Alaska Department of
Environmental Conservation
Division of Environmental Health
Pesticide Control Program

Pesticide-Use Permit Application Packet To Apply Pesticides to Water

Instructions

- Pesticide-use permits are required under the following circumstances:
  - **Aerial:** Application of pesticide from any type of aircraft or hovercraft, regardless of who owns the land being treated.
  - **Aquatic:** Application of pesticide to a pest located in a water body, including creeks, rivers, streams, ponds, wetlands, and swamps, regardless of who owns the surrounding lands. For vegetation, if the roots are in the water, this is considered an aquatic application even if only the emergent vegetation is treated.
  - **Public Project On Multiple Properties:** Pesticide program or project by a government entity (state, borough, or city) that applies pesticide to more than one property.
- This packet contains instructions and application forms for obtaining a permit to apply pesticides to waters of the state, including both fresh and marine waters.
- **Each** item must be completed and included in your application. Please address each item. If the required information is not applicable please include a brief explanation.
- An Alaska Pollution Discharge Elimination System (APDES) Permit from the DEC Division of Water is required before a pesticide may be applied to surface water. The APDES permit must be obtained **prior** to applying for an ADEC Pesticide Use Permit. For more information, contact Jim Rypkema at **james.rypkema@alaska.gov**, or (907) 334-2288.
- Check off each item as you complete it, and submit the entire packet and required information to the DEC Pesticide Program, at the address shown below.
- A notice of application is required for ALL permits. Once your application is complete, ADEC will provide the required text for you to post in local newspapers. You must also submit an affidavit of publication once publication is complete. 18 AAC 15.020, 18 AAC 15.050, 18 AAC 90.520
- The requested information in this form represents the minimum that is required under 18 AAC 90, 18 AAC 15.020, and 18 AAC 15.050; additional information can and should be provided as necessary or applicable.
- Please do not staple items, renumber required attachments, or alter the form in any way.
- You may submit all items EXCEPT the signature page electronically. The original signed signature page must be mailed or delivered to the address below.

Alaska Department of Environmental Conservation
Pesticide Control Program
1700 E. Bogard Road, #B103
Wasilla, Alaska 99654
907-376-1870
www.dec.state.ak.us/eh/pest/

June 2018

Alaska Department of
Environmental Conservation
Division of Environmental Health
Pesticide Control Program

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Part One: Contact Information

APPLICANT (Person, organization, or business applying for this permit)

Organization/business: State of Alaska, Department of Transportation, Anchorage International Airport

Contact person: Kenton Curtis

Mailing address: P.O. box 196960

City, State, Zip: Anchorage, Alaska 99519-6960

Telephone Number: 907-266-2832

Email Address: Kenton.Curtis@Alaska.gov

Is the applicant a government entity? 18 AAC 90.620

[x] Yes [ ] No

APPLICATOR (Person, organization, or business who will be applying the pesticides)
MUST BE A CERTIFIED APPLICATOR

Organization/business: State of Alaska, Department of Transportation, Anchorage International Airport

Contact person: Kenton Curtis

Mailing address: P.O. Box 196960

City/State/Zip: Anchorage, Alaska, 99519-6960

Telephone Number: 907-266-2832

Email Address: Kenton.Curtis@Alaska.gov

Pesticide Applicator Certification Number: 10067-1906-6
18 AAC 90.515(13)

✓	#	Part Two: Treatment Location Information
	1	Treatment site location: 18 AAC 90.515(8)(A) Street Address: Ted Stevens Anchorage International Airport: Lake Hood/Spenard City: Anchorage, AK OR For remote areas, fill in an informal location description such as mileposts, landmarks, distance and direction from nearest community, latitude and longitude, UTM coordinates, etc. UTM: 340646.90E, 6786480.30N
	2	Describe treatment site (lake, stream, river, wetland, etc.), including inflow and outflow characteristics, stream flow, etc.: Originally two separate water bodies, Lake Hood and Lake Spenard were joined together with a single channel in 1940 for the primary use of the lakes as a floatplane base for both private and commercial aviation. The amount of air traffic using the lakes increased through the 1950's with additional float plane parking and complex enlargement. In 1975, a slow taxi channel was dredged between the two lakes, with gull island separating the two channels. Five smaller channels with additional moorings were also constructed, expanding the western edge of the lake. Today, snowmelt is largest contributor of recharge to Lake Hood/Spenard. Lake water flows intermittently out from the north end of Lake Hood and from the east end of Spenard Lake via weirs at both outlets set at about 69.1 feet, and maintained by DOT airport environmental staff. The weir outflow for Spenard lake goes through 12 culverts into the Municipality of Anchorage's storm water system before eventually reaching Fish Creek. Lake Hood's weir outlet flows north into a bog area between the lake and eventually into Jones Lake to the north. The northward flow is diverted through several culverts under Lakeshore Dr. and Aircraft Dr.; however, there is no point source of flow between Jones Lake and Lake Hood. The Jones Lake outlet then flows into the Municipality of Anchorage's storm water system.
	3	List each public or private drinking water system within 200 feet of the treatment area. 18 AAC 90.515(8)(D) There are no public or private drinking water systems within 200 feet of Lakes Hood/Spenard. The only wells present are 8 recharge, and discovery wells owned by State of Alaska DOT or the Anchorage International Airport, Lake Hood: Log IDs 24266, 19342, 30614, 30613, 30616, 30612, 30617, and 30615 found in the Well Log Tracking System (WELTS) maintained by the Alaska Division of Mining, Land and Water.

✓	#	Part Two: Treatment Location Information
	4	Approximate size of the treatment area. Please specify units (acre feet, flow rate, etc. The units should match units on the pesticide label): 18 AAC 90.515(8)(B) Combined Lake Hood and Spenard with canals: 201.8 surface acres, 8.6 feet average depth Littora: 100 ft wide littoral area around 28195.2 feet of shoreline = 64.73 surface acres
	5	If the treatment location has been identified as habitat for an endangered or threatened species, list each species and category (threatened, endangered). 50 CFR 17.11-12 None

✓	#	Part Three: Treatment Information
	1	List the dates & times (or range of dates and times) that pesticide is proposed to be applied: 18 AAC 90.515(9) The goal is eradication of Elodea and controlling aquatic vegetation to maintain the safety of float plane operations, with applications determined as aquatic vegetation becomes a nuisance. The proposed application of Litorra will be at the most once a month during the summer months (June-August). SonarOne and SonarGenesis will only be used if Elodea is determined present, and would be applied at most once a month, if Elodea is present.
	2	Target pest of pesticide project: 18 AAC 90.515(2)

✓	Category	List specific targets
	Fungus	
	Vegetation	Nuisance Aquatic Vegetation, including Elodea
	Insects	
	Fish	
	Rodents	
	Other	

✓	#	Part Three: Treatment Information
	3	Provide a description of the method of pesticide application, including details about any equipment that will be used. 18 AAC 90.515(10)

Material and equipment will be transported to the site by truck. Pesticide dispersal will be made directly into the lake by DEC-certified applicators from an outboard motorboat. Boats will be equipped with apparatus to deliver liquid (Littora, and SonarGenesis) herbicide to the water body. Liquid Application: Liquid herbicide will be applied using a pump connected to weighted hoses mounted to a motorboat. A forked intake line will draw lake water and herbicide separately to be mixed and applied to the lake. The intake line that will draw from the herbicide concentration is metered. The intake rations will be calibrated by running both intakes with untreated water to determine the mix ratio (gallons of water: gallons of herbicide). That ratio is combined with the pump discharge rate to determine the volume of herbicide being discharged per minute (e.g. a 1:10 ratio of herbicide to water being discharged at 50 gallons/minute will deliver 4.5 gallons/minute of herbicide). Application routes will be determined based on swath width (width of application dispersal) and then programmed into onboard GPS equipment to be followed by the operator of the application vessel. The speed of the boat will be set to cover the given route in the amount of time calculated to deliver the prescribed volume of herbicide.

