

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

July 13, 2023

Mr. Zack Chesser Regulatory Labeling Manager UPL NA Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406

Subject: Label and CSF Amendment – Amended Basic CSF; Amended Label to Incorporate Interim Decision Mitigation Language for Copper Compounds. Product Name: Current Aquatic Herbicide EPA Registration Number: 70506-248 Application Date: December 16, 2016 Decision Number(s): 524851

Dear Mr. Chesser:

The amended label and Confidential Statement of Formula (CSF) referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, are acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Copper Compounds Interim Decision, and has concluded that your submission is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you

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release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Please note that the record for this product currently contains the following CSF:

• Basic CSF dated 04/07/2023

Any CSFs other than those listed above are superseded/no longer valid.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Linda Boccuzzo at 202-566-1121 or at <u>boccuzzo.linda@epa.gov</u>.

Sincerely,

Kable Bo Davis Senior Regulatory Specialist Registration Division Office of Pesticide Programs

ATTACHMENT

ACCEPTED		OPPER	GROUP	NOT CLASSIFIED	HERBICIDE
07/13/2023 Under the Federal Insecticide, Fungicide					
and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 70506-248	AQ		RENT® HERBIC	IDE	

#### For use in Lakes, Potable Water Reservoirs, Ponds, Fish Hatcheries and Raceways, Crop and Non-Crop Irrigation Conveyance Systems (Ditches, Canals and Laterals)

# Water treated with Current may be used immediately after treatment for recreational activities.

ACTIVE INGREDIENT	
Copper ethylenediamine complex (CAS No. 13426-91-0)	22.9%*
OTHER INGREDIENTS	77.1%
TOTAL	100.00%
-	

\*8.0% elemental copper One Gallon Contains 0.8 Pounds of Elemental Copper

# KEEP OUT OF REACH OF CHILDREN WARNING/AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.) [OPTIONAL REFERRAL STATEMENT FOR COMMERCIAL PACKAGING: See inside label booklet for

additional precautionary statements and directions for use.]

FIRST AID				
IF SWALLOWED:	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>			
IF IN EYES:	<ul> <li>Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>Remove contact lenses, if present, after the first five minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>			
IF ON SKIN OR CLOTHING:	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>			
IF INHALED:	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>			
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies involving this product, contact Rocky Mountain Poison and Drug Safety at 1-866-673-6671.				

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC at 1-800-424-9300.

Net Contents: \_\_\_\_\_Gallons

UPL NA Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406 • 1-800-438-6071

EPA Registration No. 70506-248 Batch/Lot No.:

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING

May be fatal if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

# PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### Mixers, loaders, applicators, and other handlers must wear the following:

- Long-sleeved shirt and long pants,
- Shoes and socks, and

• Chemical-resistant gloves made of barrier laminate, butyl rubber  $\geq 14$  mils, nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, natural rubber  $\geq 14$  mils, polyethylene, polyvinyl chloride  $\geq 14$  mils, or viton  $\geq 14$  mils.

# **USER SAFETY REQUIREMENTS**

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

# USER SAFETY RECOMMENDATIONS

#### Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

# ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Waters treated with this product may be hazardous to aquatic organisms. Treatment of aquatic weeds and algae can result in oxygen loss from decomposition of dead algae and weeds. This oxygen loss can cause fish and invertebrate suffocation. To minimize this hazard, do not treat more than 1/2 of the body of water to avoid depletion of oxygen due to decaying vegetation. Wait 14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Consult with the State or local agency with primary responsibility for regulating pesticides before applying to public waters, to determine if a permit is required.

Certain water conditions including low pH (< 6.5), low dissolved organic carbon (DOC) levels (3.0 mg/L or lower), and "soft" waters (i.e., alkalinity less than 50 mg/L), increases the potential acute toxicity to non-target aquatic organisms.

**Fish Advisory Statement:** This copper product is toxic to fish and aquatic organisms. Unlike most organic pesticides, copper is an element and will not break down in the environment and will therefore accumulate in sediment with repeated applications. Copper is a micronutrient, but its pesticidal application rate exceeds the amount of copper needed as a nutrient.

