

## AQUATIC WEED MANAGEMENT

<b>FLOATING WEED (unattached, leaves/stems above water):</b>		
<b>Formulated Product and Rate Types of Aquatic Weed or Site</b>		<b>Remarks and Precautions</b>
Galleon (penoxsulam) @ 2-5.6 fl oz/A + 0.25% nonionic surfactant foliar or 25-75 ppb total water	Water hyacinth, duckweed, common salvinia, giant salvinia*	Can be used to control floating weeds in 2,4-D-restricted areas. Also, can be used as an in-water/subsurface application at 25 to 75 ppb. *With difficult-to-control weeds, such as giant salvinia, a minimum 60-day contact time is required if applied subsurface; 75-day minimum contact time often results in improved control. Do not apply this product subsurface if rapid dilution is expected.
Clearcast or Imox (imazamox) @ 16-64 oz/A + surfactant	Water hyacinth, common salvinia, and frog's bit	Can be used to control water hyacinth in 2,4-D-restricted areas.
2,4-D amine, DMA 4 IVM, Shredder Amine, WEEDestroy AM-40, Weedar 64, or others @ 64 oz/A	Floating mats of alligatorweed, water hyacinth	Apply on foliage when weeds are actively growing. Spray to uniformly wet foliage. Avoid use in waters used for irrigation.
Diquat, Reward, Tribune or others (Diquat) @ 64-128 oz/A + 0.25% surfactant	Duckweed species, water hyacinth, water lettuce, giant/common salvinia, mosquito fern	Apply on foliage when weeds are actively growing. Apply as a surface spray. Follow label for water restrictions after application. Apply up to 128 oz/A with 50 to 200 gallons of water per acre (50 to 200 GPA).
Habitat, Polaris, Arsenal, or Imazapyr 2SL, Imazapyr 4SL @ 32-48 oz/A + 0.25 % nonionic surfactant	Duckweeds, water hyacinth	Apply when weeds are actively growing. Follow potable and irrigation water restrictions. Must be applied by certified commercial applicator only.
Rodeo, Refuge, Roundup Custom, AquaPro, AquaNeat, Glyphosate 5.4, or others @ 64-96 oz/A + 0.25% surfactant	Giant salvinia, common salvinia, and water hyacinth	Can be tank-mixed with diquat, flumioxazin, or carfentrazone to increase speed of control when targeting giant salvinia.
Clipper WDG/SC, FlumiGard WDG/SC, or Semera, Schooner SC (flumioxazin) @ 6.0-12.0 oz/A + 0.25% v/v aquatic approved surfactant	Common or giant salvinia, water lettuce, and watermeal	For use on water bodies with limited or no outflow. Contact herbicide, coverage important. Very fast acting. As a foliar treatment, it may be tank-mixed with glyphosate, 2,4-D, imazapyr, or triclopyr to increase weed control spectrum. If tank-mixed, reduce rate 1 to 6 oz/A.
Tradewind (bispyribac) @ 1-2 oz/A + 0.25% nonionic surfactant	Alligatorweed, duckweed, water hyacinth, and water lettuce	Can be used to control floating weeds in 2,4-D-restricted areas. Apply to actively growing weeds.
Stingray (carfentrazone) @ 6-13.5 oz/A + 0.25% nonionic surfactant	Common/giant salvinia, water lettuce, and watermeal	Fast acting. Contact herbicide, coverage important. May be tank-mixed with glyphosate, imazapyr, penoxsulam, or imazamox to increase weed control spectrum. If tank mixed, use 2 to 6 oz/A.
ProcellaCOR SC (florpyrauxifen-benzyl) @ 2.0-4.0 PDU + 1% v/v methylated seed oil (MSO) per 100 gallons of water; 1 PDU = 1.35 fluid oz.	Water hyacinth and mosquito fern	Apply to the foliage of actively growing plants. Follow water use restrictions. DO not apply directly to, or otherwise permit ProcellaCOR SC to come in contact during an application, with soybeans, vegetable crops, flowers, ornamental shrubs, or trees, or other desirable broadleaf plants, as serious injury may occur. Please see the label for additional instructions related to drift management.
Renovate 3, Garlon 3A, Triclopyr 3, Trycera, or others (triclopyr) @ 32-64 oz/A + 0.25% surfactant	Water hyacinth	Apply to the foliage of actively growing plants.
Sonar A.S./One/Q/SRP/PR/Genesis, Fluridone @ 10-20 ppb	Giant/common salvinia*, watermeal, crested floating heart and duckweed species	Slow acting, systemic activity will require at least 7 days for noticeable injury. Product half-life is 30 to 90 days; therefore, do not use treated water for irrigation of turf, forage or food crops for 30 days or until herbicide concentration is <5 ppb or FasTEST has been performed. *For difficult-to-control weeds, such as giant salvinia, a minimum 75-day contact

