81943-18 (09/04/2009 (1/27

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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Ms. Sherry B. Hutcheson, Agent for
Phoenix Environmental Care, LLC
c/o Rivendell Consulting USA, LLC
400 East Jane Street
Valdosta, GA 31601

SEP 4 2009

SUBJECT: Application for Pesticide Notification (PRN 98-10)
Request General Label Change (Change Graphics to Label)
EPA Reg. No. 81943-18
Application Dated July 31, 2009

Dear Registrant:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated 07/31/09 for the above product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action(s) requested fall within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, please call me directly at 703-305-6249 or Owen F. Beeder of my staff at 703-308-8899.

Sincerely,

Linda Arrington
Notifications & Minor Formulations Team Leader
Registration Division (7505P)
Office of Pesticide Programs

Please read instructions on reverse before completing form. Form Approved. OMB No. 2070-0060

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United States
Environmental Protection Agency
Washington, DC 20460

[ ] Registration
[ ] Amendment
[x] Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
81943-18	Joanne Miller	[x] None [ ] Restricted
4. Company/Product (Name)	**PM#**	
Kraken	23	

5. Name and Address of Applicant *(Include ZIP Code)*
Phoenix Environmental Care, LLC
P.O. Box 370
Valdosta, GA 31603-0370

[ ] *Check if this is a new address*

6. Expedited Reveiw. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:
EPA Reg. No. _____
Product Name _____

Section - II

[ ] Amendment - Explain below.
[ ] Resubmission in response to Agency letter dated _____
[x] Notification - Explain below.
[ ] Final printed labels in repsonse to Agency letter dated _____
[ ] "Me Too" Application
[ ] Other - Explain below.

NOTIFICATION
SEP - 4 2009

Explanation: Use additional page(s) if necessary. (For section I and Section II:)

Notification of Addition of graphics per PR Notice 98-10 (II)(H). This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46 and no other changes have been made to the labeling or the confidential statement of formula of this product. I understandthat is is a violatin of 18 U.S.C. Sec. 1001 to willfully make any false statements to the EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging		Water Soluble Packaging		2. Type of Container
[ ] Yes [x] No	[ ] Yes [x] No		[ ] Yes [x] No		[ ] Metal [x] Plastic [ ] Glass [ ] Paper [ ] Other (Specify)
* *Certification must be submitted*	If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
[x] Label [ ] Container		[ ] super booklet affixed to container

6. Manner in Which Label Is Affixed to Product: [xxx] Lithograph Paper glued Stenciled [ ] Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Sherry B. Hutcheson	Consultant	229-247-4630

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and coinplete. I acknowledge that any knowlingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

2. Signature	3. Title	
Sherry B	Consultant, Agent for Phoenix Environmental Care, LLC	
4. Typed Name	**5. Date**	
Sherry B. Hutcheson	7/31/09	

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Rivendell Consulting USA, LLC
400 East Jane Street
Valdosta, GA 31601 USA
Phone: (229) 247-4340
Fax: (229) 247-0551

July 31, 2009

Attn: Joanne Miller (PM 23)
Document Processing Desk (NOTIF)
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Subject: Notification of Addition of Graphics to Kraken Label (EPA Reg No.: 81943-5) per PR Notice 98-10

Dear Ms. Miller,

This letter provides notification of addition of graphics to Kraken label per provisions of PR Notice 98-10. Please note this label will only be used in conjunction with smaller packaging. In addition to this transmittal letter, this submission comprises:

- One completed EPA Form 8570-1 Application for Pesticide Registration-Notification
- Two copies of the label containing the addition of graphics by notification; one with the addition clearly marked per PR Notice 98-10, and one clean copy provided for your convenience.

Thank you in advance. If you have any questions, please contact me at 229-247-4340 or sherry.hutcheson@rivendellusa.com

Sincerely,

Sherry B. Hutcheson
Agent for Phoenix Environmental Care, LLC

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NOTIFICATION
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Production Forests and Industrial Non-Crop Areas: For the control of woody plants, broadleaf weeds in forests and industrial non-crop areas, including manufacturing and storage sites, rights-of-way such as electrical power lines, communication lines, pipelines, roadsides, railroads, fence rows, non-irrigation ditch banks, and around farm buildings; including application to grazed areas, and establishment and maintenance of wildlife openings on these sites, and in Christmas tree plantations. Use within production forests and industrial non-crop sites (including those listed above) may include applications to control target vegetation in and around standing water sites, such as marshes, wetlands, and the banks of ponds and lakes.

Aquatic Sites: For control of emerged, submerged and floating aquatic plants in aquatic sites such as ponds, lakes, reservoirs, non-irrigation canals, and ditches which have little or no continuous outflow, marshes and wetlands, including broadleaf and woody vegetation on banks and shores within or adjacent and other aquatic sites.

KEEP OUT OF REACH OF CHILDREN
DANGER-PELIGRO

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.)

FIRST AID	
If in eyes:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If swallowed:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **1-800-875-1724 for emergency medical treatment information.**	
NOTE TO PHYSICIAN	
Probable mucosal damage may contraindicate the use of gastric lavage.	
NOTE TO APPLICATOR: Allergic skin reaction is not expected from exposure to spray mixtures of KRAKEN herbicide when used as directed.	

See inside label booklet for additional PRECAUTIONARY STATEMENTS

NET CONTENTS: ___ Gallon(s)

Phoenix Environmental Care, LLC
P.O. Box. 370 • Valdosta, GA 31603-0370

EPA Reg. No.: 81943- 17
EPA Est. No.: _____

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PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER! Corrosive. Causes Irreversible Eye Damage. Harmful If Swallowed or absorbed through skin. Prolonged or frequently repeated skin contact with herbicide concentrate may cause an allergic skin reaction in some individuals. Do not get in eyes or on skin or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

1. Long-sleeved shirt and long pants
2. Shoes plus socks
3. Protective eyewear
4. Chemical resistant gloves (> 14 mils) such as butyl rubber, natural rubber, neoprene rubber or nitrile rubber.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the WPS (40 CFR 170.240(d) (4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing 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

Do not contaminate water when cleaning equipment or disposing of equipment washwaters. Under certain conditions, treatment of aquatic weeds can result in oxygen depletion or loss due to decomposition of dead plants, which may contribute to fish suffocation. This loss can cause fish suffocation. Therefore, to minimize this hazard, do not treat more than one-third to one-half of the water area in a single operation and wait at least 10 to 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 agency for fish and game before applying to public water to determine if a permit is needed.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

PHYSICAL OR CHEMICAL HAZARDS

COMBUSTIBLE. Do not use or store near heat or open flame.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