# **DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

# **USE RESTRICTIONS:**

- Apply this product outdoors only as specified in the directions for use on this EPA approved label.
- Application of this product through any type of aerial application method is strictly prohibited.
- Polymer applications of this product are prohibited in the state of California.
- Do not apply this product in a way that it will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.
- For applications in waters destined for use as drinking water, those waters must receive additional and separate potable water treatment. Do not apply more than 1.0 ppm as metallic copper in these waters.
- For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

# For use in Lakes, Potable Water Reservoirs, Ponds, Fish Hatcheries and Raceways, Crop and Non-Crop Irrigation Conveyance Systems (Ditches, Canals and Laterals)

Waters treated with this product may be hazardous to aquatic organisms. Treatment of aquatic weeds and algae can result in oxygen loss from decomposition of dead biomass. This oxygen loss can cause fish and invertebrate suffocation. To minimize this hazard, do not treat more than  $\frac{1}{2}$  of the water body (excluding water infrastructure and constructed conveyances such as drainage canals, ditches and pipelines or intakes and aqueducts for drinking water or irrigation use) to avoid depletion of oxygen due to decaying vegetation.

Wait at least 14 days between treatments. Begin treatment along the shore and proceed outward in bands to allow fish to move into untreated areas. Consult with the state or local agency with primary responsibility for regulating pesticides before applying to public waters to determine if a permit is required. Application of algaecides to high density blooms of cyanobacteria can result in the release of intracellular contents into the water. Some of these intracellular compounds are known mammalian hepato- and nervous system toxins. Therefore, to minimize the risk of toxin leakage, manage cyanobacteria are present at high density. In situations where rapidly reproducing toxic algal species pose a public health threat to drinking or recreational water resources, applicators must receive authorization from applicable state, local or tribal water resources authorities to apply copper at intervals shorter than 14 days should the circumstance demand.

Certain water conditions including low pH ( $\leq 6.5$ ), low dissolved organic carbon (DOC) levels (3.0 mg/L or lower) and "soft" waters (ie., alkalinity less than 50 mg/L) increases the potential acute toxicity to non-target aquatic organisms. the application rates on this label are appropriate for water with pH values > 6.5, DOC levels > 3.0 mg/L, and alkalinity greater than 50 ppm. Avoid treating waters with pH values < 6.5, DOC levels < 3.0, and alkalinity less than 50 ppm (e.g. soft or acid waters), as trout and other sensitive species of fish may be killed under such conditions if present.

Consult your state department of natural resources or fish and game agency before applying this product to public waters. Permits may be required before treating such waters.

**Pre-Application Dose Determination:** For algae and aquatic plant treatments, applicators should conduct initial dose determination tests simulating a full-scale treatment program to determine the minimum efficacious concentrations for eliminating the target species, unless an effective dose is already known for the given target pest population.

#### **PRODUCT INFORMATION**

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable use restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Unless specifically prohibited by the mix partner label, Current may be tank mixed with diquat, endothall, flumioxazin, and fluridone registered products as a part of a broader spectrum weed control program.

Because Current works through absorption into the plant, it must be applied in a way that maximizes contact with the target aquatic weeds. Apply Current during periods of active weed growth to the leaf surfaces in areas of dense weed foliage. Algae and silt in the water column, or on the weed surfaces, will reduce the herbicidal effect of Current by competitively removing the product from the water column. Interference with Current's activity due to the presence of algae can be mitigated by tank mixing Current with an algaecide.

Surface applications of Current are to be made using a land-based sprayer or spray boat. Weighted trailing hoses are recommended for subsurface applications. Where appropriate, Current can be applied as an invert emulsion, or as an admixture with a suitable polymer, (see specific instructions, and only select adjuvants approved for application in food crop production). In order to assure uniform coverage of the treated area, the applicator may use Current as an undiluted product or may make an initial dilution prior to application.

Because it must be absorbed into the plant to be effective, applications of Current are to be made when contact times of at least 12 to 24 hours can be obtained. Effective treatment is indicated by the submergence of target vegetation 3 to 7 days after treatment. If necessary, repeat applications of Current may be made. Applicator must wait 14 days before re-treatment. The full effect of the treatment will require up to six weeks after the initial effect is observed.

