest / pregrazing intervals
- Most Section 18 / 24(c) use patterns

The Master Label does not include:

- EPA precautionary label statements
- Worker Protection Standard information other than typical REIs
- Complete recommendations and limitations related to efficacy, plant varieties, etc.
- Ranges of rates, mixing directions, weed lists, etc. as per actual labels
- Comprehensive equipment details
- A very few Section 24(c) use parameters

Differences from Present Labels:

- Esters are not supported for use on rice, sugarcane or aquatic non-crop areas (except BEE)
- Reduced rate in residential turf from 2.0 to 1.5 lbs a.e./acre
- Reduced preharvest rate on small grains
- Only one of preplant or preemergence application on corn; seasonal maximum
- 30-day treatment interval and seasonal maximum rate for pasture / rangeland
- Reduced rate and seasonal maximum in forestry
- Reduced rate and seasonal maximum in non-crop
- Clarification of replanting in treated areas
- Soybean grazing / feeding restriction removed
- Dairy and slaughter animal grazing restrictions removed
- Aquatic application rates as PPM concentration rather than pounds per surface acre.

- Added aquatic use restrictions for potable water (drinking water) and swimming.
- Added new use, hops.
- High volume and low volume application instruction for non-crop use site.
- Added drift language
- Applications of granular formulation are allowed on corn, sorghum, grass grown for seed or sod, turf, cranberries, non-crop land and aquatic use sites.
- All end use labels will contain "General Instructions" that all banding applications will be an "adjusted band", e.g.:

  Example label wording for band treatment: If only bands or rows are treated, leaving middles untreated, the dosage [and spray volume (if applicable)] per crop acre is [are] reduced proportionately. For example, treating a 12-inch band where the row spacing is 36 inches would require 1/3 of the recommended broadcast rate per acre (12 inches divided by 36 inches = 1/3).

  $$\frac{Band\ width\ in\ inches}{Row\ width\ in\ inches} \quad X \quad Broadcast\ rate\ per\ acre \quad = \quad Band\ rate\ per\ acre$$

  The following spray volume equation is for sprayable products only:

  $$\frac{Band\ width\ in\ inches}{Row\ width\ in\ inches} \quad X \quad Broadcast\ volume\ per\ acre \quad = \quad Band\ volume\ per\ acre$$

The Master Label is the culmination of results from many reregistration studies on 2,4-D. It is presented as the foundation for describing 2,4-D use patterns for reregistration:

- Unless individual registrants support other use patterns, the master label should supersede present labels.
- Recommendation is for EPA to rely on the 2,4-D Master Label for risk assessment and risk management.

CEREAL GRAINS

(WHEAT, BARLEY, MILLET, OATS and RYE)

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Postemergence (not underseeded with legumes)	1.25 lbs. acid equivalent	Apply after grain is fully tillered (usually 4 to 8 inches high) but not forming joints in the stem.
Preharvest	0.5 lb. acid equivalent	Apply when grain is in the dough stage.

RESTRICTIONS AND LIMITATIONS FOR USE ON CEREAL GRAINS
PHI: Do not harvest within 14 days of application.
Max seasonal rate: Apply no more than 1.75 lbs. acid equivalent per acre per use season.
Use 2 or more gallons of spray solution per acre.

EPA Chemical Number	Chemical	Formulation	Reentry Interval	Application Method	Application Equipment
030001	Acid	WP EC	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: boom sprayers
030019	DMA	SC/L SC/S	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: boom sprayers
030063	2-EHE	EC	12 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: boom sprayers
030053	BEE	EC	12 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: boom sprayers
030035	TIPA	SC/L	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: boom sprayers
030025	IPA	SC/L	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: boom sprayers
030016	DEA	SC/L	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: boom sprayers
030004	Na	SC/L SC/S	12 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: boom sprayers

FIELD CORN and POPCORN

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Preplant or Preemergence	1.0 lb. acid equivalent	To control emerged broadleaf weed seedlings or existing cover crops, apply before corn emerges.
Postemergence	0.5 lb. Acid equivalent	Apply when weeds are small and corn is less than 8 inches tall (to top of canopy). When corn is over 8 inches tall, use drop nozzles and keep spray off foliage.
Preharvest	1.5 lbs. acid equivalent	Apply after hard dough (or at denting) stage.

RESTRICTIONS AND LIMITATIONS FOR USE ON FIELD CORN AND POPCORN
PHI: Do not harvest grain for 7 days following application.
Max seasonal rate: Apply no more than 3 lbs. acid equivalent per acre per use season.
Use 2 or more gallons of spray solution per acre.
Do not use treated crop as fodder for 7 days following application.

EPA Chemical Number	Chemical	Formulation	Reentry Interval	Application Method	Application Equipment
030001	Acid	WP EC G	48 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030019	DMA	SC/L SC/S G	48 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030063	2-EHE	EC G	12 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030053	BEE	EC G	12 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030035	TIPA	SC/L G	48 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030025	IPA	SC/L G	48 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030016	DEA	SC/L G	48 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030004	Na	SC/L SC/S G	12 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader

SWEET CORN

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Preplant or Preemergence	1.0 lb. acid equivalent	To control emerged broadleaf weed seedlings or existing cover crops, apply before corn emerges.
Postemergence	0.5 lb. acid equivalent	Apply when weeds are small and corn is less than 8 inches tall (to top of canopy). When corn is over 8 inches tall, use drop nozzles and keep spray off foliage. Do not make a postemergence application any less than 21 days following prior application.

RESTRICTIONS AND LIMITATIONS FOR USE ON SWEET CORN
PHI: Do not harvest within 45 days of application.
Max seasonal rate: Apply no more than 1.5 lbs. acid equivalent per acre per use season.
Use 2 or more gallons of spray solution per acre.

EPA Chemical Number	Chemical	Formulation	Reentry Intervall	Application Method	Application Equipment
030001	Acid	WP EC G	48 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030019	DMA	SC/L SC/S G	48 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030063	2-EHE	EC G	12 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030053	BEE	EC G	12 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030035	TIPA	SC/L G	48 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030025	IPA	SC/L G	48 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030016	DEA	SC/L G	48 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030004	Na	SC/L SC/S G	12 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader

GRAIN OR FORAGE SORGHUM

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Postemergence	1.0 lb. acid equivalent for amines, acid, salts 0.5 lb. acid equivalent for esters	Apply when sorghum is 6 to 15 inches tall. If sorghum is taller than 8 inches to top of the canopy, use drop nozzles and keep spray off the foliage.

RESTRICTIONS AND LIMITATIONS FOR USE ON SORGHUM

PHI: Do not harvest grain for 30 days following application.
Max seasonal rate: 1.0 lb. acid equivalent per acre for amines, acid, salts and 0.5 lb. acid equivalent per acre for esters
Use 2 or more gallons of spray solution per acre.
Do not permit meat or dairy animals to consume treated crop as fodder or forage for 30 days following application.

EPA Chemical Number	Chemical	Formulation	Reentry Intravel	Application Method	Application Equipment
030001	Acid	WP EC G	48 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030019	DMA	SC/L SC/S G	48 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030063	2-EHE	EC G	12 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030053	BEE	EC G	12 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030035	TIPA	SC/L G	48 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030025	IPA	SC/L G	48 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030016	DEA	SC/L G	48 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader
030004	Na	SC/L SC/S G	12 hr.	Ground or aerial spray: Broadcast Directed band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers or Granule spreader

SOYBEANS

(Preplant Only)

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Preplant	0.5 lb. acid equivalent	To control emerged broadleaf weed seedlings or existing cover crops. Esters: Apply not less than 7 days prior to planting soybeans. Amines, acid, salts: Apply not less than 15 days prior to planting soybeans.
Preplant	1.0 lb. acid equivalent	To control emerged broadleaf weed seedlings or existing cover crops. Esters: Apply not less than 15 days prior to planting soybeans. Amines, acid, salts: Apply not less than 30 days prior to planting soybeans.