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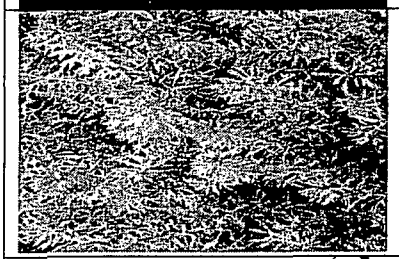
WEED INDENTIFICATION	
	Eurasian watermilfoil is an exotic species. Its leaves are feather-like that sometimes produce reddish flowers that extend above the water. The stems are red to brown in color. It can dominate a pond very quickly by fragmentation. Pieces of the plant grow roots to develop a new plant. There are many native milfoil plants which do not have as many feather-like leaves and are much less aggressive.
	Floating found leaves grow up to 10 inches, are split to the stem at the center, and are often purple underneath. Flowers are large, showy, and usually white (but sometimes pink). Flowers remain open from morning until shortly after midday. Often planted as an ornamental, this plant reproduces by rootstocks and seeds. Prefers to grow in quiet water less than six feet deep.
	Parrotweed is a rooted, submerged perennial plant that usually grows in shallow water. Parrotfeather gets it name from the gray-green thickly bunched leaves that rise above the water. These exposed leaves are whorled and have frilly divisions that give it a feather-like appearance. Underwater leaves are similar but less dense. The stems are relatively stiff. Submerged portions of all aquatic plants provide habitats for many micro and macro invertebrates.
	Common reed grass is a tall, invasive perennial wetland grass ranging in height from 3-15 feet. The plant produces horizontal rhizomes that grow on or beneath the ground and produce roots and vertical stalks. The rhizomes allow the plant to form large colonies. The stiff, hollow stalks support leaf blades which are smooth, broad and flat (1-1/2 - 2 inches wide).
	Pickerelweed is a perennial plant that can grow up to 3 1/2 feet tall. Leaves are shiny green, heart-to-lance shaped (up to 7 inches long) singly attached to a long petiole which grow in a rosette from the roots. Each stem can produce a terminal flower spike 3 to 4 inches long. The numerous tubular flowers on the spike are violet-blue in color. Each flower lasts only one day. Pickerelweed reproduces from seeds and rhizomes.
	Smartweed (Polygonum spp.) may have erect or creeping rootstocks. The stem is distinctly jointed, with each swollen joint or node covered by a thin sheath. Leaves are alternate and usually linear to elliptical. Flowers are white, or pink. Smartweed may be emersed or submersed with only the flowers being displayed.

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DIRECTIONS FOR USE

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

Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Shoes plus socks
- Protective eyewear
- Chemical resistant gloves (> 14 mils) such as butyl rubber, natural rubber, neoprene rubber or nitrile rubber.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for Agricultural Pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Entry Restrictions for Non-WPS Uses: For applications to non-cropland areas, do not allow entry into areas until sprays have dried, unless applicator and other handler PPE is worn.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

PESTICIDE STORAGE: Store above 28°F or agitate before use.
PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate, is a violation of federal law and may contaminate groundwater. 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 DISPOSAL (Metal): Do not reuse container. Triple rinse {or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.
CONTAINER DISPOSAL (Plastic): Do not reuse container. Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning, if burned, stay out of smoke.

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General: Consult federal, state, or local disposal authorities for approved alternative procedures.

GENERAL INFORMATION FOR PRODUCTION FORESTS AND INDUSTRIAL NON-CROP AREAS

KRAKEN can be used to control woody plants and broadleaf weeds in forests and industrial non-crop areas including manufacturing and storage sites, rights-of-way such as electrical power lines, communication lines, pipelines, roadsides, railroads, fence rows, non-irrigation ditch banks, and around farm buildings, including application to grazed areas, and establishment and maintenance of wildlife openings on these sites, and in Christmas tree plantations. Use within production forests and industrial non-crop sites (including those listed above) may include applications to control target vegetation in and around standing water sites, such as marshes, wetlands, and the banks of ponds and lakes.

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

GENERAL USE PRECAUTIONS AND RESTRICTIONS

In Arizona: The state of Arizona has not approved KRAKEN for use on plants grown for commercial production, specifically forests grown for commercial timber production, or on designated grazing areas.

When applying this product in tank mix combination, follow all applicable use directions, precautions and limitations on each manufacturer's label.

Chemigation: Do not apply this product through any type of irrigation system.

Do not apply KRAKEN directly to, or allow direct contact with grapes, tobacco, vegetable crops, flowers, or other desirable broadleaf plants. Do not permit spray mists containing Kraken to drift onto such plants.

It is permissible to treat non-irrigation ditch banks, seasonally dry wetlands (such as flood plains, deltas, marshes, swamps, or bogs) and transitional areas between upland and lowland sites.

Water treated with Kraken may not be used for irrigation purposes for 120 days after application or until residue levels of Kraken are determined by laboratory analysis, or other appropriate means of analysis to be 1 ppb or less.

Seasonal Irrigation Waters: Kraken may be applied during the off-season to surface waters that are used for irrigation on a seasonable basis provided that there is a minimum of 120 days between applying Kraken and the first use of treated water for irrigation purposes, or until residue levels of Kraken are determined by laboratory analysis, or other appropriate means of analysis, to be 1 ppb or less.

Irrigation Canals/Ditches: Do not apply Kraken to irrigation canals/ditches unless the 120-day restriction on irrigation water usage can be observed or residue levels of Kraken are determined by laboratory analysis, or other appropriate means of analysis, to be 1 ppb or less.

Do not apply Kraken directly to, or otherwise permit it to come into direct contact with grapes, tobacco, vegetable crops, flowers, or other desirable broadleaf plants, and do not permit spray mists containing it to drift into them.

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- Do not apply to salt water bays or estuaries.
- Do not apply to bodies of water with a continuous outflow.
- Do not apply directly to un-impounded rivers or streams.
- Do not apply on ditches or canals currently being used to transport irrigation water or that will be used for irrigation within 4 months following treatment. It is permissible to treat irrigation and non-irrigation ditch banks.
- Do not apply where runoff water may flow onto agricultural land as injury to crops may result.
- When making applications to control unwanted plants on banks or shorelines of moving water sites, minimize overspray to open water.
- The use of a mistblower is not recommended.
- Apply no more than 2 lb ae of triclopyr (2/3 gallon of KRAKEN) per acre per growing season on range and pasture sites, including rights-of-way, fence rows or any area where grazing or harvesting is allowed.
- On forestry sites, KRAKEN may be used at rates up to 6 lb ae of triclopyr (2 gallons of KRAKEN) per acre per year.
- For all terrestrial use sites other than range, pasture, forestry sites, and grazed areas, the maximum application rate is 9 lb ae of triclopyr (3 gallons of KRAKEN) per acre per year.

Precautions for Potable Water Intakes for Emerged Aquatic Weed Control

Refer to the chart below for specific setback distances near functioning potable water intakes.

NOTE: Existing potable water intakes which are no longer in use, such as those replaced by potable water wells or connections to a municipal water system, are not considered to be functioning potable water intakes. These setback restrictions do not apply to terrestrial applications made adjacent to potable water intakes.

Area Treated	KRAKEN Application Rate, qt/acre			
	2 qt/acre	4 qt/acre	6 qt/acre	8 qt/acre
(acres)	Setback Distance (ft)			
4	0	200	400	500
>4 - 8	0	200	700	900
>8 - 16	0	200	700	1000
>16	0	200	900	1300

Precautions for Potable Water Intakes for Submerged Aquatic Weed Control

For applications of Kraken to control submerged weeds in lakes, reservoirs or ponds that contain a functioning potable water intake for human consumption, see the chart below to determine the minimum setback distances of the application from the functioning potable water intakes.