Solutions of Current with cupric ion concentrations greater than 1.0 ppm may cause non-target plant injury. Do not allow sprays to drift over crops, ornamentals, grass or other desirable plants. Observe all label restrictions.

#### **RESISTANCE MANAGEMENT**

Do not apply more than 21.9 lbs of metallic copper per acre-foot to whole waterbodies per year for weed and algae control.

Do not apply more than 1 ppm in a single application.

Do not make more than 8 applications per year.

# Do not apply more than 46.6 lbs. of metallic copper per acre-foot per year to water management units protect drinking and recreational water resources from toxic algae blooms.

Water bodies or management units should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Water bodies or management units should be scouted after application to verify that the treatment was effective.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

Report any incidence of non-performance of this product against a particular weed species to your UPL NA Inc. retailer, representative or call 1-800-438-6071. If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further reproduction.

Implement the Early Detection, Rapid Response practice and Maintenance Control by using the following practices where possible:

Identify weeds present in a management unit through scouting or history of the water body and understand the biology of target species.

Applications should target weeds when populations are small and there is low biomass, early in the season to maximize efficacy.

Applications should be made so that the herbicide contacts the weed. Use the appropriate application method for the use site/weed/chemical combination.

Weed escapes should not be allowed to go to seed or produce asexual vegetative propagules.

Use a diversified approach toward weed management. Whenever possible incorporate multiple weed-control practices such as mechanical control, biological management practices, and rotation of MOAs (Modes of Action).

Time applications to have the highest probability for control and minimize need for follow-up control measures. Apply during conditions that minimize herbicide degradation (light/temperature/microbes) and/or dissipation (water exchange).

Contact your local sales representative, local water management agency, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of actions for each target weed.

#### Mandatory Spray Drift Management

## **Ground Boom Applications:**

- **DO NOT** release spray at a height greater than 4 feet above the water surface.
- Applicators must select nozzle and pressure that deliver medium or coarser droplets in accordance with ASABE S572.
- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### **Boomless Ground Applications:**

- Applicators must select nozzle and pressure that deliver medium or coarser droplets in accordance with ASABE S572.
- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### Mandatory Spray Drift Management

## **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

# IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### **Controlling Droplet Size – Ground Boom**

• Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.

• Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.

• Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

## **BOOM HEIGHT – Ground Boom**

For ground equipment, the boom should remain level with the water surface and have minimal bounce.

#### SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

#### **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

#### **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

#### WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

#### **Boom-less Ground Applications:**

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

#### Handheld Technology Applications:

Take precautions to minimize spray drift.

#### **Sensitive Areas**

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (*e.g.*, residential

areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (*e.g.*, when wind is blowing away from the sensitive areas).

#### **Other State and Local Requirements**

Applicators must follow all state and local pesticide drift requirements regarding application of copper compounds. Where states have more stringent regulations, they must be observed

# **AQUATIC USE DIRECTIONS**

#### Application Rates for Aquatic Weed Control in Lakes, Potable Water Reservoirs, Ponds, Fish Hatcheries and Raceways, Crop and Non-Crop Irrigation Conveyance Systems (Ditches, Canals and Laterals)

Aquatic Weeds, Algae	Minimum per Application Rate (lbs. Cu <sup>2+</sup> /A)	Maximum per Application Rate (lbs. Cu <sup>2+</sup> /A)	Maximum Annual Rate (lbs . Cu <sup>2+</sup> /A)	Minimum Retreatment Interval	Notes
Brazilian Elodea ( <i>Egeria</i> densa)	0.50 ppm	1 ppm	NA	14 days	No more than 1/2 of the water body may be treated at one time to avoid fish
Northern/Southern Naiads ( <i>Naias spp</i> .)					death due to oxygen depletion.
Coontail					Do not apply more than
(Ceratophyllum demersum)					21.9 lbs of metallic copper per acre-foot (8 applications
Common Elodea					at maximum rate) to whole waterbodies per year to
(Elodea canadensis)					water bodies for weed and
Hydrilla	0.75 ppm	1 ppm	NA	14 days	algae control A maximum of 46.6 lbs. of
(Hydrilla verticillata)					metallic copper per acre-
Water Hyacinth (Eichhornia crassipes)					foot per year may be applied to water management units to protect
Eurasian Watermilfoil**					drinking and recreational
(Myriophyllum spicatum <sup>**</sup> )					water resources from toxic algae blooms.
Water Lettuce					Current may control many species of algae at rates
(Pistia stratiotes)					from 0.2 to 1 ppm metallic
American Pondweed**					copper. Follow the Use Directions for Aquatic
(Potamogeton nodosus**)					Weeds.
Sago Pondweed**					
(Potamogeton pectinatus <sup>**</sup> )					
Algae control in aquaculture when fish are present		0.4 ppm	N/A	14 days	