RESTRICTIONS AND LIMITATIONS FOR USE IN SOYBEANS (PREPLANT)

Max seasonal rate: Apply no more than 1.0 lb. acid equivalent per acre per use season.
Use 2 or more gallons of spray solution per acre.

EPA Chemical Number	Chemical	Formulation	Reentry Interval	Application Method	Application Equipment
030001	Acid	WP EC	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: boom sprayers
030019	DMA	SC/L SC/S	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: boom sprayers
030063	2-EHE	EC	12 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: boom sprayers
030053	BEE	EC	12 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: boom sprayers
030035	TIPA	SC/L	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: boom sprayers
030025	IPA	SC/L	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: boom sprayers
030016	DEA	SC/L	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: boom sprayers
030004	Na	SC/L SC/S	12 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: boom sprayers

SUGARCANE

(Amines, salts and acid only)

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Preemergence	2.0 lbs. acid equivalent	Apply before canes appear for control of emerged broadleaf weeds.
Postemergence	2.0 lbs. acid equivalent	Apply after cane emerges and through canopy closure.

RESTRICTIONS AND LIMITATIONS FOR USE IN SUGARCANE

PHI: Do not harvest cane prior to crop maturity.
Max seasonal rate: Apply no more than 4.0 lbs. acid equivalent per acre per use season.
Use 2 or more gallons of spray solution per acre.

EPA Chemical Number	Chemical	Formulation	Reentry Interval	Application Method	Application Equipment
030001	Acid	WP	48 hr.	Ground or aerial spray Broadcast or band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers
030019	DMA	SC/L SC/S	48 hr.	Ground or aerial spray Broadcast or band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers
030035	TIPA	SC/L	48 hr.	Ground or aerial spray Broadcast or band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers
030025	IPA	SC/L	48 hr.	Ground or aerial spray Broadcast or band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers
030016	DEA	SC/L	48 hr.	Ground or aerial spray Broadcast or band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers
030004	Na	SC/L SC/S	12 hr.	Ground or aerial spray Broadcast or band	Aircraft: fixed wing or helicopter Ground: boom/directed sprayers

RICE
(Amines, salts and acid only)

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Preplant	1.0 lb. acid equivalent	Apply 2 to 4 weeks prior to planting rice.
Postemergence	1.5 lbs. acid equivalent	Apply when rice is in the late tillering stage of development at the time of first joint development usually 6 to 9 weeks after emergence. Do not apply after panicle initiation.

RESTRICTIONS AND LIMITATIONS FOR USE ON RICE
PHI: Do not harvest within 60 days of application.
Max seasonal rate: Apply no more than 1.5 lbs. acid equivalent per acre per use season.
Use 2 or more gallons of spray solution per acre.

WILD RICE
(For Use in Minnesota Only) (Amines, salts and acid only)

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Postemergence	0.25 lb. acid equivalent	For use only on wild rice grown in commercial paddies. Apply to rice in the 1 to 2 aerial leaf through early tillering stage. Do not spray after wild rice has reached the boot stage. For best coverage, apply 4 to 10 gallons total spray solution per acre.

RESTRICTIONS AND LIMITATIONS FOR USE ON WILD RICE
PHI: Do not harvest within 60 days of application.
Max seasonal rate: Apply no more than 0.25 lb. acid equivalent per acre per use season.
Use 2 or more gallons of spray solution per acre.

EPA Chemical #	Chemical	Formulation	Reentry Interval	Application Method	Application Equipment
030001	Acid	WP	48 hr.	Ground or aerial spray Broadcast or Spot treatment	Aircraft: fixed wing or helicopter Ground: boom sprayers or Hand held nozzle sprayer
030019	DMA	SC/L SC/S	48 hr.	Ground or aerial spray Broadcast or Spot treatment	Aircraft: fixed wing or helicopter Ground: boom sprayers or Hand held nozzle sprayer
030035	TIPA	SC/L	48 hr.	Ground or aerial spray Broadcast or Spot treatment	Aircraft: fixed wing or helicopter Ground: boom sprayers or Hand held nozzle sprayer
030025	IPA	SC/L	48 hr.	Ground or aerial spray Broadcast or Spot treatment	Aircraft: fixed wing or helicopter Ground: boom sprayers or Hand held nozzle sprayer
030016	DEA	SC/L	48 hr.	Ground or aerial spray Broadcast or Spot treatment	Aircraft: fixed wing or helicopter Ground: boom sprayers or Hand held nozzle sprayer
030004	Na	SC/L SC/S	12 hr.	Ground or aerial spray Broadcast or Spot treatment	Aircraft: fixed wing or helicopter Ground: boom sprayers or Hand held nozzle sprayer

POME FRUITS

(Amines, salts and acid only)

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Postemergence	2.0 lbs. acid equivalent	For control of weeds on the orchard floor. For best results, apply when weeds are small and actively growing.

RESTRICTIONS AND LIMITATIONS FOR USE IN POME FRUITS

PHI: Do not harvest fruit within 14 days of application.
Max seasonal rate: 4.0 lbs. acid equivalent per acre.
Do not cut orchard floor forage for hay within 7 days of application.
Allow at least 75 days between applications.
Do not make more than 2 applications per year.

Chemical chart for Pome Fruits, Stone Fruits, Nut Orchards, Pistachios, and Filberts.

EPA Chemical Number	Chemical	Formulation	Reentry Interval	Application Method	Application Equipment
030001	Acid	WP	48 hr.	Broadcast Ground or Spot treatment	Ground boom sprayers Hand held nozzle sprayer
030019	DMA	SC/L SC/S	48 hr.	Broadcast Ground or Spot treatment	Ground boom sprayers Hand held nozzle sprayer
030035	TIPA	SC/L	48 hr.	Broadcast Ground or Spot treatment	Ground boom sprayers Hand held nozzle sprayer
030025	IPA	SC/L	48 hr.	Broadcast Ground or Spot treatment	Ground boom sprayers Hand held nozzle sprayer
030016	DEA	SC/L	48 hr.	Broadcast Ground or Spot treatment	Ground boom sprayers Hand held nozzle sprayer
030004	Na	SC/L SC/S	12 hr.	Broadcast Ground or Spot treatment	Ground boom sprayers Hand held nozzle sprayer

STONE FRUITS

(Amines, salts and acid only)

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Postemergence	2.0 lbs. acid equivalent	For control of weeds on the orchard floor. For best results, apply when weeds are small and actively growing.

RESTRICTIONS AND LIMITATIONS FOR USE IN STONE FRUITS
PHI: Do not harvest stone fruit within 40 days of application.
Max seasonal rate: 4.0 lbs. acid equivalent per acre.
Do not cut orchard floor forage for hay within 7 days of application.
Allow at least 75 days between applications.
Do not make more than 2 applications per year.

NUT ORCHARDS, PISTACHIOS

(Amines, salts and acid only)

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Postemergence	2.0 lbs. acid equivalent	For control of weeds on the orchard floor. For best results, apply when weeds are small and actively growing.

RESTRICTIONS AND LIMITATIONS FOR USE IN NUT ORCHARDS, PISTACHIOS
PHI: Do not harvest nuts within 60 days of application.
Max seasonal rate: 4.0 lbs. acid equivalent per acre.
Do not cut orchard floor forage for hay within 7 days of application.
Allow at least 30 days between applications.
Do not make more than 2 applications per year.

FILBERTS

(Amines, salts and acid only)

CROP STAGE	MAXIMUM APPLICATION RATE	DIRECTIONS / Timing
Postemergence	1.0 lbs. acid equivalent per 100 gallons of spray solution	For control of suckers, spray to wet leaves and stems of suckers that are 6 to 8 inches in height during April through August.

RESTRICTIONS AND LIMITATIONS FOR USE IN FILBERTS[1]
PHI: Do not harvest nuts within 45 days of application.
Allow at least 30 days between applications.
Do not make more than 4 applications per year.

[1] A grazing restriction is not needed based on the results of the large animal residue study.