Pellet Application: Pellets will be applied using a forced air blower system mounted to a motorboat. The blower system will be calibrated using clay pellets with the same size and weight as the herbicide pellets. A set weight of training pellets will be passed through the blower to measure the time required to deliver, and this will be repeated several times to obtain an average. That information will be used to determine how many minutes are required to deliver the full prescription to the treatment area. Application routes will be determined based on swath width of the blower and programmed into onboard GPS equipment to be followed by the operator of the application vessel. The speed will be determined by the amount of time required to deliver the prescribed weight of pellets to the treatment area.

✓	#	Part Four: Pesticide List
	1	List the common or brand name of **EACH** proposed pesticide and adjuvant. 18 AAC 90.515(1) • Pesticides MUST be registered in the State of Alaska. • Adjuvants MUST be registered in the State of Washington to be considered for use in Alaska. Diquat: Littora (EPA 67690-53) Fluridone: SonarGenesis (EPA 67690-54) SonarOne (EPA 67690-45)
	2	Total number of pesticides and adjuvants listed: 3

To find pesticide products registered in Alaska, search by EPA registration number here:
http://www.kellysolutions.com/ak/pesticideindex.htm

To find adjuvants registered in Washington, search here **http://cru66.cahe.wsu.edu/labels/Labels.php**. *For "Item to search on", select "Crop". For "Common name", select "adjuvant".*

✓	#	**Part Five: Product Information** For **EACH** proposed pesticide and adjuvant, fill out the following information. Copy and attach additional sheets for each product. 18 AAC 90.515(1-6)
	1	Common or brand name of proposed pesticide or adjuvant detailed on this sheet: Littora
	2	EPA Registration Number (not applicable for adjuvants): 69690-53
	3	Specify the formulation of the pesticide or adjuvant (liquid, granular, aerosol, etc.): Liquid
	4	Name of the seller or distributor from whom the pesticide will be obtained: SePRO Corporation OR Check here if pesticide is from a previous surplus [x] 18 AAC 90.515(1)
	5	List each active ingredient (or principal functioning agent) in this product AND its percent composition:
	6	Pesticides: list the adjuvant (if any) it will be mixed with. Adjuvants: list the pesticides it will be mixed with. None

Active Ingredient	% composition
Diquat dibromide	37.3%

✓	#	**Part Five: Product Information** For **EACH** proposed pesticide and adjuvant, fill out the following information. Copy and attach additional sheets for each product. 18 AAC 90.515(1-6)
		Product Name: Littora (Diquat) Which treatment scenarios are described in questions 6-8? Seasonal/aquatic treatment
	7	If this product will be diluted prior to application to the water body, specify the rate of dilution as it will be applied for this project: 18 AAC 90.515(6) Not applicable – product won't be diluted ☐ **UNITS MUST MATCH LABEL INSTRUCTIONS** Amount of product (list units): 1 gallon Littora Amount of diluent (list units): 1 gallon water Example: 3 oz product / 1 gallon water
	8	Rate of application that will be used for this project: 18 AAC 90.515(6) **UNITS MUST MATCH LABEL INSTRUCTIONS** Amount of product (list units): 2.0 gallons per 1.0 acre On which page of the label is this application rate found? 4 Examples: 15 gallons per acre/foot; 6 lbs per 1000 gallon; Spray to wet

✓	#	**Part Five: Product Information** For **EACH** proposed pesticide and adjuvant, fill out the following information. Copy and attach additional sheets for each product. 18 AAC 90.515(1-6)
	9	Total amount of product that will be applied to the treatment site for each application: 18 AAC 90.515(6) **UNITS MUST MATCH LABEL INSTRUCTIONS**

Application Rate (from Part 5, Question 7)		Application Area Size (from Part 2, Question 4)	=	Total Volume
2.0 gallons/1.0 acre	*	64.73 acres	=	129.46 gallons

Example:	15 gallons/acre-foot	*	100 acre-feet	=	1500 gallons
	6 lbs/1,000 gallons	*	2,000 gallons	=	12 lbs

✓	#	**Part Five: Product Information** For **EACH** proposed pesticide and adjuvant, fill out the following information. Copy and attach additional sheets for each product. 18 AAC 90.515(1-6)
	1	Common or brand name of proposed pesticide or adjuvant detailed on this sheet: SonarGenesis
	2	EPA Registration Number (not applicable for adjuvants): 69690-54
	3	Specify the formulation of the pesticide or adjuvant (liquid, granular, aerosol, etc.): Liquid
	4	Name of the seller or distributor from whom the pesticide will be obtained: SePRO Corporation OR Check here if pesticide is from a previous surplus [x] 18 AAC 90.515(1)
	5	List each active ingredient (or principal functioning agent) in this product AND its percent composition:
	6	Pesticides: list the adjuvant (if any) it will be mixed with. Adjuvants: list the pesticides it will be mixed with. None

Active Ingredient	% composition
Flurodine	6.3%

✓	#	**Part Five: Product Information** For **EACH** proposed pesticide and adjuvant, fill out the following information. Copy and attach additional sheets for each product. 18 AAC 90.515(1-6)
		Product Name: Sonar Genesis Which treatment scenarios are described in questions 6-8? Seasonal/aquatic treatment
	7	If this product will be diluted prior to application to the water body, specify the rate of dilution as it will be applied for this project: 18 AAC 90.515(6) Not applicable – product won't be diluted ☐ **UNITS MUST MATCH LABEL INSTRUCTIONS** Amount of product (list units): 6.0 gallon SonarGenesis Amount of diluent (list units): 19.0 gallon water Example: 3 oz product / 1 gallon water
	8	Rate of application that will be used for this project: 18 AAC 90.515(6) **UNITS MUST MATCH LABEL INSTRUCTIONS** Amount of product (list units): 1.0 gallons per 23.0 acre-ft On which page of the label is this application rate found? 3 Examples: 15 gallons per acre/foot; 6 lbs per 1000 gallon; Spray to wet

✓	#	**Part Five: Product Information** For **EACH** proposed pesticide and adjuvant, fill out the following information. Copy and attach additional sheets for each product. 18 AAC 90.515(1-6)
	9	Total amount of product that will be applied to the treatment site for each application: 18 AAC 90.515(6) **UNITS MUST MATCH LABEL INSTRUCTIONS**

Application Rate (from Part 5, Question 7)		Application Area Size (from Part 2, Question 4)	=	Total Volume
1.0 gallons/23.0 acre-ft	*	1735.5 acre-ft	=	75.4 gal

Example:	15 gallons/acre-foot	*	100 acre-feet	=	1500 gallons
	6 lbs/1,000 gallons	*	2,000 gallons	=	12 lbs