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		time is recommended when applied subsurface. Do not apply this product subsurface if rapid dilution is expected.
PRO MSM 60, Cimarron Max Part A (metsulfuron) @ 0.5-1.0 oz/A. Section 24c/Special Local Need (SLN) label in Louisiana.	Giant salvinia ONLY	To be used only in Louisiana by public agencies (i.e., state/federal/local governmental) or hired contractors to control giant salvinia on public waterways (state/federal/city/county/parish) that are owned/regulated/managed by said agencies. Not for private use or purchase. Do not apply subsurface and do not use water to irrigate plants.

NOTE: A ft. (acre foot) = volume of water in an area having 1 acre of surface and a depth of 1 foot.

<b>EMERGENT AND MARGINAL WEEDS (rooted under water, tops above water or growing on wet soil):</b>		
<b>Formulated Product and Rate Types of Aquatic Weed or Site</b>		<b>Remarks and Precautions</b>
Galleon (penoxsulam) @ 2-5.6 oz/A + 0.25% aquatic approved nonionic surfactant	Alligatorweed, parrotfeather, other weeds	Can be used in 2,4-D-restricted areas.
Clearcast or Imox (imazamox) @ 16-64 oz/A + 0.25% aquatic approved surfactant.	Alligatorweed, cattail, parrotfeather, and primrose species	Can be used in 2,4-D-restricted areas.
2,4-D low volatile ester (LVE) @ 4.0 lbs/A in 100 gal water	Broadleaf species (arrowhead, lotus, smartweed, spatterdock, spikerush, primrose/Ludwigia species, white waterlily, yellow waterlily), Cuban bulrush, and others	Apply on foliage when weeds are actively growing. Spray to uniformly wet foliage. Add 10% fuel oil by volume or 1.0 qt. surfactant to spray mix. More than 1 application may be required for control of some species. Avoid use in waters for crop irrigation.
Habitat, Polaris, Arsenal, Imazapyr 2SL, or Imazapyr 4SL @ 16-64 oz/A + 0.25% aquatic approved nonionic surfactant	Many grasses, rushes, sedges, cattail, and broadleaf weeds. Especially useful for controlling trees and brush in water.	Apply when weeds and woody plants are actively growing. Follow potable and irrigation water restrictions. Must be applied by certified commercial applicator only. May be tank-mixed with glyphosate and/or Clipper. Late summer and fall applications may work better than early season applications on emergent weeds.
Rodeo, Roundup Custom, Refuge, AquaNeat, Glyphosate 5.4, or others @ 24-120 oz/A broadcast or 0.75%-1.5% in spray to wet equipment + 0.25% aquatic approved surfactant.	Broadleaf weeds, grasses, and weedy species such as cattail, maidencane, smartweed, spatterdock, willow, Cuban bulrush, and others.	Apply to actively growing weeds. See label for proper stage of growth. No restrictions on the use of the water. Do not apply within 0.5 mile upstream of potable water intakes or in tidewater areas. May be tank-mixed with Habitat/Polaris/Arsenal/etc., Clipper or Stingray. Late summer and fall applications may work better than early season applications on emergent perennial weeds such as cattail.
Sonar A.S./One/Q/SRP/PR/Genesis, or Fluridone subsurface (in-water) @ 10-40 ppb	Crested floating heart	Slow acting, systemic activity will require at least 7 days for noticeable injury and minimum 60-day exposure for plant control. Product half-life is 30 to 90 days; therefore, do not use treated water for irrigation of turf, forage or food crops for 30 days or until herbicide concentration is <5 ppb or FasTEST has been performed. Do not apply this product subsurface if rapid dilution is expected.

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<b>EMERGENT AND MARGINAL WEEDS</b> (rooted under water, tops above water or growing on wet soil):		
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Renovate 3, Trycera, Triclopyr 3, Garlon 3A, or others (triclopyr) @ 32-256 qt/A + 0.25% v/v aquatic approved surfactant	Aalligatorweed, water primrose, other broadleaf weeds, and brush, and trees	Can be applied to impounded water only, not to flowing streams. Apply by air or ground.
ProcellaCOR SC (florpyrauxifen-benzyl) @ 4.0-5.0 PDU + 1% v/v methylated seed oil (MSO) per 100 gallons of water; 1 PDU = 1.35 fluid oz.	Crested floating heart	Apply to the foliage of actively growing plants. Follow water use restrictions. DO not apply directly to, or otherwise permit ProcellaCOR SC to come in contact during an application, with soybeans, vegetable crops, flowers, ornamental shrubs, or trees, or other desirable broadleaf plants, as serious injury may occur. Please see the label for additional instructions related to drift management.