ESTABLISHED GRASS PASTURES, RANGELAND, AND PERENNIAL GRASSLANDS NOT IN AGRICULTURAL PRODUCTION (such as Conservation Reserve Program)

Type of Weeds	POSTEMERGENCE APPLICATION RATE	DIRECTIONS / Timing
Susceptible Annual and Biennial Broadleaf Weeds	1.0 lbs. a.e. / acre	For best results, apply when weeds are small and actively growing.
Biennial and Perennial Broadleaf Weeds (moderately susceptible)	1.0 to 2.0 lbs. a.e / acre	For best results, apply when weeds are small and actively growing.
Difficult to Control Weeds and Woody Plants	2.0 lbs. a.e. / acre	For best results, apply when weeds are small and actively growing. A second application may be required.
Spot Treatment	Use 2.0 lbs. a.e. herbicide per acre. For adequate coverage, mix XX qts. of this product to XX gallons water depending on plant density.	

RESTRICTIONS AND LIMITATIONS FOR USE IN PASTURES, RANGELAND, AND PERENNIAL GRASSLANDS NOT IN AGRICULTURAL PRODUCTION

PHI: Do not cut forage for hay within 7 days of application.

PHI: For program lands, such as CRP, consult program rules to determine whether grass or hay may be used. The more restrictive requirements of the program rules or this label must be followed.

Max seasonal rate: Apply no more than 4.0 lbs. acid equivalent per acre per use season.

Use 2 or more gallons of spray solution per acre.

Do not apply within 30 days of previous application.

If grass is to be cut for hay, Agricultural Use Requirements for the Worker Protection Standard are applicable.

EPA Chemical Number	Chemical	Formulation	Reentry Interval Non-Ag	Reentry Interval Ag	Application Method	Application Equipment
030001	Acid	WP EC	NR	48 hr.	Ground or aerial spray. Broadcast or spot	Aircraft: fixed wing or helicopter Ground: boom sprayers, spot or Hand held nozzle sprayer
030019	DMA	SC/L SC/S	NR	48 hr.	Ground or aerial spray. Broadcast or spot	Aircraft: fixed wing or helicopter Ground: boom sprayers, spot or Hand held nozzle sprayer
030063	2-EHE	EC	NR	12 hr.	Ground or aerial spray. Broadcast or spot	Aircraft: fixed wing or helicopter Ground: boom sprayers, spot or Hand held nozzle sprayer
030053	BEE	EC	NR	12 hr.	Ground or aerial spray. Broadcast or spot	Aircraft: fixed wing or helicopter Ground: boom sprayers, spot or Hand held nozzle sprayer
030035	TIPA	SC/L	NR	48 hr.	Ground or aerial spray. Broadcast or spot	Aircraft: fixed wing or helicopter Ground: boom sprayers, spot or Hand held nozzle sprayer
030025	IPA	SC/L	NR	48 hr.	Ground or aerial spray. Broadcast or spot	Aircraft: fixed wing or helicopter Ground: boom sprayers, spot or Hand held nozzle sprayer
030016	DEA	SC/L	NR	48 hr.	Ground or aerial spray. Broadcast or spot	Aircraft: fixed wing or helicopter Ground: boom sprayers, spot or Hand held nozzle sprayer
030004	Na	SC/L SC/S	NR	12 hr.	Ground or aerial spray. Broadcast or spot	Aircraft: fixed wing or helicopter Ground: boom sprayers, spot or Hand held nozzle sprayer

ORNAMENTAL TURF

golf courses, cemeteries, parks, sports fields, turfgrass, lawns and other grass areas

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Postemergence	1.5 lbs. acid equivalent	For best results, treat when weeds are young and actively growing.

RESTRICTIONS AND LIMITATIONS FOR USE IN TURF

Max seasonal rates: Do not apply more than 2 broadcast applications per year per treatment site.
This does not exclude spot treatments.

Do not apply this product in a way that will contact any person or pet, either directly or through drift.
Keep people and pets out of the area during application

Turf Reentry:

For liquid formulations: Do not allow people or pets to enter the treated area until sprays have dried.
For dry formulations: Do not allow people or pets to enter the treated areas until dust has settled.

GRASS GROWN FOR SEED AND SOD

CROP STAGE	MAXIMUM APPLICATION RATE	DIRECTIONS / Timing
Postemergence	2.0 lbs. acid equivalent	For best results, treat when weeds are young and actively growing.

RESTRICTIONS AND LIMITATIONS FOR USE IN GRASS GROWN FOR SEED AND SOD

PHI: Do not cut forage for hay within 7 days of application.
Max seasonal rate: Apply no more than 4.0 lbs. acid equivalent per acre per use season.
Use sufficient spray solution for thorough and uniform coverage, and no less than 2 gallons per acre.
Do not apply within 21 days of previous application.

EPA Chemical Number	Chemical	Formulation	Reentry Interval Seed/Sod	Application Method	Application Equipment
030001	Acid	WP EC G	48 hr.	Broadcast Ground or Spot treatment	Ground boom sprayers/spreaders Hand held nozzle sprayer Backpack / knapsack sprayer
030019	DMA	SC/L SC/S G	48 hr.	Broadcast Ground or Spot treatment	Ground boom sprayers/spreaders Hand held nozzle sprayer Backpack / knapsack sprayer
030063	2-EHE	EC G	12 hr.	Broadcast Ground or Spot treatment	Ground boom sprayers/spreaders Hand held nozzle sprayer Backpack / knapsack sprayer
030053	BEE	EC G	12 hr.	Broadcast Ground or Spot treatment	Ground boom sprayers/spreaders Hand held nozzle sprayer Backpack / knapsack sprayer
030035	TIPA	SC/L G	48 hr.	Broadcast Ground or Spot treatment	Ground boom sprayers/spreaders Hand held nozzle sprayer Backpack / knapsack sprayer
030025	IPA	SC/L G	48 hr.	Broadcast Ground or Spot treatment	Ground boom sprayers/spreaders Hand held nozzle sprayer Backpack / knapsack sprayer
030016	DEA	SC/L G	48 hr.	Broadcast Ground or Spot treatment	Ground boom sprayers/spreaders Hand held nozzle sprayer Backpack / knapsack sprayer
030004	Na	SC/S SC/L G	12 hr.	Broadcast Ground or Spot treatment	Ground boom sprayers/spreaders Hand held nozzle sprayer Backpack / knapsack sprayer

FALLOWLAND AND CROP STUBBLE

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Idle land, postharvest to crops, or between crops	2.0 lbs. acid equivalent	Apply to emerged broadleaf weeds. For best results, treat when weeds are young and actively growing.

RESTRICTIONS AND LIMITATIONS FOR USE IN FALLOWLAND AND CROP STUBBLE
PHI: Do not cut forage for hay within 7 days of application.
Max seasonal rate: 4.0 lbs. acid equivalent per acre.
Do not apply within 30 days of previous application.

PLANTING IN TREATED AREAS
Labeled Crops: Within 29 days following an application of this product, plant only those crops named as use sites on this or other registered 2,4-D labels. Follow more specific limitations, if any, provided in the directions for individual crops. Labeled crops may be at risk for crop injury or loss when planted soon after application, especially in the first 14 days. Degradation factors described below should be considered in weighing this risk.
Other Crops: All other crops may be planted 30 or more days following an application without concern for illegal residues in the planted crop. However, under certain conditions, there may be a risk of injury to susceptible crops. Degradation factors described below should be considered in weighing this risk. Under normal conditions, any crop may be planted without risk of injury if at least 90 days of soil temperatures above freezing have elapsed since application.
Degradation Factors: When planting into treated areas, the risk of crop injury is less if lower rates of product were applied and conditions following application have included warm, moist soil conditions that favor rapid degradation of 2,4-D. Risk is greater if higher rates of product were applied and soil temperatures have been cold and/or soils have been excessively wet or dry in the days following application.