✓	#	**Part Five: Product Information** For **EACH** proposed pesticide and adjuvant, fill out the following information. Copy and attach additional sheets for each product. 18 AAC 90.515(1-6)
	1	Common or brand name of proposed pesticide or adjuvant detailed on this sheet: SonarONE
	2	EPA Registration Number (not applicable for adjuvants): 67690-45
	3	Specify the formulation of the pesticide or adjuvant (liquid, granular, aerosol, etc.): Pellet
	4	Name of the seller or distributor from whom the pesticide will be obtained: SePRO Corporation OR Check here if pesticide is from a previous surplus [x] 18 AAC 90.515(1)

✓	#	**Part Five: Product Information** For **EACH** proposed pesticide and adjuvant, fill out the following information. Copy and attach additional sheets for each product. 18 AAC 90.515(1-6)
	5	List each active ingredient (or principal functioning agent) in this product AND its percent composition:

Active Ingredient	% composition
Fluridone	5.0%

	6	Pesticides: list the adjuvant (if any) it will be mixed with. Adjuvants: list the pesticides it will be mixed with. None
		Product Name SonarOne (Fluridone) Which treatment scenarios are described in questions 6-8? Seasonal/aquatic treatment
	7	If this product will be diluted prior to application to the water body, specify the rate of dilution as it will be applied for this project: 18 AAC 90.515(6) Not applicable – product won't be diluted ☐ **UNITS MUST MATCH LABEL INSTRUCTIONS**

Amount of product (list units)	1.0 lb
Amount of diluent (list units)	2.0 acre-ft

Example: 3 oz product / 1 gallon water

✓	#	**Part Five: Product Information** For **EACH** proposed pesticide and adjuvant, fill out the following information. Copy and attach additional sheets for each product. 18 AAC 90.515(1-6)
	8	Rate of application that will be used for this project: 18 AAC 90.515(6) **UNITS MUST MATCH LABEL INSTRUCTIONS** Amount of product (list units): 1.0 lbs per 2.0 acre feet On which page of the label is this application rate found? 3 Examples: 15 gallons per acre/foot; 6 lbs per 1000 gallon; Spray to wet
	9	Total amount of product that will be applied to the treatment site for each application: 18 AAC 90.515(6) **UNITS MUST MATCH LABEL INSTRUCTIONS**

Application Rate (from Part 5, Question 7)		Application Area Size (from Part 2, Question 4)	=	Total Volume
1.0 lb/2.0 acre	*	1735.5 acre-ft	=	867.8lbs

Example:

15 gallons/acre-foot	*	100 acre-feet	=	1500 gallons
6 lbs/1,000 gallons	*	2,000 gallons	=	12 lbs

✓	#	**Part Six: Storage and Disposal** 18 AAC 90.615
	1	List the location where pesticide will be stored prior to final disposal. Physical Address: Old Field Maintenance Building; 4100 Aircraft Drive City, State, Zip: Anchorage, AK 99519

✓	#	Part Six: Storage and Disposal — 18 AAC 90.615
	2	Describe how and where excess mixed pesticides and adjuvants will be disposed: There should be no excess mixed product of diquat or fluridone since the product will not be mixed and stored in tanks in advance; rather, the concentrate will be metered and mixed with lake or slough water during the pumping application process.
	3	Describe how and where empty pesticide and adjuvant containers will be disposed: Empty containers will be triple-rinsed, punctured, and crushed on-site or at the Old Field Maintenance Warehouse. These containers will later be offered for recycling at the landfill or disposed of in the landfill or with airport maintenance disposal.
	4	If excess material or empty containers will be disposed in a landfill, provide the following information: Facility Name: Anchorage Landfill City, State, Zip: Eagle River, AK 99577 Date when disposal site was contacted to confirm acceptance of materials: 2 October 2018

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Please provide EACH required item in a separate, stand-alone document.
Check off each item that is attached. Some items may not be applicable; if so, check the N/A column.

Part Seven: Supporting Documentation

✓	#	N/A	Item
	1.	Required	Justification for the pesticide application - why you need to apply a pesticide and the benefits you expect to achieve from the treatment.
	2.	Required	Map that shows the location of the treatment area within the state of Alaska. Map must be issued by the United States (e.g USGS), the State, or the Municipality.
	3.	Required	Maps and/or aerial photos that show details within the treatment area, included areas where pesticides will be applied. Map/photo must include a scale to show distances.
	4.		Map and/or aerial photo that shows the treatment area and the location of all sources of drinking water within 200 feet of the treatment area. Map/photo must include a scale to show distances.
	5.	Required	EPA approved label for each proposed pesticide and adjuvant to be used.
	6.	Required	Material Safety Data Sheet for each proposed pesticide and adjuvant to be used.
	7.	Required	Description of potential impacts to the environment and non-target plants and animals including invertebrates. Should address any potential impacts to biodiversity and distribution of species, potential for anoxia due to plant decomposition, impact to the overall ecological health of the water body, and any other expected impacts.
	8.	Required	Description of precautions planned to protect human health, safety, welfare, animals, and the environment.
	9.		Proof of liability insurance (for non-government applicants)
	10.		Information about how the proposed pesticide application might affect any threatened or endangered species that may be found in or near treatment area, and any proposed measures to prevent or reduce impacts.
	11.	Required	Documentation of compliance with APDES permit requirements (see instructions on page 1).

Part Eight: Signatures

All applications must be signed as follows, per 18 AAC 15.030:

- **Corporations**: A principal executive officer, an officer that is no lower than the level of vice president, or a duly authorized representative who is responsible for the overall management of the project or operation
- **Partnerships**: A general partner
- **Sole proprietorship**: The proprietor
- **Municipal, state, federal, or other public entity**: A principal executive officer, ranking elected official, or duly authorized employee

I, James Szczesniak certify under penalty of perjury, that all of the information And exhibits in this application and attached documentation are true, accurate, and complete.