Area Treated (acres)	Concentration of Triclopyr Acid in Water (ppm ae)				
	0.75 ppm	1 ppm	1.5 ppm	2 ppm	2.5 ppm
	Required Setback Distance (ft) from Potable Water Intake				
<4	300	400	600	800	1000
>4 – 8	420	560	840	1120	1400
>8 – 16	600	800	1200	1600	2000
>16 – 32	780	1040	1560	2080	2600
>32 acres, calculate a setback using the formula for the appropriate rate	Setback (ft) = (800*ln (acres) – 160)/3.33	Setback (ft) = (800*ln (acres) – 160)/2.50	Setback (ft) = (800*ln (acres) – 160)/1.67	Setback (ft) = (800*ln (acres) – 160)/1.25	Setback (ft) = (800*ln (acres) – 160)

Example Calculation 1: to apply 2.5 ppm Kraken to 50 acres:

Setback in feet = (800 x ln (50 acres) – 160
= (800 x 3.912) – 160
= 2970 feet

Example Calculation 2: to apply 0.75 ppm Kraken to 50 acres:

$$\text{Setback in feet} = \frac{(800 \times \ln(50 \text{ acres}) - 160}{3.33}$$
$$= \frac{(800 \times 3.912) - 160}{3.33}$$
= 892 feet

Note: Existing potable water intakes which are no longer in use, such as those replaced by potable water wells or connections to a municipal water system, are not considered to be functioning potable water intakes. These setback restrictions do not apply to terrestrial applications made adjacent to potable water intakes.

When applying KRAKEN around and within the distances noted in the table above from a functioning potable water intake, the intake must be turned off until the triclopyr level in the intake water is determined to be 0.4 parts per million (ppm) or less by laboratory analysis or immunoassay.

Recreational Use of Water in Treatment Area: There are no restrictions on use of water in the treatment area for recreational purposes, including swimming and fishing.

Livestock Use of Water from Treatment Area: There are no restrictions on livestock consumption of water from the treatment area.

Grazing and Haying Restrictions

Except for lactating dairy animals, there are no grazing restrictions following application of this product.

Grazing Lactating Dairy Animals: Do not allow lactating dairy animals to graze treated areas until the next growing season following application of this product.
Do not harvest hay for 14 days after application.
Grazed areas of non-cropland and forestry sites may be spot treated if they comprise no more than 10% of the total grazable area.

Slaughter Restrictions: During the season of application, withdraw livestock from grazing treated grass at least 3 days before slaughter.

Avoiding Injurious Spray Drift

Make applications only when there is little or no hazard from spray drift. Small quantities of spray, which may not be visible, may seriously injure susceptible plants. Do not spray when wind is blowing toward susceptible crops or ornamental plants that are near enough to be injured. It is suggested that a continuous smoke column at or near the spray site or a smoke generator on the spray equipment be used to detect air movement, lapse conditions, or temperature inversions (stable air). If the smoke layers or indicates a potential of hazardous spray drift, do not spray

Aerial Application: For aerial application on rights-of-way or other areas near susceptible crops, apply through a Microfoil† or Thru-Valve boom†, or use an agriculturally labeled drift control additive. Other drift reducing systems or thickened sprays prepared by using high viscosity inverting systems may be used if they are made as drift-free as mixtures containing agriculturally labeled thickening agents or applications

made with the Microfoil or Thru-Valve boom. Keep spray pressures low enough to provide coarse spray droplets. Spray boom should be no longer than ¾ of the rotor length. Do not use a thickening agent with the Microfoil or Thru-Valve booms, or other systems that cannot accommodate thick sprays. Spray only when the wind velocity is low (follow state regulations). Avoid application during air inversions. If a spray thickening agent is used, follow all use recommendations and precautions on the product label.

† Reference within this label to a particular piece of equipment produced by or available from other parties is provided without consideration for use by the reader at its discretion and subject to the reader's independent circumstances, evaluation, and expertise. Such reference by Phoenix Environmental Care, LLC, is not intended as an endorsement of such equipment, shall not constitute a warranty (express or implied) of such equipment, and is not intended to imply that other equipment is not available and equally suitable. Any discussion of methods of use of such equipment does not imply that the reader should use the equipment other than is advised in directions available from the equipment's manufacturer. The reader is responsible for exercising its own judgment and expertise, or consulting with sources other than Phoenix Environmental Care, LLC, in selecting and determining how to use its equipment.

Spray Drift Management

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications:

1. The distance of the outer most operating nozzles on the boom must not exceed ¾ the length of the rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the following Aerial Drift Reduction Advisory. [This information is advisory in nature and does not supersede mandatory label requirements.]

Aerial Drift Reduction Advisory

Information on Droplet Size: The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

Controlling Droplet Size:

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles - Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.

- Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length: For some use patterns, reducing the effective boom length to less than ¾ of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height: Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment: When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

Wind: Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity: When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions: Applications should not occur during a local, low level temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of the 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.

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).

Ground Equipment: To aid in reducing spray drift, KRAKEN should be used in thickened (high viscosity) spray mixtures using an agriculturally labeled drift control additive, high viscosity invert system, or equivalent as directed by the manufacturer. With ground equipment, spray drift can be reduced by keeping the spray boom as low as possible; by applying 20 gallons or more of spray per acre; by keeping the operating spray pressures at the lower end of the manufacturer's recommended pressures for the specific nozzle type used (low pressure nozzles are available from spray equipment manufacturers); and by spraying when wind velocity is low (follow state regulations). In hand-gun applications, select the minimum spray pressure that will provide adequate plant coverage (without forming a mist). Do not apply with nozzles that produce a fine-droplet spray.

High Volume Leaf-Stem Treatment: To minimize spray drift, do not use pressure exceeding 50 psi at the spray nozzle and keep sprays no higher than brush tops. An agriculturally labeled thickening agent may be used to reduce drift.

Plants Controlled by KRAKEN

Woody Plant Species

alder
arrowwood
ash
aspen
Australian pine
bear clover (bearmat)
beech
birch
blackberry
blackgum
Brazilian pepper
cascara
ceanothus
cherry
chinquapin
choke cherry
cottonwood
crataegus (hawthorn)
Douglas-fir
dogwood
elderberry
elm
gallberry
hazel
hornbean
kudzu†
locust
madrone
maples
mulberry
oaks
persimmon
pine
poison ivy
poison oak
poplar
salt-bush (Baccharis spp.)
salt cedar††
salmonberry
sassafras
scotch broom
sumac
sweetbay magnolia
sweetgum
sycamore
tanoak
thimbleberry
tulip poplar
waxmyrtle
western hemlock
white titi
wild rose
willow
winged elm
salmonberry

†For complete control, retreatment may be necessary.
††Use cut surface treatments for best results.