EPA Chemical Number	Chemical	Formulation	Reentry Interval	Application Method	Application Equipment
030001	Acid	WP EC	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: Boom sprayers
030019	DMA	SC/L SC/S	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: Boom sprayers
030063	2-EHE	EC	12 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: Boom sprayers
030053	BEE	EC	12 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: Boom sprayers
030035	TIPA	SC/L	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: Boom sprayers
030025	IPA	SC/L	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: Boom sprayers
030016	DEA	SC/L	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: Boom sprayers
030004	Na	SC/L SC/S	12 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground: Boom sprayers

FORESTRY

Forest Site Preparation, Forest Roadsides, Brush Control, Established Conifer Release
(Including Christmas trees and reforestation areas)

WEEDS	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Annual broadleaf weeds **Biennial and perennial broadleaf weeds** **Brush**	4.0 lbs. Acid equivalent	Apply to emerged weeds and brush. For best results, treat when weeds and brush are young and actively growing.

RESTRICTIONS AND LIMITATIONS FOR USE IN FORESTRY
Max seasonal rate: For broadcast applications, apply no more than 4.0 lbs. acid equivalent per acre per 12 months.

TREE AND BRUSH CONTROL

(For controlling species such as alder, ash. aspen, birch, blackgum, cherry, elm, oak, sweetgum, tulip poplar, willow and others)

TREATMENT	MAXIMUM APPLICATION RATE	DIRECTIONS / Timing
Basal spray	8.0 lbs. acid equivalent per 100 gallons of diluent, preferably oil-containing mixture	Thoroughly wet the base and root collar of all stems until the spray begins to accumulate around the root collar at ground line. Also wetting stems with 2,4-D mixture may aid control.
Cut surface - Stumps	8.0 lbs. acid equivalent per 100 gallons of diluent, preferably oil-containing mixture	Apply as soon as possible after cutting trees. Thoroughly soak the entire stump with 2,4-D mixture. Also treat exposed roots and bark.
Frill	8.0 lbs. acid equivalent per 100 gallons of diluent, preferably oil-containing mixture	Make frills with an axe or other tool that can cut overlapping v-shaped notches through the bark in a continuous ring around the base of the tree. Treat freshly cut frills with as much 2,4-D mixture as they will hold.
Injection	1 to 2 ml of 4.0 lbs. acid equivalent formulation (or equivalent amount of another formulation) per injection site	Make injections as near to the root collar as possible, using one injection per inch of trunk dbh (4 1/2 feet). For resistant species such as hickory, injections should overlap. For best results, injections should be made during the growing season, May 15th through October 15th in many areas. The injection bit must penetrate the inner bark.

RESTRICTIONS AND LIMITATIONS FOR TREE AND BRUSH CONTROL
Max seasonal rate: For broadcast applications, apply no more than 4.0 lbs. acid equivalent per acre per 12 months.

Forestry

EPA Chemical Number	Chemical	Formulation	Reentry Interval	Application Method	Application Equipment
030001	Acid	WP EC	48 hr.	Ground or aerial spray Broadcast, spot, basal, frill, cut stump or injection	Aircraft: fixed wing or helicopter Ground: Boom sprayers, Hand held nozzle sprayer, Backpack / knapsack sprayer, tree injector
030019	DMA	SC/L SC/S	48 hr.	Ground or aerial spray Broadcast, spot, basal, frill, cut stump or injection	Aircraft: fixed wing or helicopter Ground: Boom sprayers, Hand held nozzle sprayer, Backpack / knapsack sprayer, tree injector
030063	2-EHE	EC	12 hr.	Ground or aerial spray Broadcast, spot, basal, frill, cut stump or injection	Aircraft: fixed wing or helicopter Ground: Boom sprayers, Hand held nozzle sprayer, Backpack / knapsack sprayer, tree injector
030053	BEE	EC	12 hr.	Ground or aerial spray Broadcast, spot, basal, frill, cut stump or injection	Aircraft: fixed wing or helicopter Ground: Boom sprayers, Hand held nozzle sprayer, Backpack / knapsack sprayer, tree injector
030035	TIPA	SC/L	48 hr.	Ground or aerial spray Broadcast, spot, basal, frill, cut stump or injection	Aircraft: fixed wing or helicopter Ground: Boom sprayers, Hand held nozzle sprayer, Backpack / knapsack sprayer, tree injector
030025	IPA	SC/L	48 hr.	Ground or aerial spray Broadcast, spot, basal, frill, cut stump or injection	Aircraft: fixed wing or helicopter Ground: Boom sprayers, Hand held nozzle sprayer, Backpack / knapsack sprayer, tree injector
030016	DEA	SC/L	48 hr.	Ground or aerial spray Broadcast, spot, basal, frill, cut stump or injection	Aircraft: fixed wing or helicopter Ground: Boom sprayers, Hand held nozzle sprayer, Backpack / knapsack sprayer, tree injector
030004	Na	SC/L SC/S	12 hr.	Ground or aerial spray Broadcast, spot, basal, frill, cut stump or injection	Aircraft: fixed wing or helicopter Ground: Boom sprayers, Hand held nozzle sprayer, Backpack / knapsack sprayer, tree injector

NON-CROPLAND

Such as fencerows, hedgerows, roadsides, ditches, rights-of-way, utility power lines, railroads, airports, industrial sites, and other non-crop areas

CROP STAGE	MAXIMUM APPLICATION RATE	DIRECTIONS / Timing
Postemergence (annual and perennial weeds)	2.0 lbs. acid equivalent	Apply to emerged weeds. For best results, treat when weeds are young and actively growing.
Postemergence (woody plants)[1,2]	4.0 lbs. acid equivalent	Apply to trees and brush when foliage is fully expanded and plants are actively growing.

RESTRICTIONS AND LIMITATIONS FOR USE IN NON-CROPLAND

Max seasonal rate: Apply no more than 4.0 lbs. acid equivalent per acre per use season.
Use 2 or more gallons of spray solution per acre.

When multiple applications of up to 2.0 lbs. acid equivalent per acre are utilized to reach the maximum seasonal use rate, do not make a repeat application within 30 days of the previous application.

1. **Woody Plants:** Up to 4.0 lbs. acid equivalent per acre may be applied in a single application to rights-of-way, including electrical power lines, communication lines, pipelines, highways and railroads that intersect wooded areas or stands of trees, brush and woody plants. Usage under this section is not applicable to treatment of commercial timber or other plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.

2. **High volume and low volume applications:**

a. For high spray volumes of 100-400 gallons per acre:

For broadcast applications, the maximum seasonal rate is 4.0 pounds of 2,4-D acid equivalent per acre per 12 months. Use 4.0 pounds of 2,4-D acid equivalent in 100 - 400 gallons of water.

The total spray volume per acre should be based upon the size and density of the woody plants and the spray equipment.

The maximum spray concentration is 0.48% acid equivalent on a weight to weight basis at the minimum spray volume of 100 gpa. See Table x below for the relationship between the spray volume and the maximum application rate.

For the spray preparation of all end use products, registrants will convert the amounts expressed as pounds of 2,4-D acid equivalent in Table x to volumes of formulated product and prepare their dilution tables for high volume applications (100 - 400 gpa).

b. For low spray volumes of 10-100 gallons per acre:

For broadcast applications, the maximum seasonal rate is 4.0 pounds of 2,4-D acid equivalent per acre per 12 months. Use 4.0 pounds of 2,4-D acid equivalent in 10 - 100 gallons of water.

Apply this product in a *minimum* spray volume of 10 gallons per acre. Larger plants will require the higher spray volumes (50 - 100 gallons per acre) to obtain sufficient coverage.

The maximum spray concentration is 4.8% 2,4-D acid equivalent on a weight to weight basis at the minimum spray volume of 10 gpa. See Table x below for the relationship between the spray volume and the maximum application rate.

For the spray preparation of all end use products, registrants will convert the amounts expressed as pounds of 2,4-D acid equivalent in Table x to volumes of formulated product and prepare their dilution tables for low volume applications (10 - 100 gpa).

Table x. Amounts (Pounds) of 2,4-D acid equivalents needed to prepare the spray concentrations of 0.12% to 4.8% wt/wt. with spray volumes of 10 - 400 gallons per acre.