Applicant's Signature

02 - 11 - 2019
Month Day Year

Airport Manager
Applicant's Title

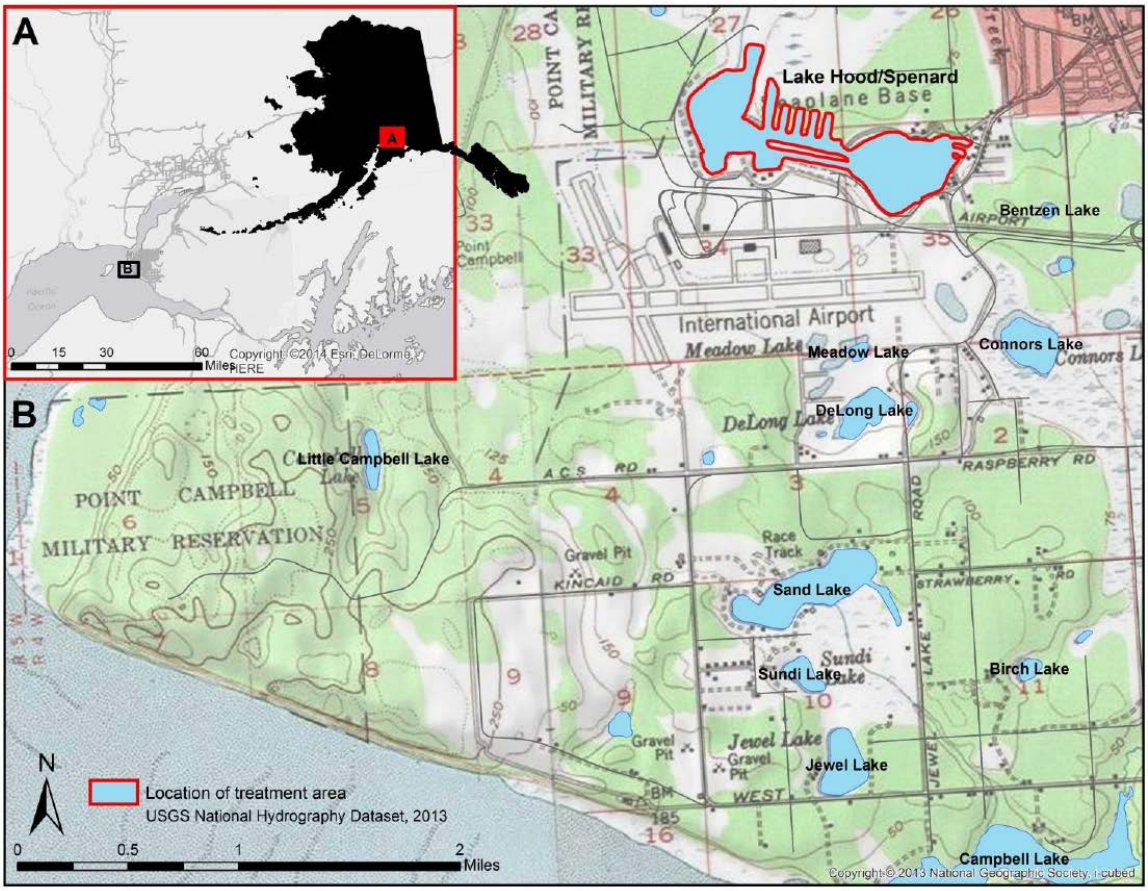
Attachment 1: Justification for Managing Nuisance Vegetation in Lake Hood/Spenard

Lake Hood/Spenard receives an average of 190 flights per day, making it the world's busiest floatplane airport. The Airport's goal is to provide slip owners, visiting pilots, and passengers who fly in and out of Lake Hood/Spenard with a safe flying and maneuvering environment. The Airport aims to protect the natural environment and water quality of the lakes while providing safe passage when taxiing, taking off, and landing. Keeping aquatic vegetation in control will enable this.

Herbicide control of nuisance aquatic vegetation is the most effective method to prevent spread of most types of nuisance aquatic vegetation, as physical or mechanical controls often allow the plants to reproduce and spread from the fragmentation that results. In Lake Hood/Spenard, it is speculated that the operation of the DOT vegetation harvester is only a temporary fix to excessive vegetation, and leaves plant fragments in the water, potentially distributing nuisance aquatic vegetation to establish in different areas around the lake, and other lakes the float planes visit.

In addition to the potential safety risks of having dense nuisance aquatic vegetation in the lake, it is important to ensure that the world's busiest floatplane lake be free of invasive vegetation that may spread to other lakes, such as Elodea. Elodea, Alaska's first submersed aquatic invasive plant species, was discovered by a National Parks Service aquatic ecologist in Lakes Hood/Spenard on June 10th, 2015. Elodea is particularly injurious because of its ability to propagate through vegetative growth via fragmentation, and can be transported by float planes, making Lakes Hood/Spenard a high risk area for allowing Elodea to spread throughout remote Alaska. Since 2015, Lakes Hood/Spenard have received pesticide applications, and have recently tested free of Elodea, but the threat is ongoing, and treatment for unsafe/nuisance vegetation in the lake will also limit the re-establishment of Elodea in the waters.

Attachment 2: Treatment Area within the State of Alaska



Attachment 3: Details of Treatment Areas

Attachment 4: Nearby Drinking Water

There are no wells or other drinking water sources within 200 feet of the treatment area of Lakes Hood/Spenard.

Littora®

Landscape and Aquatic Herbicide

SPECIMEN

SePRO

To prevent accidental poisoning, never put this product into food, drink, or other containers. Do not use measuring utensils for subsequent food use. Use strictly in accordance with entire label.

Active Ingredient

Diquat dibromide [6,7-dihydrodipyrido(1,2-a:2',1'-c)pyrazinediium dibromide]	37.3%
Other Ingredients	62.7%
Total	100.0%

Contains 2 pounds diquat cation per one (1) U.S. gallon (3.73 pounds diquat dibromide per gallon).

Keep Out of Reach of Children

CAUTION / PRECAUCIÓN

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.)

Refer to inside of label booklet for additional precautionary information and *Directions for Use*, including *First Aid* and *Storage and Disposal*.

NOTICE: Read the entire label before using. Use only according to label directions. Before buying or using this product, read *Terms and Conditions of Use*, *Warranty Disclaimer*, *Inherent Risks of Use* and *Limitation of Remedies* inside label booklet. If terms are unacceptable, return at once unopened.

Manufactured for: SePRO Corporation
11550 North Meridian Street, Suite 600
Carmel, IN 46032, U.S.A.

EPA Reg. No. 67690-53
FRL20130821

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

Keep Out of Reach of Children

CAUTION / PRECAUCIÓN

Harmful if inhaled. Harmful if swallowed. Causes moderate eye irritation. Avoid breathing spray mist and contact with eyes or clothing.

FIRST AID	
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further 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 the poison control center or doctor. • Do not give anything to an unconscious person.
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.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. In case of emergency endangering health or the environment involving this product, call **INFOTRAC** at **1-800-535-5053**.	

Note to Physicians: To be effective, treatment for diquat poisoning must begin **IMMEDIATELY.** Treatment consists of binding diquat in the gut with suspensions of activated charcoal or bentonite clay, administration of cathartics to enhance elimination, and removal of diquat from the blood by charcoal hemoperfusion or continuous hemodialysis.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are: barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils. If you want more options, follow the instructions for Category A on an EPA Chemical Resistance Category Selection Chart.

Mixers, Loaders, Applicators and Other Handlers Must Wear:

- Coveralls over long-sleeved shirt and long pants;
- Chemical-resistant gloves;
- Chemical-resistant footwear plus socks;
- Protective eyewear;
- Chemical-resistant headgear for overhead exposure;
- Chemical-resistant apron when cleaning equipment, mixing, or loading; and
- Face shield when mixing or loading.

Exception: After this product has been diluted to 0.50% Littora or less in water (i.e., the labeled rate for some spot applications), applicators for AQUATIC SURFACE APPLICATIONS must, at a minimum, wear (Note: Mixers and loaders for this application method must still wear the PPE as described in the above section.):

- Long-sleeved shirt and long pants;
- Shoes plus socks;
- Waterproof gloves; and
- Protective eyewear.

Exception: At a minimum, applicators for AQUATIC SUBSURFACE APPLICATIONS must wear (Note: Mixers and loaders for this application method must still wear the PPE as described in the above section.):

- Short-sleeved shirt and short pants;
- Waterproof gloves; and
- Chemical-resistant footwear plus socks.

USER SAFETY REQUIREMENT

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 exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS

Mixers and loaders supporting aerial applications are required to use closed systems that provide dermal protection. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)]. When using the closed system, mixers and loaders' PPE requirements may be reduced or modified as specified in the WPS.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [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/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 aquatic invertebrates. **For Terrestrial Uses** do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters. **For Aquatic Uses** do not apply directly to water except as specified on this label.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Read the entire label. Use strictly in accordance with precautionary statements and directions for use, and with applicable state and federal regulations.