<b>SUBMERSED WEEDS (majority of plant grows under water, usually rooted or anchored):</b>		
<b>Formulated Product and Rate Types of Aquatic Weed or Site</b>		<b>Remarks and Precautions</b>
Copper sulfate @ 2.0-3.0 lbs/A foot of water	Algae (scums and mosses)	Apply at bloom. Apply crystals or powder at any stage of algae growth by any method to give rapid and uniform distribution. Repeat as necessary to maintain control. If entire waterbody is treated at one time or dissolved oxygen level is low, decaying weeds can remove enough oxygen and may result in fish suffocation. Therefore, limit treatment to no more than half the waterbody. Repeat treatments should be delayed by 10 to 14 days. Apply 3.0 lbs./A ft. in ponds with soft water.
Aquathol K (liquid) @ 0.5-5.0 ppm Aquathol Super K (Granular) (endothall, dipotassium salt) @ 0.5-5.0 ppm	Coontail, fanwort, hydrilla, milfoil species, pondweed species, southern naiad, water stargrass	Apply at active growth stage. Can be injected into the waterbody or sprayed over surface. If entire waterbody is treated at one time or dissolved oxygen level is low, decaying weeds can remove enough oxygen and may result in fish suffocation. Therefore, limit treatment to no more than half the waterbody. Repeat treatments should be delayed by 10 to 14 days
Copper Chelates (Cutrine-Plus, Captain, Captain XTR, Argos, or others) @ 0.2-1.0 ppm (see individual labels for gallons per acre foot)	Algae (scums and mosses)	Apply at bloom. Apply as a surface spray or injection. If entire waterbody is treated at one time or dissolved oxygen level is low, decaying algae or plants can remove enough oxygen and may result in fish suffocation. Therefore, limit treatment to no more than half the waterbody. Repeat treatments should be delayed by 10 to 14 days. Toxicity to fish depends on water hardness. See label for additional details.
Hydrothol 191 (endothall, dimethylalkylamine salt) @ 0.6-3.6 pt/A ft of water	Filamentous algae (scums and mosses)	Apply at bloom. Apply as a surface spray. If entire waterbody is treated at one time or dissolved oxygen level is low, decaying weeds can remove enough oxygen and may result in fish suffocation. Therefore, limit treatment to half the waterbody. Repeat treatments should be delayed by 10 to 14 days. Follow label instructions concerning fish toxicity.

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<b>SUBMERSED WEEDS (majority of plant grows under water, usually rooted or anchored):</b>		
<b>Formulated Product and Rate Types of Aquatic Weed or Site</b>		<b>Remarks and Precautions</b>
Sonar A.S./One/Q/SRP/PR/Genesis or Fluridone @ 10-20 ppb as a total water treatment	Coontail, fanwort, milfoil, hydrilla, elodea, southern naiad, pondweeds	Due to the slow activity of this herbicide, apply throughout the entire waterbody to actively growing plants. Longer exposure periods (>60 days) increase the likelihood of achieving complete control. Product provides slow control/kill. Repeat applications may be necessary for difficult to control weeds such as hydrilla. Due to excessive rainfall, product re-application (i.e., bump treatment) may be required if herbicide concentrations fall below lethal doses (5 ppb) if control has not been achieved. <b>Do not apply this product subsurface if rapid dilution is expected.</b>
Diquat, Reward, Tribune, or others (diquat) @ 1.0-2.0 gal/surface-acre	Coontail, southern naiad, and milfoil species	Apply at active growth stage. If entire waterbody is treated at one time or dissolved oxygen level is low, decaying weeds can remove enough oxygen and may result in fish suffocation. Therefore, limit treatment to no more than half the waterbody. Repeat treatments should be delayed by 10 to 14 days. Apply as a direct-pour or subsurface injection. Short residual. Water may be used for irrigation 5 days after treatment. Can be tank-mixed with copper, Aquathol K, or Clipper for hydrilla control.
Galleon (penoxsulam) @ 25-75 ppb as a total water treatment	Hydrilla, Eurasian watermilfoil, and southern naiad	Due to the slow activity of this herbicide, apply throughout the entire waterbody to actively growing plants. Longer exposure periods (>60 days) increase the likelihood of achieving complete control. Product provides slow control/kill. Repeat applications may be necessary for difficult to control weeds such as hydrilla. Due to excessive rainfall, product re-application (i.e., bump treatment) may be required if herbicide concentrations fall below lethal doses (5 ppb) if control has not been achieved. A 60-day contact time required. Do not use in moving water or where rapid dilution is expected.
Tradewind (bispribac) @ 20-45 ppb as a total water treatment	Hydrilla, and Eurasian watermilfoil	Must maintain desired concentration for minimum of 60 days. Not for use in moving water.
Clipper WDG/SC, FlumiGard WDG/SC, Pond-Klear, or Semera, Schooner SC (flumioxazin) @ 100-400 ppb as a total in-water treatment	Hydrilla, fanwort, southern naiad, pondweeds, milfoil species, coontail	For use in water bodies with limited or no outflow. Fast acting. Follow instructions on timing of application and possible oxygen depletion following application. Herbicide efficacy/activity will decrease as water pH increases to 8 and higher. Can be tank-mixed with other herbicides to increase control. If entire waterbody is treated at one time or dissolved oxygen level is low, decaying weeds can remove enough oxygen and may result in fish suffocation. Therefore, limit treatment to no more than half the waterbody. Repeat treatments should be delayed by 10 to 14 days.