SPRAY VOLUME (Gallons Water per Acre)	**(POUNDS) OF 2,4-D ACID EQUIVALENTS NEEDED FOR THESE SPRAY CONCENTRATIONS**						
	0.12%	**0.16%**	**0.24%**	**0.48%**	**0.96%**	**2.4%**	**4.8%**
10	0.10	0.13	0.20	0.40	0.80	2.00	**4.00**
20	0.20	0.27	0.40	0.80	1.60	**4.00**	
50	0.50	0.67	1.00	2.00	**4.00**		
100	1.00	1.33	2.00	**4.00**			
200	2.00	2.67	**4.00**				
300	3.00	**4.00**					
400	**4.00**						

EPA Chemical Number	Chemical	Formulation	Reentry Interval	Application Method	Application Equipment
030001	Acid	WP EC G	NA	Ground or aerial spray Broadcast or spot	Aircraft: fixed wing or helicopter Ground: Boom sprayers, spreaders, Hand held nozzle sprayer, Backpack / knapsack sprayer
030019	DMA	SC/L SC/S G	NA	Ground or aerial spray Broadcast or spot	Aircraft: fixed wing or helicopter Ground: Boom sprayers, spreaders, Hand held nozzle sprayer, Backpack / knapsack sprayer
030063	2-EHE	EC G	NA	Ground or aerial spray Broadcast or spot	Aircraft: fixed wing or helicopter Ground: Boom sprayers, spreaders, Hand held nozzle sprayer, Backpack / knapsack sprayer
030053	BEE	EC G	NA	Ground or aerial spray Broadcast or spot	Aircraft: fixed wing or helicopter Ground: Boom sprayers, spreaders, Hand held nozzle sprayer, Backpack / knapsack sprayer
030035	TIPA	SC/L G	NA	Ground or aerial spray Broadcast or spot	Aircraft: fixed wing or helicopter Ground: Boom sprayers, spreaders, Hand held nozzle sprayer, Backpack / knapsack sprayer
030025	IPA	SC/L G	NA	Ground or aerial spray Broadcast or spot	Aircraft: fixed wing or helicopter Ground: Boom sprayers, spreaders, Hand held nozzle sprayer, Backpack / knapsack sprayer
030016	DEA	SC/L G	NA	Ground or aerial spray Broadcast or spot	Aircraft: fixed wing or helicopter Ground: Boom sprayers, spreaders, Hand held nozzle sprayer, Backpack / knapsack sprayer
030004	Na	SC/S SC/L G	NA	Ground or aerial spray Broadcast or spot	Aircraft: fixed wing or helicopter Ground: Boom sprayers, spreaders, Hand held nozzle sprayer, Backpack / knapsack sprayer

AQUATIC WEED CONTROL
(irrigation ditchbank application)
(Amines, salts, acid and butoxyethanol ester only)

WEEDS AND BRUSH ON IRRIGATION CANAL DITCHBANKS	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Postemergence	2.0 lbs. acid equivalent	For best results, treat when weeds are young and actively growing.

RESTRICTIONS AND LIMITATIONS FOR USE ON IRRIGATION CANAL DITCHBANKS
Max seasonal rate: Apply no more than 4.0 lbs. acid equivalent per acre per use season.
Apply no more than 2 treatments per season.
Do not make a broadcast application within 30 days of previous broadcast application. Spot treatments are permitted.
Use 2 or more gallons of spray solution per acre.
Do not use on small canals with a flow rate less than 10 cubic feet per second (CFS) where water will be used for drinking purposes. CFS may be estimated by using the formula below. The approximate velocity needed for the calculation can be determined by observing the length of time that it takes a floating object to travel a defined distance. Divide the distance (ft.) by the time (sec.) to estimate velocity (ft. per sec.). Repeat 3 times and use the average to calculate CFS.

Average Width (ft.) x Average Depth (ft.) x Average Velocity (ft. per sec.) = CFS

For Ditchbank Weeds: Do not spray cross-stream to opposite bank. Do not allow boom spray to be directed onto water.
For Shoreline Weeds: Boom spraying onto water surface must be held to a minimum and allow no more than 2 foot overspray onto water with an average of less than 1 foot overspray to prevent introduction of greater than negligible amounts of chemical into the water.

EPA Chemical Number	Chemical	Formulation	Reentry Interval	Application Method	Application Equipment
030001	Acid	WP	NA	Boat or aerial spray Broadcast or spot	Aircraft: fixed wing or helicopter Ground: Boom sprayers, Hand held nozzle sprayer, Backpack / knapsack sprayer
030019	DMA	SC/L SC/S	NA	Boat or aerial spray Broadcast or spot	Aircraft: fixed wing or helicopter Ground: Boom sprayers, Hand held nozzle sprayer, Backpack / knapsack sprayer
030053	BEE	G	NA	Boat or aerial spreader Broadcast or spot	Aircraft: fixed wing or helicopter Boat granule spreaders
030035	TIPA	SC/L	NA	Boat or aerial spray Broadcast or spot	Aircraft: fixed wing or helicopter Ground: Boom sprayers, Hand held nozzle sprayer, Backpack / knapsack sprayer
030025	IPA	SC/L	NA	Boat or aerial spray Broadcast or spot	Aircraft: fixed wing or helicopter Ground: Boom sprayers, Hand held nozzle sprayer, Backpack / knapsack sprayer
030016	DEA	SC/L	NA	Boat or aerial spray Broadcast or spot	Aircraft: fixed wing or helicopter Ground: Boom sprayers, Hand held nozzle sprayer, Backpack / knapsack sprayer
030004	Na	SC/L SC/S	NA	Boat or aerial spray Broadcast or spot	Aircraft: fixed wing or helicopter Ground: Boom sprayers, Hand held nozzle sprayer, Backpack / knapsack sprayer

AQUATIC WEED CONTROL
(surface application for floating and emergent weeds)
(Amines, salts, acid and butoxyethanol ester only)

AQUATIC SITES WITH EMERGENT WEEDS	MAXIMUM APPLICATION RATE / Surface Acre	DIRECTIONS / Timing
Emergent aquatic weeds in ponds, lakes, reservoirs, marshes, bayous, drainage ditches, non-irrigation canals, rivers and streams that are quiescent or slow moving.	4.0 lbs. acid equivalent	Direct application to the foliage when weeds are actively growing. The maximum rate may be needed for mature plants or dense growth.

RESTRICTIONS AND LIMITATIONS FOR SURFACE APPLICATIONS TO EMERGENT AQUATIC WEEDS

Do not exceed 4.0 lbs. acid equivalent per surface acre per application.
Do not make a broadcast application within 21 days of previous broadcast application. Spot treatments are permitted.

Fish breathe dissolved oxygen in the water and decaying weeds also use oxygen. When treating continuous, dense weed masses, it may be appropriate to treat only part of the infestation at a time. For example, apply the product in lanes separated by untreated strips that can be treated after vegetation in treated lanes has disintegrated. During the growing season, weeds decompose in a 2 to 3 week period following treatment. Waters having limited and less dense weed infestations may not require partial treatments. Other local factors such as water exchange and sediment load can also influence the dissolved oxygen level.

Coordination and approval of local and state authorities may be required, either by letter of agreement or issuance of special permits for aquatic applications.

Water Use:

1. **Water for irrigation or sprays:**

   A. If treated water is intended to be used only for crops or non-crop areas that are labeled for direct treatment with 2,4-D such as pastures, turf or cereal grains, the treated water may be used to irrigate and/or mix sprays for these sites at anytime after the 2,4-D aquatic application.

   B. Due to potential phytotoxicity considerations, the following restrictions are applicable:

   If treated water is intended to be used to irrigate or mix sprays for plants grown in commercial nurseries and greenhouses; and other plants or crops that are not labeled for direct treatment with 2,4-D, the water must not be used unless one of the following restrictions has been observed:

   i. A setback distance from functional water intake(s) of ≥600 ft. was used for the application, or,

   ii. A waiting period of 7 days from the time of application has elapsed, or,

   iii. An approved assay indicates that the 2,4-D concentration is 100 ppb (0.1 ppm) or less at the water intake. Wait at least 3 days after application before initial sampling at water intake.