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.

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

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 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 WPS.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

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

- Coveralls over long-sleeve shirt and long pants;
- Chemical-resistant gloves;
- Chemical-resistant footwear plus socks;
- Protective eyewear; and
- Chemical-resistant headgear for overhead exposure.

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 (WPS) 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.

Keep all unprotected persons out of operating areas or vicinity where there may be drift.

For terrestrial uses, do not enter or allow entry of maintenance workers into treated areas, or allow contact with treated vegetation wet with spray, dew, or rain, without appropriate protective clothing until spray has dried.

For aquatic uses, do not enter treated areas while treatments are in progress.

PRODUCT OVERVIEW INFORMATION

Littora® Landscape and Aquatic Herbicide is a nonvolatile herbicidal for use as a general herbicide to control weeds in:

- Commercial greenhouses and nurseries;
- Ornamental seed crops (flowers, bulbs, etc. - except in the state of California);
- Landscape, industrial, recreational, commercial, residential, and public areas;
- Turf renovation (all turf areas except commercial sod farms);
- Dormant established turfgrass (bermudagrass, zoysiagrass, nonfood or feed crop); and
- Aquatic areas.

Absorption and herbicidal action is usually quite rapid with effects visible in a few days. Littora controls weeds by interfering with photosynthesis that occurs within green plant tissue. Weeds should be succulent and/or actively growing for best results.

Rinse all spray equipment thoroughly with water after use. Avoid spray drift to crops, ornamentals, and other desirable plants during application, as injury may result. Application to muddy water may result in reduced control. Minimize creating muddy water during aquatic application. Use of dirty or muddy water for Littora dilution may result in reduced herbicidal activity. Avoid applying under conditions of high wind, water flow, or wave action.

Spray Drift Management

Avoiding spray drift at the application site is the responsibility of the applicator. The interactions of many equipment-and weather-related factors determine the potential for spray drift. The applicator is 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 to agricultural field crops:

- The distance of the outermost nozzles on the boom must not exceed ¾ the length of the wingspan or rotor; and
- Nozzles must always point backward parallel with the air stream and never be pointed downward more than 45 degrees.

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

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* sections of this label).

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 target 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 2-10 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 conditions 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 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 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 wind is blowing away from adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops).

USE IN COMMERCIAL GREENHOUSES AND NURSERIES

For general weed control in commercial greenhouses (beneath benches), field grown and container stock, and other similar areas, Littora may be applied pre- or post-plant preemergence in field grown ornamental nursery plantings or post-emergence as a directed spray. Littora may also be applied preemergence in ornamental seed crops (except in the state of California).

Avoid contact with desirable foliage as injury may occur. Do not use on food or feed crops.

Spot spray: Apply 1-2 quarts of Littora plus the labeled rate of a 75% or greater nonionic surfactant per 100 gallons of water, or 0.75 ounces (22 milliliters) of Littora plus the labeled rate of a 75% or greater nonionic surfactant per 1 gallon of water.

Broadcast: Apply 1-2 pints of Littora in a minimum of 15 gallons of water per acre. Add the labeled rate of a 75% or greater nonionic surfactant per 100 gallons of spray mixture. Use an adequate spray volume to ensure good coverage.

USE IN ORNAMENTAL SEED CROPS (FLOWERS, BULBS, ETC.) [EXCEPT IN THE STATE OF CALIFORNIA]

For pre-harvest desiccation of ornamental seed crops. NOT FOR FOOD OR FIBER CROPS.

Broadcast (Air or Ground): Apply 1.5-2 pints of Littora plus the labeled rate of a 75% or greater nonionic surfactant per acre in sufficient water (minimum of 5 gallons by air; 15 gallons by ground) for desiccation and weed burndown. Repeat as needed at no less than at 5-day intervals; up to three applications. Do not use seed, screenings, or waste as feed or for consumption.

USE IN LANDSCAPE, INDUSTRIAL, RECREATIONAL, COMMERCIAL, RESIDENTIAL, AND PUBLIC AREAS

Littora provides fast control of broadleaf and grassy weeds in industrial, recreational, golf course, commercial, residential, and public areas. Littora is a nonselective herbicide that rapidly kills undesirable above ground weed growth in 24-36 hours. Avoid application of Littora to desirable plants.

Littora is a contact/desiccant herbicide; it is essential to obtain complete coverage of the target weeds to get good control. Improper application technique and/or application to stressed weeds may result in unacceptable weed control. For best results, apply to actively growing, young weeds. Difficult weeds (such as perennial or deeply-rooted weeds) can often be controlled by tank mixing Littora with other systemic-type herbicides. Refer to other product labels for specific application directions.

For residual weed control, tank mix Littora with a preemergent herbicide labeled for the intended use site. When mixing Littora with another herbicide, it is recommended to mix just a small amount to first determine if the mixture is physically compatible before proceeding with larger volumes.

SePRO Corporation has not tested all possible tank mixtures with other herbicides for compatibility, efficacy or other adverse effects. Before mixing with other herbicides SePRO Corporation recommends you first consult your state experimental station, state university or extension agent.

- **Grounds maintenance weed control:** Littora can be used as a spot or broadcast spray to control weeds in public, commercial and residential landscapes, including landscape beds, lawns, golf courses and roadsides. Littora can also be used for weed control around the edges and non-flooded portions of ponds, lakes and ditches.
- **Trim and Edge weed control:** Littora can be used to eliminate undesired grass and broadleaf plant growth in a narrow band along driveways, walkways, patios, cart paths, fence lines, and around trees, ornamental gardens, buildings, other structures, and beneath noncommercial greenhouse benches. Vegetation control with Littora is limited to the spray application width. Do not exceed the labeled rate of Littora as excessive rates may result in staining of concrete-based materials.

  Littora, since it does not translocate systemically, can be used as an edging or pruning tool when precisely applied to select areas of grass or to undesirable growth on desirable ornamental bedding plants, ground covers, etc.
- **Industrial weed control:** Littora can be used as a spot or broadcast spray either alone or in combination with other herbicides as a fast burndown or control weeds in rights-of-ways, railroad beds/yards, highways, roads, dividers and medians, parking lots, pipelines, pumping stations, public utility lines, transformer stations and substations, electric utilities, storage yards, and other non-crop areas.

Spot spray: Apply either 1-2 quarts of Littora plus the labeled rate of a 75% or greater nonionic surfactant per 100 gallons water, or 0.75 ounces (22 milliliters) Littora plus the labeled rate of a 75% or greater nonionic surfactant per 1 gallon of water.

Broadcast: 1-2 pints of Littora per acre in sufficient water to ensure good spray coverage. Add the labeled rate of 75% or greater nonionic surfactant per 100 gallons spray mixture. Greater water volumes are necessary if the target plants are tall and/or dense. It is recommended that 60 gallons or greater water volume be used to obtain good coverage of dense weeds.