Annual and Perennial Broadleaf Weeds

bindweed
burdock
Canada thistle
chicory
curly dock
dandelion
field bindweed
lambsquarter
Mexican petunia
plantain
Purple loosestrife
ragweed
smartweed
Spanish neddles/common
beggarthicks
tansy ragwort
tropical soda apple
vetch
wedelia
wild lettuce

Purple Loosestrife (Lythrum salicaria)
Purple loosestrife can be controlled with foliar applications of Kraken. For broadcast applications use a minimum of 4 ½ to 6 lb ae of triclopyr (6 to 8 quarts of Kraken) per acre. Apply Kraken when purple loosestrife is at the bud to mid-flowering stage of growth. Follow-up applications for control of regrowth should be made the following year in order to achieve increased control of this weed species. For all applications, a non-ionic surfactant should be added to the spray mixture. Follow all directions and use precautions on the label of the surfactant. Thorough wetting of the foliage and stems is necessary to achieve satisfactory control. A minimum spray volume of 50 gallons per acre is recommended for ground broadcast applications.

If using a backpack sprayer, a spray mixture containing 1% to 1.5% Kraken or 5 to 7.6 fl oz of Kraken per 4 gallons of water should be used. All purple loosestrife plants should be thoroughly wetted.

APPLICATION METHODS

Use Kraken at rates of ¾ to 9 lb ae of triclopyr (1/4 to 3 gallons of Kraken) per acre to control broadleaf weeds and woody plants. In all cases, use the amount specified in enough water to give uniform and complete coverage of the plants to be controlled. Use only water suitable for spraying. Use an

agriculturally labeled non-ionic surfactant for all foliar applications. When using surfactants, follow the use directions and precautions listed on the surfactant manufacturer's label. Use the higher concentrations of surfactant in the spray mixture when applying lower spray volumes per acre. The order of addition to the spray tank is water, spray thickening agent (if used), additional herbicide (if used), and Kraken. Surfactant should be added to the spray tank last or as recommended on the product label. If combined with emulsifiable concentrate herbicides, moderate continuous adequate agitation is required.

Before using any recommended tank mixtures, read the directions and all use precautions on both labels.

For best results, apply when woody plants and weeds are actively growing. When hard to control species such as ash, blackgum, choke cherry, elm, maples, oaks, pines, or winged elm are prevalent and during applications made in late summer when the plants are mature and during drought conditions, use the higher rates of Kraken alone or in combination with PICLORAM + 2,4-D IVM specialty herbicide. (PICLORAM + 2,4-D IVM is a restricted use pesticide. See product label.) PICLORAM + 2,4-D IVM is not registered for use in the states of California and Florida.

When using Kraken in combination with 2,4-D 3.8 lb amine, like DMA 4 IVM, or low volatile ester herbicides, generally the higher rates should be used for satisfactory brush control.

Use the higher dosage rate when brush approaches an average of 15 feet in height or when the brush covers more than 60% of the area to be treated. If lower rates are used on hard to control species, resprouting may occur the year following treatment.

On sites where easy to control brush species dominate, rates less than those listed may be effective. Consult State or Local Extension personnel for such information.

FOLIAGE TREATMENT WITH GROUND EQUIPMENT

High Volume Foliage Treatment

For woody plants, apply KRAKEN at 4 to 12 quarts per 100 gallons of water (equivalent to 3 to 9 lb triclopyr acid). Alternately apply KRAKEN at 1 to 4 quarts (equivalent to ¾ to 3 lb triclopyr acid) in combination with 1 to 2 quarts of a 2,4-D 3.8 lb amine product, (like DMA 4 IVM) or PICLORAM + 2,4-D IVM and diluted to make 100 gallons of spray solution. Apply at a volume of 100 to 400 gallons of total spray per acre depending on foliage density of woody plants. Coverage should be made to thoroughly wet all foliage and root collars but not to create runoff.

(See General Use Precautions and Restrictions.)

Do not exceed maximum allowable use rates per acre (see table below).

Maximum Labeled Rate versus Spray Volume per Acre

Total Spray Volume (gal/acre)	Maximum Rate of KRAKEN		
	Rangeland and Pasture Sites(1) (gal/100 gal of spray)	Forestry Sites(2) (gal/100 gal of spray)	Other Non-Cropland Sites(3) (gal/100 gal of spray)
400	Do not use	0.5	0.75
300	Do not use	0.67	1
200	Do not use	1	1.5
100	0.67	2	3
50	1.33	4	6
40	1.67	5	7.5
30	2.33	6.65	10
20	3.33	10	15
10	6.67	20	30

(1) Do not exceed the maximum use rate of 2 lb ae of triclopyr (2/3 gal of KRAKEN)/acre/year.
(2) Do not exceed the maximum use rate of 6 lb ae of triclopyr (2 gal of KRAKEN)/acre/year.
(3) Do not exceed the maximum use rate of 9 lb ae of triclopyr (3 gal of KRAKEN)/acre/year on non-cropland use sites other than rangeland, pasture, forestry, and grazed areas.

Low Volume Foliage Treatment

To control susceptible woody plants, apply up 20 quarts of KRAKEN in 10 to 100 gallons of finished spray. The spray concentration of KRAKEN and total spray volume per acre should be adjusted depending on the size and foliage density of target woody plants and type of spray equipment used. Regardless of spray volume uniform coverage of target plant foliage (including stems and root collars) is essential for optimal control (see General Use Precautions and Restrictions). When making low volume applications a surfactant is recommended. Delivery rate of spray nozzles to height and density of woody plants is important. When treating tall, dense brush, a spray gun that can deliver up to 2 gallons per minute at 40 to 60 psi may be required. Application equipment with spray tips that deliver less than 1 gallon of spray per minute (such as backpack sprayers) may only be appropriate for short, low to moderate density brush.

Tank Mixing: As a low volume foliar spray, up to 12 quarts KRAKEN (equivalent to 9 lb triclopyr acid) may be applied in a tank mix combination with 2 to 4 quarts Tordon K or 4 to 8 quarts of PICLORAM + 2,4-D IVM in 10 to 100 gallons of finished spray.

BROADCAST APPLICATIONS WITH GROUND EQUIPMENT

Use only equipment that will assure uniform coverage of the spray volumes applied. The addition of a non-ionic surfactant may enhance coverage. See Maximum Labeled Rate versus Spray Volume per Acre table above for relationship between mixing rate, spray volume and maximum application rate.

Woody Plant Control

Foliage Treatment: Use 8 to 12 quarts of KRAKEN (equivalent to 6 to 9 lb triclopyr acid) in enough water to make 20 to 100 gallons of total spray per acre. 2 to 4 quarts of KRAKEN may be tank mixed with 4 to 8 quarts of 2,4-D 3.8 lb amine, (like DMA 4 IVM) or PICLORAM + 2,4-D IVM in sufficient water to make 20 to 100 gallons of total spray per acre.

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Broadleaf Weed Control

Apply 1 1/3 to 6 quarts of KRAKEN (equivalent to 1 to 4 1/2 lb triclopyr acid) in a total volume of 20 to 100 gallons of water per acre. Application may be made at any time during the growing season. KRAKEN at 1 1/3 to 4 quarts may be tank mixed with 2 to 4 quarts of Tordon K, PICLORAM + 2,4-D IVM or 2,4-D 3.8 lb amine, like DMA 4 IVM herbicides to improve the weed spectrum.