\* Light weed infestation allows use of lower rate, and high weed density requires higher rate.

\*\* Control can be obtained in low hardness waters.

# **APPLICATION RATE CALCULATION**

For large treatment areas, it is most convenient to determine the surface area in acres and the average depth in feet.

The average depth is defined as the cumulative total of a series of depth measurements divided by the number of measurements made. The accuracy of the average will increase with increasing measurements.

A rectangular treatment area is its length in feet times its width in feet, and the area of a circular treatment is the square of its radius (in feet) that is then multiplied by 3.14. The result of either calculation is area in square feet. This result is divided by 43,560 to give the area in acres.

The amount of material to be applied to this multi-acre site is calculated by using the following formula and the desired copper concentration:

Gallons of Current = Target [metallic copper] (ppm) X Ave. Depth (feet) X Surface Area (acres) X 3.34

Table 1 provides the results of this calculation on a per acre basis for 1 to 10 feet average water depth in 1 foot increments for target copper concentrations of 0.5, 0.75, and 1.0 ppm.

Average Water Depth of Treatment Site	Gallons of Current per Surface Acre to Achieve the Desired Copper Concentration				
(feet)	0.5 ppm	0.75 ppm	1.0 ppm		
1	1.7	2.5	3.3		
2	3.3	5.0	6.7		
3	5.0	7.5	10.0		
4	6.7	10.0	13.4		
5	8.4	12.5	16.7		
6	10.0	15.0	20.0		
7	11.7	17.5	23.4		
8	13.4	20.0	26.7		
9	15.0	22.5	30.1		
10	16.7	25.1	33.4		

 Table 1. Application Rate Data for Large Treatment Areas

For smaller treatment areas, it is more convenient to calculate the amount of Current necessary in terms of fluid ounces per 1,000 square feet.

The raw surface area in square feet is divided by 1,000 to give the number of thousand square foot increments and this value is entered into the following calculation.

Fluid Ounces of Current = Target [metallic copper] (ppm) X Ave. Depth (feet) X Surface Area (1,000 sq. ft.) X 10

Table 2 provides the results of this calculation on a per 1,000 square feet basis for 1 to 10 feet average water depths in 1 foot increments for target copper concentrations of 0.5, 0.75, and 1.0 ppm.

## Table 2. Application Rate Data for Smaller Treatment Areas

Average Water Depth of Treatment Site	Fluid Ounces of Current per 1,000 Square Feet to Achieve the Desired Copper Concentration			
(feet)	0.5 ppm	0.75 ppm	1.0 ppm	
1	5.0	7.5	10.0	
2	10.0	15.0	20.0	
3	15.0	22.5	30.0	
4	20.0	30.0	40.0	
5	25.0	37.5	50.0	
6	30.0	45.0	60.0	
7	35.0	52.5	70.0	
8	40.0	60.0	80.0	
9	45.0	67.5	90.0	
10	50.0	75.0	100.0	

#### IRRIGATION SYSTEMS AND FLOWING WATER TREATMENTS: DRIP OR METERING SYSTEM APPLICATIONS

For aquatic plant and algae control in flowing water, Current use rates can be found in the following chart. Apply Current in a manner to achieve the desired rate and adequate mixing so Current is distributed throughout the entire water column. Using rates from the table below will produce a concentration of 1.0 ppm  $Cu^{++}$  in treated waters. Maintain the target application rate for a minimum of 3 hours.

Factors including plant species and susceptibility, plant infestation density, water temperature and water hardness may impact control or distance travelled. In these cases, longer exposure times may be necessary. Due to the factors outlined above, additional downstream applications may be required as needed. Applications can be repeated downstream as necessary until the entire infested area has been treated. Season-long control will require periodic retreatments.