2. **Drinking water (potable water):**

   A. Consult with appropriate state or local water authorities before applying this product to public waters. State or local agencies may require permits.

   The potable water use restrictions on this label are to ensure that consumption of water by the public is allowed only when the concentration of 2,4-D in the water is less than the MCL (Maximum Contaminant Level) of 70 ppb. Applicators should consider the unique characteristics of the treated waters to assure that 2,4-D concentrations in potable water do not exceed 70 ppb at the time of consumption.

   B. For floating and emergent weed applications, the drinking water setback distance from functioning potable water intakes is ≥600 ft.

C.

If no setback distance of ≥600 ft. is used for the application, applicators or the authorizing organization must provide a drinking water notification prior to a 2,4-D application to the party responsible for a public water supply or to individual private water users. Notification to the party responsible for a public water supply or to individual private water users must be done in a manner to assure that the party is aware of a water use restrictions when this product is applied to potable water.

The following is an example of an example of notification via posting, but other methods of notification which convey the above restrictions may be used and may be required in some cases under state or local law or as a condition of a permit.

Example:
Posting notification should be located every 250 feet including the shoreline of the treated area and up to 250 feet of shoreline past the application site to include immediate public access points. Posting must include the day and time of application. Posting may be removed if analysis of a sample collected at the intake 3 or more days following application shows that the concentration in the water is less than 70 ppb (100 ppb for irrigation or sprays), or after 7 days following application, whichever occurs first.

Text of notification: Wait 7 days before diverting functioning surface water intakes from the treated aquatic site to use as drinking water, irrigation, or sprays, unless water at functioning drinking water intakes is tested at least 3 days after application and is demonstrated by assay to contain not more than 70 ppb 2,4-D (100 ppb for irrigation or sprays).
Application Date: _____ Time: _____ .

D.

Following each application of this product, treated water must not be used for drinking water unless one of the following restrictions has been observed:

i. A setback distance from functional water intake(s) of ≥600 ft. was used for the application, or,

ii. A waiting period of at least 7 days from the time of application has elapsed, or,

iii. An approved assay indicates that the 2,4-D concentration is 70 ppb (0.07 ppm) or less at the water intake. Sampling for drinking water analysis should occur no sooner than 3 days after 2,4-D application. Analysis of samples must be completed by a laboratory that is certified under the Safe Drinking Water Act to perform drinking water analysis using a currently approved version of analytical Method Number 515, 555, other methods for 2,4-D as may be listed in Title 40CFR, Part 141.24, or Method Number 4015 (immunoassay of 2,4-D) from U.S. EPA Test Methods for Evaluating Solid Waste SW-846.

E. Note: Existing potable water intakes that are no longer in use, such as those replaced by a connection to a municipal water system or a potable water well, are not considered to be functioning potable water intakes.

F. Drinking water setback distances do not apply to terrestrial applications of 2,4-D adjacent to water bodies with potable water intakes.

3. Swimming (2,4-D butoxyethanol ester only):

   A. Do not swim in treated water for a minimum of 24 hours after application.

   B. Users must provide the following notification prior to performing a 2,4-D BEE application. Notification to the party responsible for the public swimming area or to individual private users must be done in a manner to assure that the party is aware of the swimming restrictions when this product is applied to water. The following is an example of a notification via posting, but other methods of notification which convey the above restrictions may be used and may be required in some cases under state or local law or as a condition of a permit.
   Example:
   Posting notification should be located every 250 feet including the shoreline of the treated area and up to 250 feet of shoreline past the application site to include immediate public access points.

   Text of Notification: Do not swim in treated water for a minimum of 24 hours after application. Application Date: _____ Time: _____ .

4. Except as stated above, there are no restrictions on using water from treated areas for swimming, fishing, watering livestock or domestic purposes.

- For EPA chemical numbers, reentry, application method and application equipment:
  See Aquatic Weed Control (ditchbank application).

AQUATIC WEED CONTROL
(Surface application or subsurface injection for submersed weeds)
(Amines, salts, acid and butoxyethanol ester only)

AQUATIC SITES WITH SUBMERSED WEEDS	MAXIMUM APPLICATION RATE	DIRECTIONS / Timing
Aquatic weeds in ponds, lakes, reservoirs, marshes, bayous, drainage ditches, canals, rivers and streams that are quiescent or slow moving	10.8 lbs. acid equivalent per acre foot (see Table 1 below)	For best results, apply in spring or early summer. A second treatment may be needed when weeds show signs of recovery, but no later than September in most areas.

Table 1
AMOUNT TO APPLY FOR A TARGET SUBSURFACE CONCENTRATION

Surface Area	Average Depth	For typical conditions – 2 ppm (2,4-D a.e./acre)	For difficult conditions – 4 ppm * (2,4-D a.e./acre)
1 acre	1 ft.	5.4 lbs.	10.8 lbs.
	2 ft.	10.8 lbs.	21.6 lbs.
	3 ft.	16.2 lbs.	32.4 lbs.
	4 ft.	21.6 lbs.	43.2 lbs.
	5 ft.	27.0 lbs.	54.0 lbs.

* Examples include spot treatments of pioneer colonies of Eurasian Water Milfoil and certain difficult to control aquatic species.

RESTRICTIONS AND LIMITATIONS FOR AQUATIC SITES WITH SUBMERSED WEEDS

Do not exceed 10.8 lbs. acid equivalent per acre foot.

Fish breathe oxygen in the water and a water-oxygen ratio must be maintained. Decaying weeds use up oxygen, but during the period when applications should be made, the weed mass is fairly sparse and the weed decomposition rate is slow enough that the water-oxygen ratio is not disturbed by treating the entire area at one time. If treatments must be applied later in the season when the weed mass is dense and repeat treatments are needed, apply product in lanes, leaving buffer strips which can then be treated when vegetation in treated lanes has disintegrated. During the growing season, weeds decompose in a 2 to 3 week period following treatment.

Do not apply within 21 days of previous application.

When treating moving bodies of water, applications must be made while traveling upstream to prevent concentration of 2,4-D downstream from the application.

Coordination and approval of local and state authorities may be required, either by letter of agreement or issuance of special permits for such use.

Water Use:

1. **Water for irrigation or sprays:**
   A. If treated water is intended to be used only for crops or non-crop areas that are labeled for direct treatment with 2,4-D such as pastures, turf or cereal grains, the treated water may be used to irrigate and/or mix sprays for these sites at anytime after the 2,4-D aquatic application.
   B.
   Due to potential phytotoxicity and/or residue considerations, the following restrictions are applicable:
   If treated water is intended to be used to irrigate or mix sprays for unlabeled crops, non-crop areas or other plants not labeled for direct treatment with 2,4-D, the water must not be used unless one of the following restrictions has been observed:
   i. A setback distance described in the Drinking Water Setback Table was used for the application, or,
   ii.

A waiting period of 21 days from the time of application has elapsed, or,

iii. An approved assay indicates that the 2,4-D concentration is 100 ppb (0.1 ppm) or less at the water intake. See Table 3 for the waiting period after application but before taking the initial sampling at water intake.

2. **Drinking water (potable water):**

A. Consult with appropriate state or local water authorities before applying this product to public waters. State or local agencies may require permits.

The potable water use restrictions on this label are to ensure that consumption of water by the public is allowed only when the concentration of 2,4-D in the water is less than the MCL (Maximum Contaminant Level) of 70 ppb. Applicators should consider the unique characteristics of the treated waters to assure that 2,4-D concentrations in potable water do not exceed 70 ppb at the time of consumption.

B. For submersed weed applications, the drinking water setback distances from functioning potable water intakes are provided in Table 2 Drinking Water Setback Distance (below).

C. If no setback distance from the Drinking Water Setback Table (Table 2) is to be used for the application, applicators or the authorizing organization must provide a drinking water notification and an advisory to shut off all potable water intakes prior to a 2,4-D application. Notification to the party responsible for a public water supply or to individual private water users must be done in a manner to assure that the party is aware of the water use restrictions when this product is applied to potable water.