Aerial Application (Helicopter Only)

Aerial sprays should be applied using suitable drift control. (See General Use Precautions and Restrictions) Add an agriculturally labeled non-ionic surfactant as described under Directions for Use. See Maximum Labeled Rate versus Spray Volume per Acre table above for relationship between mixing rate, spray volume and maximum application rate.

Foliage Treatment (Non-Grazed Rights-of-Way)

Non-grazed areas: Apply 4 to 12 quarts of KRAKEN (equivalent to 6 to 9 lb of triclopyr acid) or 4 to 6 quarts of KRAKEN in a tank mix combination with 4 to 8 quartss of 2,4-D 3.8 lb amine, like DMA 4 IVM, or or PICLORAM + 2,4-D IVM, and apply in a total spray volume of 10 to 30 gallons per acre. Apply higher rates and volumes if target plants are dense or under drought conditions.

Areas within non-grazed rights-of-ways that may be grazed may be spot treated if the treated area comprises no more than 10% of the total grazable area.

FOREST MANAGEMENT APPLICATIONS

Optimal control for broadcast applications of KRAKEN is achieved using spray volumes that allow thorough plant coverage. Recommended spray volumes are usually 10 to 25 gallons per acre by air or 10 to 100 gallons per acre by ground depending upon equipment. When using spray volumes less than 50 gallons per acre, the addition of an agriculturally labeled non-ionic surfactant as described under Directions for Use will help assure more complete coverage of foliage. Application systems or additives designed to minimize drift by producing larger droplets may require higher spray volumes to maintain brush control.

Forest Site Preparation (Not for Conifer Release)

Apply up to 8 quarts of KRAKEN (equivalent to 6 lb triclopyr acid) and apply in a total spray volume of 10 to 30 gallons per acre. 4 to 6 quarts of KRAKEN (equivalent to 3 to 4 1/2 lb triclopyr acid) may be tank mixed with 1 to 2 gallons of PICLORAM + 2,4-D IVM or 2,4-D 3.8 lb low volatile ester in a tank mix combination in a total spray volume of 10 to 30 gallons per acre. Use ~~of~~ a non-ionic agricultural surfactant for all foliar applications as described under Directions for Use. PICLORAM + 2,4-D IVM is not registered for use in the states of California and Florida.

Note: Conifers planted within one month after treatment with KRAKEN at less than 5 1/3 quarts per acre or sooner than two months after treatment at 5 1/3 to 12 quarts per acre may be injured due to residual triclopyr in soil. If applying tank mixtures with other herbicides for forest site preparation, review labels for all products in the mixture to determine the longest recommended waiting period before re-planting treated site.

Directed Spray Applications for Conifer Release

To release conifers from competing hardwoods such as red maple, sugar maple, striped maple, sweetgum, red and white oaks, ash, hickory, alder, birch, aspen, and pin cherry, mix 4 to 8 quarts of KRAKEN (equivalent to 3 to 6 lb triclopyr acid) in enough water to make 100 gallons of spray mixture. Spray coverage may be improved by the addition of a non-ionic surfactant as described under Directions for Use. Direct the spray onto the foliage of competing hardwoods using a knapsack or backpack sprayer

with flat fan nozzles. Make application any time after hardwoods have reached full leaf size, but prior to autumn coloration. Treated hardwoods should be less than 6 feet in height to ensure adequate spray coverage. Avoid with conifer foliage, particularly desirable pines.

Note: Spray may cause temporary damage and growth suppression where contact with conifers occurs; however, injured conifers should recover and grow normally. Over-the-top broadcast type spray applications can kill pines.

Broadcast Application for Conifer Release in the Northeastern United States

To release spruce, fir, red pine and white pine from competing hardwoods, such as red maple, sugar maple, striped maple, alder, birch (white, yellow or gray), aspen, ash, pin cherry and Rubus spp. and perennial and annual broadleaf weeds, apply 2 to 4 quarts of KRAKEN (equivalent to 1 ½ to 3 lb triclopyr acid) per acre alone or with 2,4-D amine, like DMA 4 IVM, or 2,4-D ester to provide no more than 4 pounds acid equivalent per acre from both products. Make applications in late summer or early fall after conifers have formed their over wintering buds and hardwoods are in full leaf and prior to autumn coloration.

Broadcast Applications for Douglas Fir Release in the Pacific Northwest and California

To release Douglas fir from susceptible competing vegetation such as broadleaf weeds, alder, blackberry or Scotch broom, apply 1 1/3 to 2 quarts of KRAKEN (equivalent to 1 to 1 ½ lb **of** triclopyr acid) per acre alone or in combination with 4 lb per acre of atrazine. Mix all sprays in a water carrier with a non-ionic surfactant. Make applications in early spring after hardwoods begin growth and before Douglas fir bud break ("early foliar" hardwood stage) or after Douglas fir seasonal growth has "hardened off" (set winter buds) in late summer, but while hardwoods are still actively growing. When treating after Douglas fir bud set, apply prior to onset of autumn coloration in hardwood foliage.

Note: Applications made during active Douglas fir shoot growth (after spring bud break and prior to bud set) may cause injury to Douglas fir trees.

CUT SURFACE TREATMENTS

To control unwanted trees of hardwood species such as elm, maple, oak and conifers in labeled sites, make a 50% (1 to 1 ratio with water) to 100% (undiluted) application of KRAKEN as directed below.

Tree Injector Method

Using suitable equipment, inject 1/2 milliliter of undiluted KRAKEN or 1 milliliter of the diluted solution into the bark at intervals of 3 to 4 inches between centers of the injector wound. The injections should completely surround the tree at any convenient height.

Note: No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is injected directly into plants.

Hack and Squirt Method

Make cuts around the tree trunk at a convenient height with a suitable tool so that the cuts overlap slightly and make a continuous circle around the trunk. Apply 1/2 milliliter of undiluted KRAKEN or 1 milliliter of the diluted solution into the pocket created between the bark and the inner stem/trunk by each cut.

Frill or Girdle Method

Make a single girdle through the bark completely around the tree at a convenient height. Wet the cut surface with undiluted or diluted solution.

Note: Both the Hack and Squirt method and the Frill or Girdle method may not be effective during heavy sap flow of certain species such as maples.

Stump Treatment

Spray or paint the cut surfaces of freshly cut stumps and stubs with undiluted KRAKEN. Make sure the cambium area next to the bark is wet.

CHRISTMAS TREE PLANTATIONS

Use KRAKEN to control woody plants and annual and perennial broadleaf weeds in established Christmas tree plantations. Best results are obtained when woody plants and weeds are actively growing. KRAKEN will not control weeds that have not emerged at the time of application. Resprouting can occur the year after treatment when lower rates are made on hard to control species. Applications made with backpack or knapsack sprayers to plants over 8 feet in height may result in reduced control due to inability to reach top foliage. Applicators should use the higher rates of KRAKEN or use cut surface application methods when treating large brush or trees or hard to control species (such as ash, blackgum, choke cherry, elm, hazel, madrone, maples, oaks or sweetgum), and for applications made during drought conditions or in late summer when the leaves are mature,. When making foliar applications, use enough water to give thorough coverage. Reduced control may occur when applications are made under drought conditions.