USE IN TURF RENOVATION (ALL TURF AREAS EXCEPT COMMERCIAL SOD FARMS)

To desiccate golf course turf and other turf areas prior to renovation, apply 1-2 pints of Littora per acre plus the labeled rate of a 75% or greater nonionic surfactant in 20-100 gallons of water (4 teaspoons of Littora plus the labeled rate of a 75% or greater nonionic surfactant per 1 gallon of water) using ground spray equipment. Apply for full coverage and thorough contact with the turfgrass. Apply only when the turf is dry, free from dew and incidental moisture. For enhanced turf desiccation, especially in the case of thick turfgrass, water volumes should approach 100 gallons of water per acre.

For **suppression** of regrowth and quick desiccation of treated turfgrass, Littora may be mixed with other systemic nonselective or systemic post-emergence grassy weed herbicides. Refer to other product labels for specific application directions and restrictions.

Avoid spray contact with, or spray drift to, foliage of ornamental plants or food crops. Do not graze livestock on treated turf or feed treated thatch to livestock.

USE IN DORMANT ESTABLISHED TURFGRASS (BERMUDAGRASS, ZOYSIAGRASS), NONFOOD OR FEED CROP

For control of emerged annual broadleaf and grass weeds, including Little Barley†, Annual Bluegrass, Bromes including Rescuegrass, Sixweeks fescue, Henbit, Buttercup, and Carolina Geranium in established dormant bermudagrass lawns, parks, golf courses, etc.

Apply 1-2 pints Littora per acre in 20-100 gallons of spray mix by ground as a broadcast application. Add the labeled rate of a 75% or greater nonionic surfactant per 100 gallons of spray mixture.

Bermudagrass must be dormant at application. Application to actively growing bermudagrass or bermudagrass in transition may cause delay or permanent injury. Users in the extreme Southern areas should be attentive to the extent of dormancy at the time of application.

†For control of Little Barley, apply Littora prior to the mid-boot stage.

USE IN AQUATIC AREAS

New York - Not for Sale or Use in New York State without Supplemental Special Local Needs Labeling.

Obtain Required Permits: Consult with appropriate state or local pesticide and/or water authorities before applying this product in or around pubic waters. Permits and posting or treatment notification may be required by state, tribal, or local public agencies.

Treatment of dense weed areas may result in oxygen loss from decomposition of dead weeds. This loss of oxygen may cause fish suffocation. Therefore, to minimize this hazard, do not treat more than 1/2 of the water body area at one time and wait 14 days between treatments when susceptible plants are mature and have grown to the water's surface, or when the treatment would result in significant reductions in total plant biomass. Waters having limited and less dense weed infestations may not require partial treatments.

For application only to **still water** (i.e. ponds, lakes, and drainage ditches) where there is minimal or no outflow to public waters.

and/or

For applications to **public waters** in ponds, lakes, reservoirs, marshes, bayous, drainage ditches, canals, streams, rivers, and other slow-moving or quiescent bodies of water for control of aquatic weeds. For use by:

- Corps of Engineers;
- Federal or State public agencies (i.e., Water Management District personnel, municipal officials); or
- Applicators and/or licensees (certified for aquatic pest control) that are authorized by the State or Local government.

Treated water may be used according to the water use restrictions set forth in Table 1 or when an approved assay or analytical method establishes that the water does not contain more than the designated maximum contaminant level goal (MCLG) of 0.02 mg/l (ppm) of diquat dibromide (calculated as the cation).

TABLE 1: WATER USE RESTRICTIONS FOLLOWING APPLICATIONS WITH LITTORA (Days)

Application Rate (gallons/surface acre)	Drinking	Fishing and Swimming	Livestock/ Domestic Animals Consumption	Irrigation to Turf and Landscape Ornamentals††	Irrigation to Food Crops and Production Ornamentals††
≥ 2	3 days	0	1 day	3 days	5 days
1	2 days	0	1 day	2 days	5 days
0.75	2 days	0	1 day	2 days	5 days
0.50	1 day	0	1 day	1 day	5 days
Spot Spray† (<0.5)	1 day	0	1 day	1 day	5 days

† Add a nonionic surfactant (with at least 75% of the constituents active as a spray adjuvant) at the rate recommended by the manufacturer.
†† For preparing agricultural sprays for food crops, turf or ornamentals (to prevent phytotoxicity), do not use water treated with Littora before the specified time period.

When the contents of more than one spray tank is necessary to complete a single aquatic application, no water holding restrictions apply between the consecutive spray tanks.

No applications are to be made in areas where commercial processing of fish, resulting in the production of fish protein concentrate or fish meal, is practiced.

Littora may be applied by backpack, airboat, spray handgun, helicopter, airplane, or similar application equipment that results in thorough spray coverage.

Floating and Marginal Weed Control
Littora may be applied by backpack, airboat, spray handgun, helicopter, airplane, or similar application equipment that results in thorough spray coverage.

- Cattails, *Typha* spp.
- Duckweed, including *Lemna* spp.
- Frog's Bit†, *Limnobium spongia*
- Pennywort (*Hydrocotyle* spp.)
- Salvinia spp. (including *S. molesta*)
- Water hyacinth, *Eichhornia crassipes*
- Water lettuce, *Pistia stratiotes*

†Not for use in California

Spot Treatment: Apply Littora at 2 to 4 quarts per 100 gallons spray carrier (0.5 - 1.0% solution) with an approved aquatic surfactant or wetting agent at 0.25 - 1.0% v/v (1 quart to 1 gallon per 100 gallons water; refer to the surfactant label for product-specific rates). For cattail control, Littora should be applied prior to flowering at the maximum application rate (8 quarts of Littora /100 gallons spray carrier) plus the wetting agent. Repeat treatments may be necessary for complete control.

Spray to completely wet target weeds but not to runoff. Densely packed weeds or mats may require additional applications due to incomplete spray coverage. Re-treat as needed. For best results, re-treat weed escapes within 2 weeks of the initial treatment.

Broadcast Treatment: Apply Littora at the rate of 0.5 - 2.0 gallons per surface acre in sufficient carrier along with 16-32 ounces per acre of an aquatic surfactant or wetting agent (refer to the surfactant label for product specific rates). Re-treat as necessary for densely populated weed areas. Good coverage is necessary for control of the target weeds.

For duckweed control, apply Littora at 1 - 2 gallons/acre.

Submersed Weed Control
To control submersed weeds apply Littora in water at 0.5 - 2.0 gallons per surface acre (per 4 foot water depth), or up to 0.5 gallons/acre foot in water with an average depth greater than 4 feet deep. For severe weed infestations or when treating more difficult to control species, use 0.5 gallons/acre foot of water. Refer to Table 2 for application rates.

- Algae††, *Spirogyra* spp. and *Pithophora* spp.
- Bladderwort, *Utricularia* spp.
- Brazilian Elodea, *Egeria densa*
- Coontail, *Ceratophyllum demersum*
- Elodea, *Elodea* spp.
- Hydrilla, Hydrilla verticillata
- Naiad, *Najas* spp.
- Pondweeds†, *Potamogeton* spp.
- Watermilfoils (including Eurasian), *Myriophyllum* spp.

†Littora controls Potamogetan species except Richardson's pondweed, *P. richardsonii*.
††Suppression only. For control of *Spirogyra* and/or *Pithophora*, use Littora in a tank mix with an approved algaecide.

TABLE 2: GALLONS OF LITTORA PER SURFACE ACRE†

Application Rate (gallons/acre)	Average Water Depth			
	1 Foot	2 Feet	3 Feet	4 Feet††
1	0.25 gal.	0.50 gal.	0.75 gal.	1.0 gal.
2	0.50 gal.	1.0 gal.	1.5 gals.	2.0 gals.