The following is an example of an example of notification via posting, but other methods of notification which convey the above restrictions may be used and may be required in some cases under state or local law or as a condition of a permit.

Example:
Posting notification should be located every 250 feet including the shoreline of the treated area and up to 250 feet of shoreline past the application site to include immediate public access points. Posting should include the day and time of application. Posting may be removed if analysis of a sample collected at the intake no sooner than stated in Table 3 (below) shows that the concentration in the water is less than 70 ppb (100 ppb for irrigation or sprays), or after 21 days following application, whichever occurs first.

Text of notification: Wait 21 days before diverting functioning surface water intakes from the treated aquatic site to use as drinking water, irrigation, or sprays, unless water at functioning drinking water intakes is tested no sooner than (insert days from Table 3) and is demonstrated by assay to contain not more than 70 ppb 2,4-D (100 ppb for irrigation or sprays).
Application Date: _____ Time: _____ .

D. Following each application of this product, treated water must not be used for drinking water unless one of the following restrictions has been observed:

i. A setback distance described in the Drinking Water Setback Distance Table was used for the application, or,

ii. A waiting period of at least 21 days from the time of application has elapsed, or,

iii. An approved assay indicates that the 2,4-D concentration is 70 ppb (0.07 ppm) or less at the water intake.
Sampling for drinking water analysis should occur no sooner than stated in Table 3. Analysis of samples must be completed by a laboratory that is certified under The Safe Drinking Water Act to perform drinking water analysis using a currently approved version of analytical Method Number 515, 555, other methods for 2,4-D as may be listed in Title 40CFR, Part 141.24, or Method Number 4015 (immunoassay of 2,4-D) from U.S. EPA Test Methods for Evaluating Solid Waste SW-846.

E. Note: Existing potable water intakes that are no longer in use, such as those replaced by a connection to a municipal water system or a potable water well, are not considered to be functioning potable water intakes.

F. Drinking water setback distances do not apply to terrestrial applications of 2,4-D adjacent to water bodies with potable water intakes.

3. **Swimming (2,4-D butoxyethanol ester only):**

A. Do not swim in treated water for a minimum of 24 hours after application.

B. Users must provide the following notification prior to performing a 2,4-D BEE application. Notification to the party responsible for the public swimming area or to individual private users must be done in a manner to assure that the party is aware of the swimming restrictions when this product is applied to water. The following is an example of a notification via posting, but other methods of notification which convey the above restrictions may be used and may be required in some cases under state or local law or as a condition of a permit.

Example:
Posting notification should be located every 250 feet including the shoreline of the treated area and up to 250 feet of shoreline past the application site to include immediate public access points.

Text of Notification: Do not swim in treated water for a minimum of 24 hours after application. Application Date: _____ Time: _____ .

4. Except as stated above, there are no restrictions on using water from treated areas for swimming, fishing, watering livestock or domestic purposes.

Table 2 Drinking Water Setback Distance
For Submersed Weed Applications

Application Rate and Minimum Setback Distance (feet) from functioning potable water intake			
1 ppm*	**2 ppm***	**3 ppm***	**4 ppm***
600	1200	1800	2400

* ppm acid equivalent target water concentration

Table 3 Sampling for Drinking Water Analysis After 2,4-D Application
For Submersed Weed Applications

Minimum Days After Application Before Initial Water Sampling at the functioning potable water intake			
1 ppm*	**2 ppm***	**3 ppm***	**4 ppm***
5	10	10	14

* ppm acid equivalent target water concentration

- For EPA chemical numbers, reentry, application method and application equipment: See Aquatic Weed Control (ditchbank application).

POTATOES

Fresh Market Only

CROP STAGE	MAXIMUM APPLICATION RATE	DIRECTIONS / Timing
Postemergence	0.07 lbs. acid equivalent	Make first application when potatoes are in the pre-bud stage (about 7 to 10 inches high) and Make a second application about 10 to 14 days later.

RESTRICTIONS AND LIMITATIONS FOR USE IN POTATOES
PHI: Do not harvest within 45 days of application.
Max seasonal rate: 0.14 lbs. acid equivalent per acre.
Do not exceed two applications per crop.

EPA Chemical Number	Chemical	Formulation	Reentry Interval	Application Method	Application Equipment
030001	Acid	WP EC	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground boom sprayers
030019	DMA	SC/L SC/S	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground boom sprayers
030063	2-EHE	EC	12 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground boom sprayers
030053	BEE	EC	12 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground boom sprayers
030035	TIPA	SC/L	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground boom sprayers
030025	IPA	SC/L	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground boom sprayers
030016	DEA	SC/L	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground boom sprayers
030004	Na	SC/L SC/S	12 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground boom sprayers

ASPARAGUS

(Amines, salts or acid only – See chemical listing after strawberries)

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS/ Timing
After cutting	2.0 lbs. acid equivalent	Apply on actively growing weeds.

RESTRICTIONS AND LIMITATIONS FOR USE in ASPARAGUS

PHI: Do not harvest within 3 days of application.

Max seasonal rate: 4.0 lbs. acid equivalent per acre.

Do not exceed two applications per crop.

Do not apply within 30 days of previous application.

HOPS

(Amines, salts or acid only)
(See chemical listing after strawberries)

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS/ Timing
Post emergence	0.5 lbs. acid equivalent	Make application as a directed treatment to the row middles (directed to ground)

RESTRICTIONS AND LIMITATIONS FOR USE in HOPS

PHI: Do not harvest within 28 days of application.

Limited to 3 application per crop cycle.

Max seasonal rate: 1.5 lbs. acid equivalent per acre.

Do not apply within 30 days of previous application.

STRAWBERRIES

(Amines, salts or acid only)

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Dormant or after last picking	1.5 lbs. acid equivalent	Apply to established plantings when strawberries have gone into dormancy or soon after the last picking.

RESTRICTIONS AND LIMITATIONS FOR USE in STRAWBERRIES

Max seasonal rate: 1.5 lbs. acid equivalent per acre.

Do not apply in California or Florida.

EPA Chemical Number	Chemical	Formulation	Reentry Interval	Application Method	Application Equipment
030001	Acid	WP	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground boom sprayers
030019	DMA	SC/L SC/S	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground boom sprayers
030035	TIPA	SC/L	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground boom sprayers
030025	IPA	SC/L	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground boom sprayers
030016	DEA	SC/L	48 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground boom sprayers
030004	Na	SC/L SC/S	12 hr.	Ground or aerial spray Broadcast	Aircraft: fixed wing or helicopter Ground boom sprayers

LOW BUSH BLUEBERRIES

(Amines, salts or acid only - See chemical listing after high bush blueberries)

CROP STAGE	MAXIMUM APPLICATION RATE	DIRECTIONS / Timing
Postemergence	Wiper solution containing 0.0375 lbs./gallon (4.5 g/l) 2,4-D acid equivalent.	Make directed wipe or spot applications when weed tops are above the crop.
Postharvest	Solution containing 1.0 lb. acid equivalent per 10 gallons of oil.	Make directed application to cut hardwoods in row middles in summer or fall after harvest.

RESTRICTIONS AND LIMITATIONS FOR USE IN BLUEBERRIES
Max seasonal rate: Not applicable – spot treatment.
Avoid herbicide contact with blueberry plant foliage.
Apply only in the nonbearing year.

HIGH BUSH BLUEBERRIES

(Amines, salts or acid only)

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Postemergence	1.4 lbs acid equivalent	Make directed or shielded application in the spring.
Postharvest	1.4 lbs acid equivalent	Make directed application to row middles in summer or fall after harvest.

RESTRICTIONS AND LIMITATIONS FOR USE IN BLUEBERRIES
PHI: Do not harvest within 30 days of application.
Max seasonal rate: 2.8 lbs. acid equivalent per acre.
Avoid herbicide contact with blueberry plant foliage.