## AQUATIC WEED MANAGEMENT

USE RESTRICTIONS for TREATED WATER (number of days)									
Herbicide	Human Drinking	Human Swimming	Human Fish Consumption		Animal Drinking		Turf Irrigation	Forage Irrigation	Food Crop Irrigation
2,4-D Amine, DMA 4 IVM, Shredder Amine, WEEDestroy AM-40, Weedar 64	21 <sup>e</sup>	0	0		21 <sup>e</sup>		21 <sup>e</sup>	21	21 <sup>e,f</sup>
Aquathol Granular	7	1	0		7		0	7	7
Aquathol K	7-25	1	0		7-25		0	7-25	7-25
Clearcast, Imox	0 <sup>i</sup>	0	0		0		K	K	K
Clipper WDG/SC, FlumiGard WDG/SC, Pond-Klear, Semera, Schooner SC	0	0	0		0		5	5	5
Chelated Copper	0	0	0		0		0	0	0
Copper Sulfate	0	0	0		0		0	0	0
Diquat, Reward, /Tribune, Harvestor, Littora, Weedtrine-D, others	2	0	0		1		2	5	5
Galleon	0	0	0		0		H	0	1
Habitat, Polaris, Ecomazapyr 2SL, Imazapyr 4SL	2 <sup>n</sup>	0	0		0		120 <sup>g</sup>	120 <sup>g</sup>	120 <sup>g</sup>
Hydrothol	7-25	1	0		7-25		7-25	7-25	7-25
ProcellaCOR SC	0 <sup>l</sup>	0	0		0		0	m	m
Renovate 3, Garlon 3A, Triclopyr, Trycera <sup>p,q,r</sup>	0	0	0		0		120 <sup>s</sup>	120 <sup>s</sup>	120 <sup>s</sup>
Rodeo, Glypro, AquaPro, Glypro, Roundup Custom, AquaNeat, Glyphosate, others	0	0	0		0		0	0	0
Sonar A.S./One/Q/SRP/PR/Genesis, Fluridone	-	0	0		0		7-30 <sup>d</sup>	7-30 <sup>d</sup>	7-30 <sup>d</sup>
Tradewind	0	0	0		0 <sup>g</sup>		0	0	0
Stingray	K	0	0		K		k	k	k

<sup>a</sup> Do not use in human, animal or irrigation water.

<sup>b</sup> Not recommended for use in commercial fishing areas.

<sup>c</sup> See label for distance allowed from potable water intakes.

<sup>d</sup> Restriction suggested by manufacturer.

<sup>e</sup> Shorter interval may be used depending on amount of 2,4-D acid present.

<sup>f</sup> Do not use on irrigation ditches.

<sup>g</sup> Or until residues = 1.0 ppb or less.

<sup>h</sup> Concentration < 30 ppb.

<sup>l</sup> Concentration = 1 ppb, except rice = 30 ppb.

<sup>i</sup> Concentration < 50 ppb within 0.25 miles of water intake.

<sup>k</sup> See label.

<sup>m</sup> See label for specific label irrigation restrictions.

<sup>n</sup> Do not apply within ½ mile of potable water intake.

<sup>o</sup> Do not use in water utilized for crawfish farming.

<sup>p</sup> Except for lactating dairy animals, there are no grazing restrictions following application of this product.

<sup>q</sup> During the season of application, withdraw livestock from grazing treated grass at least 3 days before slaughter.

<sup>r</sup> Potable water intake must be turned off until the triclopyr level in the intake water is determined to be 0.4 (ppm; or 400 ppb) or less by laboratory analysis.

<sup>s</sup> As an alternative to waiting 120 days, treated water may be used for irrigation once the triclopyr level in the intake water is determined to be non-detectable by laboratory analysis.