†For water depths ≤ 2 feet including shorelines, do not exceed 1 gallon per surface acre.
††In treatment areas with an average water depth greater than 4 feet, apply a maximum of 0.5 gallons per acre foot of water.

Subsurface Applications: Where the submersed weed growth, especially hydrilla, has reached the water surface, apply either in a water carrier or an invert emulsion through trailing hoses to apply the dilute spray below the water surface to ensure adequate coverage.

Bottom Placement: Where submersed weeds such as hydrilla, bladderwort, or coontail are growing in deeper water and are less mature (e.g. not to the surface of the water) and/or where the water is slowly moving through the weed growth, the use of an application method (such as invert emulsion carrier or long-trailing hoses) to inject Littora near the bottom with weighted hoses may improve control.

Surface Application for Submerged Aquatic Weeds: Apply the recommended rate of Littora as a spray in sufficient carrier to fully cover the target area. Applications should be made to ensure complete coverage of the weed areas. In mixed weed populations, use the high rate of application as indicated by weeds present. For dense submersed weeds or water over 2 feet deep, a surface spray is not recommended (Littora should be applied subsurface in these situations.)

Tank Mixes With Other Aquatic Herbicides/Algaecides: For severe weed or algae infestations, the use of an approved algaecide either as a pretreatment to the Littora application or in a tank mix, may result in enhanced weed control.

When tank mixing, read and follow the labeled precautionary statements, directions for use, weeds controlled, and other restrictions for each tank mix product. **Use in accordance with the most restrictive label limitations and precautions of the products used in the tank mix.** Do not exceed any labeled rate or dose. To ensure compatibility, a jar test is recommended before field application of any tank mix combination. Consult with SePRO Corporation for latest tank mix recommendations.

Littora + Komeen®
The addition of Komeen, or other copper-based herbicides/algaecides, with Littora may improve control on some species, such as hydrilla. For best results, apply 2 gallons Littora in combination with 4 gallons of

Komeen (0.8 lbs a.i./gallon) per acre. For hydrilla control and control of other species with high sensitivity to copper, lower rates of Komeen may also enhance the activity of Littora. Apply copper at a minimum of 0.1 ppm in combination with Littora. Higher rates may be needed in areas with dense weeds.

NOTE: For Drinking (Potable) Water

- The drinking (potable) water restrictions for applications of Littora plus endothall are to ensure that consumption of water by the public is allowed only when the concentration of endothall in the water is less than the MCL (Maximum Contamination Level) of 0.1 ppm. Applicators should consider the unique characteristics of the treated waters to assure that endothall concentrations in potable drinking water do not exceed 0.1 ppm at the time of consumption.
- For applications of Littora plus endothall, the drinking water setback distance from functioning potable water intakes is ≥ 600 feet. Note: Existing potable water intakes that are no longer in use, such as those replaced by a connection to a municipal water system or a potable water well, are not considered to be functioning potable water intakes.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.
Pesticide Storage: Keep pesticide in original container. Do not put concentrate or dilute into food or drink containers. Do not contaminate feed, foodstuffs, or drinking water. Do not store or transport near feed or food. Store at temperatures above 32°F.
Pesticide Disposal: Open dumping is prohibited. Pesticide wastes are toxic. 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.
Nonrefillable Container Disposal (rigid, 5 gallons or less): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. 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 ¼ 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 the procedure two more times. Then offer the container for recycling (if available) or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.
Nonrefillable Container Disposal (rigid, greater than 5 gallons): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling (if available) 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.

CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER!

TERMS AND CONDITIONS OF USE

If terms of the following *Warranty Disclaimer, Inherent Risks of Use* and *Limitation of Remedies* are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, to the extent consistent with applicable law, use by the buyer or any other user constitutes acceptance of the terms under *Warranty Disclaimer, Inherent Risks of Use*, and *Limitation of Remedies*.

WARRANTY DISCLAIMER

SePRO Corporation warrants that the 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. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, SEPRO CORPORATION 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 temperatures, 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 SePRO Corporation or the seller. To the extent consistent with applicable law, all such risks shall be assumed by buyer.

LIMITATION OF REMEDIES

To the extent consistent with applicable 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 SePRO Corporation'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 consistent with applicable law, SePRO Corporation shall not be liable for losses or damages resulting from handling or use of this product unless SePRO Corporation is promptly notified of such losses or damages in writing. In no case shall SePRO Corporation be liable for consequential or incidental damages or losses.

The terms of the *Terms and Conditions of Use, Warranty Disclaimer, Inherent Risks of Use* and this *Limitation of Remedies* cannot be varied by any written or verbal statements or agreements. No employee or sales agent of SePRO Corporation or the seller is authorized to vary or exceed the terms of the *Warranty Disclaimer* or this *Limitation of Remedies* in any manner.

REF82542-14-061010

Conforms to HazCom 2012/United States

SAFETY DATA SHEET

Littora®

Landscape and Aquatic Herbicide

Section 1. Identification

Product name : Littora® Landscape and Aquatic Herbicide

Other means of identification : EPA Registration Number 67690-53

Supplier's details : SePRO Corporation
11550 North Meridian Street
Suite 600
Carmel, IN 46032 U.S.A.
Tel: 317-580-8282
Toll free: 1-800-419-7779
Fax: 317-580-8290
Monday - Friday, 8am to 5pm E.S.T.
www.sepro.com

Emergency telephone : **INFOTRAC - 24-hour service 1-800-535-5053**

The following recommendations for exposure controls and personal protection are intended for the manufacture, formulation and packaging of this product. For applications and/or use, consult the product label. The label directions supersede the text of this Safety Data Sheet for application and/or use.

Section 2. Hazards identification

Hazard Classification:

Acute Oral Toxicity:	Category 4
Acute Dermal Toxicity:	Category 4
Acute Inhalation Toxicity:	Category 2
Acute Aquatic Toxicity:	Category 4

Signal Word: Caution

Hazard Statements: Toxic by inhalation. Irritating to eyes and skin. Harmful if swallowed.

Hazard Pictograms:

Precautionary Statements: Harmful if inhaled. Harmful if swallowed. Causes moderate eye irritation. Avoid breathing spray mist. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling before eating, drinking, chewing gum, or using tobacco. Avoid contact with eyes or clothing. Wear protective eyeware. Wear long-sleeved shirt, long pants, socks, shoes and gloves.

Description of Hazards not Otherwise Classified: This pesticide is toxic to aquatic invertebrates.

Section 3. Composition/information on ingredients

Hazardous Component Name	CAS No.	Average % by Weight
Diquat dibromide	85-00-7	37.3%

Section 4. First aid measures

General information:

When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

If inhaled:

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferable by mouth-to-mouth if possible.
- Call a poison control center or doctor for future 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.

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.

Notes to Physician:

To be effective, treatment for ingestion of the product must begin IMMEDIATELY. Treatment consists of binding the active ingredient, diquat, in the gut with suspensions of activated charcoal or bentonite clay, administration of cathartics to enhance elimination and removal of diquat from the blood by charcoal hemoperfusion or continuous hemodialysis.

Section 5. Fire-fighting measures

Fire Extinguishing Equipment:

Use dry chemical, foam or CO_2 extinguishing media. Wear full protective clothing and self contained breathing apparatus.