EPA Chemical Number	Chemical	Formulation	Reentry Interval	Application Method	Application Equipment
030001	Acid	WP	48 hr.	Directed, ground wipe or spot application	Wick or directed boom sprayer, Hand held nozzle sprayer, Backpack / knapsack sprayer
030019	DMA	SC/L SC/S	48 hr.	Directed, ground wipe or spot application	Wick or directed boom sprayer, Hand held nozzle sprayer, Backpack / knapsack sprayer
030035	TIPA	SC/L	48 hr.	Directed, ground wipe or spot application	Wick or directed boom sprayer, Hand held nozzle sprayer, Backpack / knapsack sprayer
030025	IPA	SC/L	48 hr.	Directed, ground wipe or spot application	Wick or directed boom sprayer, Hand held nozzle sprayer, Backpack / knapsack sprayer
030016	DEA	SC/L	48 hr.	Directed, ground wipe or spot application	Wick or directed boom sprayer, Hand held nozzle sprayer, Backpack / knapsack sprayer
030004	Na	SC/L SC/S	12 hr.	Directed, ground wipe or spot application	Wick or directed boom sprayer, Hand held nozzle sprayer, Backpack / knapsack sprayer

GRAPES

(For Use in California Only)
(Amines, salts and acid only)

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Apply after shatter following bloom and before grape shoots reach the ground, or during dormant season.	1.36 lbs. acid equivalent	Use hooded boom sprayer or equivalent to direct coarse spray to weeds and minimize potential contact with grape foliage, shoots or stems.

RESTRICTIONS AND LIMITATIONS FOR USE IN GRAPES
PHI: Do not harvest grapes within 100 days of application.
Max seasonal rate: 1.36 lbs. acid equivalent.
Do not apply to grape foliage, shoots or stems.

EPA Chemical Number	Chemical	Formulation	Reentry Interval	Application Method	Application Equipment
030001	Acid	WP	48 hr.	Ground directed	Hooded boom sprayer or equivalent to direct spray
030019	DMA	SC/L SC/S	48 hr.	Ground directed	Hooded boom sprayer or equivalent to direct spray
030035	TIPA	SC/L	48 hr.	Ground directed	Hooded boom sprayer or equivalent to direct spray
030025	IPA	SC/L	48 hr.	Ground directed	Hooded boom sprayer or equivalent to direct spray
030016	DEA	SC/L	48 hr.	Ground directed	Hooded boom sprayer or equivalent to direct spray
030004	Na	SC/L SC/S	12 hr.	Ground directed	Hooded boom sprayer or equivalent to direct spray

CRANBERRIES

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Dormant	4.0 lbs. acid equivalent **(Granular ester only)****	Make broadcast application in the dormant season.
Postemergence	1.2 lbs. acid equivalent **(Amines, salts and acid only)**	Make directed wipe or spot applications when weed tops are above crop.

RESTRICTIONS AND LIMITATIONS FOR USE IN CRANBERRIES
PHI: Do not harvest within 30 days of application.
Max seasonal rate: 4 lbs. acid equivalent per acre in the dormant season and 2.4 lbs. acid equivalent in the growing season.
Dormant: Make only one dormant application per crop.
Postemergence: Do not exceed two postemergence applications per crop.

EPA Chemical Number	Chemical	Formulation	Reentry Interval	Application Method	Application Equipment
030001	Acid	WP EC	48 hr.	Ground wipe or spot	Wick or Hand held nozzle sprayer Backpack / knapsack sprayer
030019	DMA	SC/L SC/S	48 hr.	Ground wipe or spot	Wick or Hand held nozzle sprayer Backpack / knapsack sprayer
** 030063	2-EHE	G	12 hr.	Ground granule spreader	Granule spreader
** 030053	BEE	G	12 hr.	Ground granule spreader	Granule spreader
030035	TIPA	SC/L	48 hr.	Ground wipe or spot	Wick or Hand held nozzle sprayer Backpack / knapsack sprayer
030025	IPA	SC/L	48 hr.	Ground wipe or spot	Wick or Hand held nozzle sprayer Backpack / knapsack sprayer
030016	DEA	SC/L	48 hr.	Ground wipe or spot	Wick or Hand held nozzle sprayer Backpack / knapsack sprayer
030004	Na	SC/L SC/S	12 hr.	Ground wipe or spot	Wick or Hand held nozzle sprayer Backpack / knapsack sprayer

** The granular formulation of 2-EHE was used in the IR-4 RAC study, but is not supported for an aquatic use pattern. The registrant intends to bridge the data to the granular formulation of BEE, which is supported for aquatic use.

CITRUS

(Isopropyl ester only)

CROP STAGE	MAXIMUM APPLICATION RATE / Acre	DIRECTIONS / Timing
Growing Navel oranges, Valencia oranges and grapefruit – To increase fruit size	23 to 45 grams acid equivalent per acre (approximately 0.05 to 0.1 lbs. per acre) based on fruit size at time of application	Approximate fruit diameter less than 0.75 inch for oranges and 1 inch for grapefruit.
Growing Navel oranges and Valencia oranges – To reduce pre-harvest fruit drop	up to 200 ppm for aerial and ground concentrate applications	Apply in September through January.
Fall sprays on lemons, Navel oranges, Valencia oranges and Tangelos - To prevent pre-harvest drop of mature fruit and leaves the following spring	4 to 24 ppm depending on specific application	Apply in fall oil, water or whitewash sprays according to local recommendations.
Postharvest packing house application to lemons - To retain buttons	500 ppm	Apply in water or water-wax emulsion after the final fresh water rinse of fruit. Incompatible with nitrogen trichloride treatment.

RESTRICTIONS AND LIMITATIONS FOR USE IN CITRUS
PHI: Do not harvest within 7 days of application to growing fruit.

EPA Chemical Number	Chemical	Formulation	Reentry Interval	Application Method	Application Equipment
030066	IPE	EC	12 hr.	Ground or aerial spray: Broadcast or directed Increase fruit size or Reduce pre-harvest drop	Aircraft: fixed wing or helicopter or Ground sprayers
030066	IPE	EC	None	Lemon dip or Spray application	Dip or spray equipment at post-harvest processing

SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Droplet Size
When applying sprays that contain 2,4-D as the sole active ingredient, or when applying sprays that contain 2,4-D mixed with active ingredients that require a Coarse or coarser spray, apply only as a Coarse or coarser spray (ASAE standard 572) or a volume mean diameter of 385 microns or greater for spinning atomizer nozzles.

When applying sprays that contain 2,4-D mixed with other active ingredients that require a Medium or more fine spray, apply only as a Medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

Wind Speed
Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition and there are not sensitive areas (including, but not limited to, residential areas, bodies of water, known habitat for non-target species, non-target crops) within 250 feet downwind. If applying a Medium spray, leave one swath unsprayed at the downwind edge of the treated field.

Temperature Inversions
If applying at wind speeds less than 3 mph, the applicator must determine if:
a) conditions of temperature inversion exist, or
b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

Susceptible Plants
Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption. Susceptible crops include, but are not limited to, cotton, okra, flowers,
grapes (in growing stage), fruit trees (foliage), soybeans (vegetative stage), ornamentals, sunflowers, tomatoes, beans, and other vegetables, or tobacco. Small amounts of spray drift that might not be visible may injure susceptible broadleaf plants.

Other State and Local Requirements
Applicators must follow all state and local pesticide drift requirements regarding application of 2,4-D herbicides. Where states have more stringent regulations, they must be observed.

Equipment
All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

Additional requirements for aerial applications:

The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter. Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. This requirement does not apply to forestry or rights-of-way applications.
When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this by adjusting the path of the aircraft upwind.

Additional requirements for ground boom application:

Do not apply with a nozzle height greater than 4 feet above the crop canopy.

Additional requirements for liquid products applied as a spray and containing an ester form of 2,4-D (e.g. 2,4-D butoxyethyl ester, 2,4-D ethylhexyl ester, 2,4-D isopropyl ester):

2,4-D esters may volatilize during conditions of low humidity and high temperatures. Do not apply during conditions of low humidity and high temperatures.