Use Precautions

- Do not use on newly seeded grass until well established as indicated by vigorous growth and development of secondary root system and tillering
- Newly seeded turf (alleyways, etc.) should be mowed two or three times before any treatment with KRAKEN.
- Do not reseed Christmas tree areas treated with KRAKEN for a minimum of three weeks after application.
- Do not use KRAKEN if legumes, such as clover, are present and injury cannot be tolerated.

Spray Preparation

Optimal order of addition to the spray tank is:

1. Water
2. Drift control agent (if used)
3. Non-ionic agricultural surfactant (if used)
4. KRAKEN.

Use moderate agitation while mixing and spraying. Use of a non-ionic agricultural surfactant is recommended for all applications. Follow use directions and precautions listed on the manufacturer's label. Use the higher recommended concentrations of surfactant in the spray mixture when applying lower spray volumes per acre.

Application

Time applications for late summer or early autumn after terminal growth of Christmas trees has hardened off, but prior weed leaf drop. Apply 2 to 5 pints of KRAKEN (equivalent to ¾ to 1 ¾ lb triclopyr acid) per acre as directed spray toward the base of Christmas trees. Use enough spray volume to provide thorough coverage of target plants (20 to 100 gallons per acre).

Do not apply with 2,4-D.

Application rates of KRAKEN recommended for Christmas trees will only suppress some well established woody plants that are greater than 2 to 3 years old (see table below). Broadcast sprays may also be applied in bands between the rows of planted trees. Use spray equipment that will assure uniform coverage of the desired spray volume.

Unintended foliage contact of KRAKEN to Christmas trees from directed sprays can cause needle and branch injury. Blue spruce, white spruce, balsam fir and Frasier fir are less susceptible to injury than white pine and Douglas fir.

Restriction: Apply KRAKEN only to established Christmas trees that were planted at least one full year prior to application.

Application Rates and Species Controlled:

SPECIES	APPLICATION RATE (pint/Acre)	COMMENT
clover, dandelion, dock curly, lambsquarters, lespedeza, plantain (broadleaf), plantain (buckhorn), ragweed, common vetch	2	
Blackberry	4	
Chicory (suppression), fireweed, ivy (ground), lettuce (wild), oxalis, poison ivy, violet (wild), Virginia creeper	3 to 4	
bindweed (field), smartweed, thistle (Canada)		Top growth control, retreatment may be necessary
Aspen, chinquapin, elderberry, Grape (wild)	5	
Arrowwood, beech, birch, cottonwood, mulberry, poplar, sassafras, sumac, sycamore		Seedlings less than 2 **to** 3 years old

Directed Applications

To control hardwoods such as red maple, sugar maple, striped maple, sweetgum, red and white oaks, ash, alder, birch, aspen, and pin cherry mix 4 to 20 fluid ounces of KRAKEN in enough water to make 3 gallons of spray mixture. For directed applications, do not exceed 8 quarts of KRAKEN (equivalent to 6 lb triclopyr acid) per acre per year. Spray coverage may be improved by the addition of a non-ionic surfactant as described under Directions for Use. Direct the spray onto the foliage of competing hardwoods using a knapsack or backpack sprayer with flat fan nozzles. Make application any time after hardwoods have reached full leaf size, but prior to autumn coloration. Treated hardwoods should be less than 8 feet in height to ensure adequate spray coverage.

Note: To prevent Christmas tree injury, care should be taken to direct spray away from contact with Christmas tree foliage.

Cut Surface Treatments

When treating large brush or trees or hard to control species such as ash, blackgum, choke cherry, elm, hazel, madrone, maples, oaks, salt cedar or sweetgum, and for applications made during drought conditions or in late summer when the leaves are mature, use cut surface treatments. (See directions for Cut Surface Treatments in preceding section of this label.)

WETLAND SITES IN PRODUCTION FORESTS AND INDUSTRIAL NON-CROP AREAS

KRAKEN may be used within production forests and industrial non-crop sites to control target vegetation in and around standing water sites, such as marshes, wetlands, and the banks of ponds and lakes and transition areas between upland and lowland sites.

For control of woody plants and broadleaf weeds in these sites, follow use directions and application methods on this label for forestry and non-cropland sites.

Use Precautions

Minimize overspray to open water when treating target vegetation in and around non-flowing, quiescent or transient water. When making applications to control unwanted plants on banks or shorelines of flowing water, minimize overspray to open water.

Note: Consult local public water control authorities before applying this product in and around public water. Permits may be required to treat such areas.

GENERAL INFORMATION FOR AQUATIC AND WETLAND SITES

Use Kraken for control of emersed, submersed and floating aquatic plants in aquatic sites such as ponds, lakes, reservoirs, non-irrigation canals, and ditches which have little or no continuous outflow, marshes and wetlands, including broadleaf and woody vegetation on banks and shores within or adjacent and other aquatic sites.

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

Aquatic Plants Controlled by Kraken

Aquatic Weeds

alligatorweed	nuphar (spatterdock)	purple loosestrife
American lotus	parrotfeather†	waterhyacinth
American frogbit	phragmites	waterlily
aquatic soda apple	pickerelweed	waterprimose
Eurasian watermilfoil	pennywort	watershield
milfoil species		

Aquatic Applications Methods

Floating and Emerged Weeds

For control of waterhyacinth, alligatorweed (see specific directions below), and other susceptible emerged and floating herbaceous weeds and woody plants, apply 1 ½ to 6 lb ae of triclopyr (2 to 8 quarts of Kraken) per acre as a foliar application using surface or aerial equipment. Use higher rates in the rate range when plants are mature, when the weed mass is dense, or for difficult to control species. Repeat as necessary to control regrowth and plants missed in the previous operation, but do not exceed a total of 6 lb ae of triclopyr (8 quarts of Kraken) per acre per annual growing season.
Use a non-ionic surfactant in the spray mixture to improve control. Follow all directions and use precautions on the aquatic surfactant label.
Apply when plants are actively growing.

Surface Application

Use a spray boom, handgun or other similar suitable equipment mounted on a boat or vehicle. Thorough wetting of foliage is essential for maximum effectiveness. Use 20 to 200 gallons per acre of spray mixture. Special precautions such as the use of low spray pressure, large droplet producing nozzles or addition of a labeled thickening agent may minimize spray drift in areas near sensitive crops.

Aerial Application (Helicopter Only)

Apply with a helicopter using a Microfoil or Thru-Valve boom, or a drift control additive in the spray solution. Apply in a minimum of 10 gallons of total spray mix per acre. Do not apply when weather conditions favor drift to sensitive areas. See label section on aerial application directions and precautions.

Waterhyacinth (Eichhornia crassipes)

Apply Kraken at 1 ½ to 6 lb ae of triclopyr (2 to 8 quarts of Triclopy 44% TEA IVM) per acre to control waterhyacinth. Apply when plants are actively growing. Use the higher rate in the rate range when the weed mass is dense. It is important to thoroughly wet all foliage with the spray mixture. Use a non-ionic surfactant in the spray mixture. A repeat treatment may be needed to control regrowth or plants missed in the previous treatment.