FLOW RATE		Current DRIP RATE (1.0 ppm Cu)			
C.F.S.	GAL/MIN.	QTS./HR.	mL/MIN.	Fl. OZ./MIN.	
1	450	1.13	17.8	0.6	
2	900	2.26	35.6	1.2	
3	1350	3.39	53.4	1.8	
4	1800	4.52	71.2	2.4	
5	2250	5.65	89	3.0	

## **Application Rates for Current for Flowing Water**

Note: There is no Pre-harvest Interval (PHI) for crops irrigated with treated water.

# To calculate the amount of Current required for a treatment use the following formula (based on 1 ppm Cu):

Gallons of Current =

Cubic Feet per Second (CFS) X Length of Treatment (hrs) X rate (1.13 quarts/hour)

#### To calculate the amount of Current to be applied per hour use the following formula:

Gallons of Current per hour = Total Gallons of Current / Length of Treatment (hrs)

#### METHODS OF APPLICATION

Surface Application: Surface applications are to be made for shallow depths of 4 feet or less.

**Subsurface Application:** Subsurface applications of Current are recommended for water depths exceeding 4 feet. Weighted hoses should be set to deliver the recommended rate of Current in zones containing dense foliage. Subsurface application can be used for direct or invert applications of Current. If the subsurface application is made via boat, avoid dragging the hoses on the bottom.

**Invert Application:** Tank mix or bi-fluid mixer techniques can be used to produce inverts with Current. Inverts are not suited for surface application and should only be applied subsurface through submerged, weighted hoses. Do not drag hoses on the bottom, if made via boat.

The invert emulsion disperses into tiny adherent droplets which will deposit on submerged leaf surfaces and over time these droplets will break to release the herbicide in close proximity to the plant. The ideal invert emulsion will be heavier than water and will have a thick viscous consistency. It will deliver the product quickly enough to allow absorption, but not so fast as to be carried away from the application site.

Choose approved adjuvants before producing an invert emulsion with Current. Example invert preparations are provided below to serve as a guide only. Test the system to be used prior to application to ensure desired results. The properties of the invert system can be modified through small adjustments to the component ratios.

Mixer System	Water (gallons)	Invert Oil (gallons)	Current (gallons)
Tank Mix	80	3	8
Bi-Fluid	60	3	16

#### Table 3. Approximate Invert System Ratios

Direct application of Current is preferable to invert application in areas of dense weed populations as a streaking effect may be observed following invert application in such cases. This effect is a result of localized control along the paths taken by the weighted hoses. Allow adequate time for Current to work, immediate reapplication of Current may not increase effectiveness.

**Polymer Application (Except CA):** Spray sinking, deposition, and retention may be improved by addition of a polymer to Current itself or to a dilution of Current in water. Follow the instructions on the polymer product label governing the use of that product in aquatic weed control.

## SPRAY EQUIPMENT

Surface Application: Surface applications are appropriate for shallow depths of 4 feet or less.

**Polymer Application (Except CA):** Use the recommended rate of sinking agent in spray solution of Current plus water. Make up the spray solution to apply Current at the specified rate in a total volume of 100

to 400 gallons per acre. Agitation must be initiated prior to the addition of the polymer and maintained throughout the application. The polymer-Current mixture will have a stringy constancy and will cling to the aquatic weed surfaces. Applications to slow moving water should be made to the densest mass of foliage at a speed of 4 to 5 mph in a direction opposite to the water flow.

#### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal.

**PESTICIDE STORAGE:** Keep this product in its tightly closed original container. Store in a cool, dry (preferably locked) area that is inaccessible to children and animals, in such a manner as to prevent cross contamination with other pesticides, fertilizers, food and feed.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER HANDLING: Nonrefilable container.** Triple rinse container (or equivalent) promptly after emptying. Do not reuse or refill this container. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling (if available) or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration.

#### IMPORTANT INFORMATION READ BEFORE USING PRODUCT

#### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of UPL NA Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of UPL NA Inc. and Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold UPL NA Inc. and Seller harmless for any claims relating to such factors.

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