Alligatorweed (Alternanthera philoxeroides)

Apply Kraken at 2 to 6 lb ae of triclopyr (3 to 8 quarts of Kraken) per acre to control alligatorweed. It is important to thoroughly wet all foliage with the spray mixture. For best results, add an approved non-ionic aquatic surfactant to the spray mixture. Alligatorweed growing outside the margins of a body of water can be controlled with this treatment. However, alligatorweed growing in water will only be partially controlled. Top growth above the water will be controlled, but the plant will likely regrow from tissue below the water surface.

Precautions for Potable Water Intakes – Lakes, Reserviors, Ponds:

For applications of Kraken to control floating and emerged weeds in lakes, reservoirs or ponds that contain a functioning potable water intake for human consumption, see chart below to determine the minimum setback distances of the application from the functioning potable water intakes.

	Kraken Application Rate, qt/acre			
Area Treated	2 qt/acre	4 qt/acre	6 qt/acre	8 qt/acre
(acres)	Setback Distance (ft)			
<4	0	200	400	500
>4 – 8	0	200	700	900
>8 – 16	0	200	700	1000
>16	0	200	900	1300

Note: Existing potable water intakes which are no longer in use, such as those replaced by potable water wells or connections to a municipal water system, are not considered to be functioning potable water intakes. These setback restrictions do not apply to terrestrial applications made adjacent to potable water intakes.

To apply Kraken around and within the distances noted above from a functioning potable water intake, the intake must be turned off until the triclopyr level in the intake water is determined to be 0.4 parts per million (ppm) or less by laboratory analysis or immunoassay.

- Recreational Use of Water in Treatment Area: There are no restrictions on use of water in the treatment area for recreational purposes, including swimming and fishing.

- Livestock Use of Water from Treatment Area: There are no restrictions on livestock consumption of water from the treatment area.

Submerged Weeds

For control of Eurasian watermilfoil (Myriophyllum spicatum) and other susceoptible submerged weeds in ponds, lakes, reservoirs, and in non-irrigation canals or ditches that have little or no continuous outflow, apply Kraken as either a surface or subsurface application. Rates should be selected according to the rate chart below to provide a triclopyr concentration of 0.75 to 2.5 ppm ae in treated water. Use higher rates in the rate range in areas of greater water exchange. These areas may require a repeat application. However, total application of Kraken must not exceed an application rate of 2.5 ppm of triclopyr for the treatment area per annual growing season.

Apply in spring or early summer when Eurasian watermilfoil or other submersed weeds are actively growing.

Areas near susceptible crops or other desirable broadleaf plants may be treated by subsurface injection applied by boat to avoid spray drift.

Subsurface Application

Apply desired amount of Kraken per acre directly into the water through boat-mounted distribution systems. When treating target plants that are 6 feet below the surface of the water, trailing hoses should be used along with an aquatic approved sinking agent (except California).

Surface Application

Apply the desired amount of Kraken as either a concentrate or a spray mixture in water. However, use a minimum spray volume of 5 gallons per acre. Do not apply when weather conditions favor drift to sensitive areas.

Average water depth (feet) x 0.905 x target concentration (ppm) = gallons of Kraken per surface acre treated.

Example: to achieve a 2 ppm concentration of triclopyr in water averaging 4 feet deep
4 x 0.905 x 2 ppm = 7.2 gallons of Kraken per surface acre treated

	Concentration of Triclopyr Acid in Water (ppm ae)				
	0.75 ppm	1 ppm	1.5 ppm	2 ppm	2.5 ppm
Water Depth (ft)	Gallons of Kraken per Surface Acre at Specified Depth				
1	0.7	0.9	1.4	1.8	2.3
2	1.4	1.8	2.7	3.6	4.6
3	2.1	2.7	4.1	5.4	6.8
4	2.7	3.6	5.4	7.2	9.1
5	3.4	4.5	6.8	9	11.3
6	4.1	5.4	8.1	10.9	13.6
7	4.8	6.3	9.5	12.7	15.8
8	5.5	7.2	10.9	14.5	18.1
9	6.1	8.1	12.2	16.3	20.4
10	6.8	9	13.6	18.1	22.6
15	10.2	13.6	20.4	27.2	33.9
20	13.6	18.1	27.2	36.2	45.3

Precautions for Potable Water Intakes – Lakes, Reservoirs, Ponds:

For applications of Kraken to control submerged weeds in lakes, reservoirs or ponds that contain a functioning potable water intake for human consumption, see the chart below to determine the minimum setback distances of the application from the functioning potable water intakes.

	Concentration of Triclopyr Acid in Water (ppm ae)				
	0.75 ppm	1 ppm	1.5 ppm	2 ppm	2.5 ppm
Area Treated (acres)	Required Setback Distance (ft) from Potable Water Intake				
<4	300	400	600	800	1000
>4 – 8	420	560	840	1120	1400
>8 – 16	600	800	1200	1600	2000
>16 – 32	780	1040	1560	2080	2600
>32 acres, calculate a setback using the formula for the appropriate rate	Setback (ft) = (800*ln (acres) – 160)/3.33	Setback (ft) = (800*ln (acres) – 160)/2.50	Setback (ft) = (800*ln (acres) – 160)/1.67	Setback (ft) = (800*ln (acres) – 160)/1.25	Setback (ft) = (800*ln (acres) – 160)

Example Calculation 1: to apply 2.5 ppm Triclopye 44% TEA IVM to 50 acres:

Setback in feet = (800 x ln (50 acres) – 160
= (800 x 3.912) – 160
= 2970 feet

Example Calculation 2: to apply 0.75 ppm Kraken to 50 acres:

$$\text{Setback in feet} = \frac{(800 \times \ln(50 \text{ acres}) - 160}{3.33}$$
$$= \frac{(800 \times 3.912) - 160}{3.33}$$
= 892 feet

Note: Existing potable water intakes which are no longer in use, such as those replaced by potable water wells or connections to a municipal water system, are not considered to be functioning potable water intakes. These setback restrictions do not apply to terrestrial applications made adjacent to potable water intakes.

To apply Kraken around and within the distances noted above from a functioning potable water intake, the intake must be turned off until the triclopyr level in the intake water is determined to be 0.4 parts per million (ppm) or less by laboratory analysis or immunoassay.

- Recreational Use of Water In Treatment Area: There are no restrictions on use of water in the treatment area for recreational purposes, including swimming and fishing.
- Livestock Use of Water from Treatment Area: There are no restrictions on livestock consumption of water from the treatment area.

Wetland Sites

Wetlands include flood plains, deltas, marshes, swamps, bogs, and transitional areas between upland and lowland sites. Wetlands may occur within forests, wildlife habitat restoration and management areas and similar sites as well as areas adjacent to or surrounding domestic water supply reservoirs, lakes and ponds.

For control of woody plants and broadleaf weeds in these sites, follow use directions and application methods on this label for terrestrial sites associated with wetland areas.

Use Precautions

Minimize overspray to open water when treating target vegetation in and around non-flowering, quiescent or transient water. When making applications to control unwanted plants on banks or shorelines of flowing water, minimize overspray to open water. Note: Consult local public water control authorities before applying this product in and around public water. Permits may be required to treat such areas.

Purple Loosestrife (Lythrum salicaria)

Purple loosestrife can be controlled with foliar applications of Kraken. For broadcast applications, use a minimum of 4 ½ to 6 lb ae of triclopyr (6 to 8 quarts of Kraken) per acre. Apply Kraken when purple loosestrife is at the bud to mid-flowering stage of growth. Follow-up applications for control of regrowth should be made the following year in order to achieve increased control of this weed species. For all applications, a non-ionic surfactant labeled for aquatics should be added to the spray mixture. Follow all directions and use precautions on the label of the surfactant. Thorough wetting of the foliage and stems is necessary to achieve satisfactory control. A minimum spray volume of 50 gallons per acre is recommended for ground broadcast applications.

If using a backpack sprayer, a spray mixture containing 1% to 1.5% Kraken or 5 to 7.6 fl oz of Kraken per 4 gallons of water should be used. All purple loosestrife plants should be thoroughly wetted.

Phragmites (Phragmites australia)

Phragmites can be selectively controlled with foliar applications of Kraken. For broadcast applications, a minimum of 2 ¼ lb ae of triclopyr (3 quarts of Kraken) per acre should be used. For optimum control, apply Kraken when phragmites is in the early state of growth, ½ to 3 feet in height, prior to seed head development. Follow-up applications for control of regrowth may be made the following year in order to achieve increased control of this weed species. For all applications, non-ionic surfactant labeled for aquatics should be added to the spray mixture. Follow all directions and use precautions on the label of the surfactant. Thorough wetting of the foliage and stems is necessary to achieve satisfactory control. A minimum spray volume of 50 gallons per acre is recommended for ground broadcast applications.

If a backpack sprayer is used, a spray mixture containing 1% to 1.5% of Kraken or 5 to 7.6 fl oz of Kraken per 4 gallons of water should be used. All phragmites foliage should be thoroughly wetted.

Aerial application by helicopter may be needed when treating restoration sites that are inaccessible, remote, difficult to traverse, isolated, or otherwise unsuited to ground application, or in circumstances where invasive exotic weeds dominate native plant populations over extensive areas and efforts to restore native plant diversity are being conducted. By air, apply in a minimum spray volume of 30 gallons per acre using Thru-Valve or Microfoil boom only.

- Recreational Use of Water in Treatment Area: There are no restrictions on use of water in the treatment area for recreational purposes, including swimming and fishing.
- Livestock Use of Water from Treatment Area: There are no restrictions on livestock consumption of water from the treatment area.

Terrestrial Sites Associated With Wetland Areas

- Apply no more than 2 lb ae of triclopyr (2/3 gallon of Kraken) per acre per growing season on range and pasture sites, including rights-of-way, fence rows or any area where grazing or harvesting is allowed.
- On forestry sites, Kraken may be used at rates up to 6 lb ae of triclopyr (2 gallons of Kraken) per acre per year.

Use Kraken at rates of ¾ to 6 lb ae of triclopyr (1/4 to 2 gallons of Kraken) per acre to control broadleaf weeds and woody plants. In all cases use the amount of specified in enough water to give uniform and complete coverage of the plants to be controlled. Use only water suitable for spraying. Use a labeled non-ionic surfactant for all foliar applications. When using surfactants, follow the use directions and precautions listed on the surfactant manufacturer's label. Use the higher recommended concentrations of surfactant in the spray mixture when applying lower spray volumes per acre. The order of addition to the spray tank is water, spray thickening agent (if used), additional herbicide (if used), and Kraken. A labeled aquatic surfactant should be added to the spray tank last or as recommended on the product label. If combined with emulsifiable concentrate herbicides, moderate continuous adequate agitation is required.

Before using any recommended tank mixtures, read the directions and all use precautions on both labels.

For best results, apply when woody plants and weeds are actively growing. When hard to control species such as ash, blackgum, choke cherry, maples, or oaks are prevalent and during applications made in late summer when the plants are mature and during drought conditions, use the higher rates of Kraken.

When using Kraken in combination with a 2,4-D herbicide approved for aquatic use, such as DMA 4 IVM, generally the higher rates should be used for satisfactory brush control.

Use the higher dosage rates when brush approaches an average of 15 feet in height or when the brush covers more than 60% of the area to be treated. If lower rates are used on hard to control species, resprouting may occur the year following treatment.

High Volume Foliage Treatment

For control of woody plants, use Kraken at the rate of 3 to 6 lb ae of triclopIry (1 to 2 gallons of Kraken) per 100 gallons of spray solution, or Kraken at ¾ to 3 lb ae of triclopyr (1 to 4 quarts of Kraken) may be mixed with ¼ to ½ gallons of 2,4-D 3.8 lb amine, like DMA 4 IVM, diluted to make 100 gallons of spray solution. Apply at a volume of 100 to 400 gallons of total spray per acre depending upon size and density of woody plants. Coverage should be thorough to wet all leaves, stems, and root collars. (See General Use Precautions and Restrictions.) Do not exceed the maximum allowable use rate of 6lb ae of triclopyr (2 gallons of Kraken) per acre per growing season.

Low Volume Foliage Treatment

To control susceptible woody plants, apply up to 15 lb ae of triclopyr (5 gallons of Kraken) in 10 to 100 gallons of finished spray. The spray concentration of Kraken and total spray volume per acre may be adjusted according to the size and density of target woody plants and kind of spray equipment used. With low volume sprays, use sufficient spray volume to obtain uniform coverage of target plants including the surfaces of all foliage, stems, and root collars (see General Use Precautions and Restrictions). For best results, a labeled aquatic surfactant should be added to all spray mixtures. Match equipment and delivery rate of spray nozzles to height and density of woody plants. When treating tall, dense brush, a truck mounted spray gun with spray tips that deliver up to 2 gallons per minutes at 40 to 60 psi may be required. Backpack or other types of specialized spray equipment with spray tips that deliver less than 1 gallon of spray per minute may be appropriate for short, low to moderate density brush.

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WARRANTY DISCLAIMER

Phoenix Environmental Care, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. Phoenix Environmental Care, LLC MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the, control of Phoenix Environmental Care, LLC or the seller. To the extent allowable by applicable law, all such risks shall be assumed by buyer.

Limitation of Remedies

To the extent permitted by law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Phoenix Environmental Care, LLC's election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of amount of product used

To the extent permitted by law, Phoenix Environmental Care, LLC shall not be liable for losses or damages resulting from handling or use of this product unless Phoenix Environmental Care, LLC is promptly notified of such loss or damage in writing. To the extent permitted by law in no case shall Phoenix Environmental Care, LLC be liable for consequential or incidental damages or losses.

The terms of the "Warranty Disclaimer" above and this "Limitation of Remedies" cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Phoenix Environmental Care, LLC or the seller is authorized to vary or exceed the terms of the "Warranty Disclaimer" or this "Limitation of Remedies" in any manner.