Fire and Explosion Hazards:

This product may form flammable and explosive hydrogen gas when in contact with aluminum. During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Hazardous Decomposition Products: Flammable hydrogen gas may be formed on contact with aluminum. See "Conditions to Avoid", Section 10. May decompose at high temperatures forming toxic gases.

PPE for firefighters/fire fighting instructions:

Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

Section 6. Accidental release measures

Personal Precautions:

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 personal protective equipment immediately after handling this product. Wash the outside of gloves before removing.

Methods for Cleaning Up:

Control the spill at its source. Contain the spill to prevent from spreading or contaminated soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

Section 7. Handling and storage

Handling Procedures:

This product reacts with aluminum to produce flammable hydrogen gas. Do not mix or store in containers or systems made of aluminum or having aluminum fittings.

Storing Procedures:

Store the material in well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Work/Hygienic Procedures:

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 personal protective equipment immediately after handling this product. Wash the outside of gloves before removing.

Section 8. Exposure controls/personal protection

Exposure Limits:

OSHA PEL	Not established
ACGIH TLV	0.5 mg/m³ TWA (total No dust); 0.08 mg/m³ TWA (respirable dust)
NIOSH TWA	0.5 mg/m³

Engineering Controls:

Mixers and loaders supporting aerial applications are required to use closed systems that provide dermal protection. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)]. When using the closed system, mixers and loaders PPE requirements may be reduced or modified as specified in the WPS.

Personal Protective Equipment:

Eye Protection	Use splash-proof goggles if needed to prevent liquid from getting into the eyes.
Ingestion	Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure the material. Wash thoroughly with soap and water after handling.
Skin Protection	Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.
Inhalation	A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

Section 9. Physical and chemical properties

Appearance	Dark brown liquid
Odor	Odorless
pH	4 - 6
Specific Gravity	1.2 g/mL at 20°C
Melting Point	Not Applicable
Water solubility	718,000 mg/L at 25°C and pH 7.2 (Diquat dibromide)
Vapor Pressure	$<10^{-8}$ mmHg at 25°C (Diquat dibromide)
Flash point	Not Applicable
Flammable Limits (% in Air)	Not Applicable
Autoignition Temperature	Not Applicable
Flammability	Not Applicable

Section 10. Stability and reactivity

Conditions to Avoid Concentrate should not be stored in aluminum containers. Spray solutions should not be mixed, stored or applied in containers other than plastic, plastic-lined steel, stainless steel or fiberglass.

Hazardous Polymerization Will not occur.

Chemical Stability Stable under normal conditions.

Materials to Avoid Strong alkalis and anionic wetting agents (e.g., alkyl and alkylaryl sulfonates). Corrosive to aluminum.

Hazardous Decomposition Flammable hydrogen gas may be formed on contact with aluminum. See “Conditions to Avoid”, Section 10. May decompose at high temperatures forming toxic gases.

Section 11. Toxicological information

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:	Rat (Female):	LD_{50}: = 886 mg/kg body weight (Slightly Toxic)
Dermal:	Rat:	LD_{50}: > 5,050 mg/kg body weight (Practically Non-Toxic)
Inhalation:	Rat:	LD_{50}: = 0.62 mg/L air – 4 hours
Eye Contact:	Rabbit:	Mildly Irritating
Skin Contact:	Rabbit:	Slightly Irritating
Skin Sensitization:	Guinea Pig:	Not a Sensitizer

Reproductive & Development Effects:

Diquat dibromide:

Mutagenicity:	No evidence in in vivo assays
Developmental Toxicity:	In rabbit studies a small percentage of fetuses had minor defects at 3 and 10 mg ion/kg/d.

Chronic/Sub-Chronic Toxicity Studies:

Diquat dibromide:

Kidney weight decreases and cataracts seen in dogs at 12.5 mg ion/kg/d. No evidence for neurotoxic effects in rats dosed up to 400 ppm ion in the diet for 13 weeks.

Carcinogenicity:

Diquat dibromide:

No evidence of carcinogenicity in rat and mouse studies.

Other Toxicity Information:
None

Toxicity of Other Components:
Not Applicable

Target Organs:
Diquat Dibromide: Eye, kidney
Inert Ingredients: Not Applicable

Section 12. Ecological information

This pesticide is toxic to aquatic invertebrates. **For Terrestrial Uses** do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters. **For Aquatic Uses** do not apply directly to water except as specified on this label.

Summary of Effects
Diquat dibromide:
Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Eco-Acute Toxicity
Diquat dibromide:

Fish (Rainbow Trout)	96-hour LC_{50}	14.83ppm
Fish (Bluegill Sunfish)	96-hour LC_{50}	13.9ppm
Bird (Mallard Duck)	Oral LD_{50}	60.6 mg/kg
Bird (Mallard Duck)	8-day dietary LC_{50}	5000ppm
Bee (Contact)	LD_{50}	100ug/bee
Invertebrate (Water Flea)	48-hour EC_{50}	0.77ppm
Green Algae	4-day EC_{50}	9.4ppb

Eco-Chronic Toxicity
Diquat dibromide:

Invertebrate (Water Flea)	21-day LOEC	0.17ppm
Bird (Mallard Duck)	Reproduction LOEL	25ppm
Fish (Fathead Minnow)	34-day LOEC	1.5ppm

Environmental Fate
Diquat dibromide:
The information presented here is for the active ingredient, diquat dibromide. Stable in soil water. Immobile in soil. Sinks in water (after 24 hr).

Section 13. Disposal considerations

Waste Disposal:
Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system.

Disposal:
Do not contaminate water, food or feed by storage. 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 Disposal:
Triple rinse containers. Puncture container to avoid re-use. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning. If burned, stay out of smoke.

Section 14. Transport information

DOT CLASSIFICATION:
UN1760, Corrosive Liquid, N.O.S. (Diquat Dibromide), 8, PGIII

IMDG CLASSIFICATION:
UN1760, Corrosive Liquid, N.O.S. (Diquat Dibromide), 8, PGIII, EmS F-A, S-F, Stowage Category A

IATA CLASSIFICATION:
UN1760, Corrosive Liquid, N.O.S. (Diquat Dibromide), 8, PGIII, Packaging Instruction Y841

Section 15. Regulatory information

EPCRA SARA Title III Classification

Section 311/312 Hazard Classes: Acute Health Hazard
Chronic Health Hazard
Section 313 Toxic Chemicals: Not Applicable

California Proposition 65

None

CERCLA/SARA 302 Reportable Quantity (RQ)

Report product spills ≥ 268 gal. (based on diquat [RQ=1,000lbs] content in the formulation)

RCRA Hazardous Waste Classification (40 CFR 261)

Not Applicable

TSCA Status

Exempt from TSCA, subject to FIFRA

Section 16. Other information

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 1 Reactivity - 0 Others - none

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions.

Date of Issue: May 22, 2017

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

SonarOne® Aquatic Herbicide

Section 1. Identification

GHS product identifier : SonarOne® Aquatic Herbicide

Other means of identification : Not available.

EPA Registration No. : 67690-45

Relevant identified uses of the substance or mixture

Aquatic herbicide.

Supplier's details : SePRO Corporation
11550 North Meridian Street
Suite 600
Carmel, IN 46032 U.S.A.
Tel: 317-580-8282
Toll free: 1-800-419-7779
Fax: 317-580-8290
Monday - Friday, 8am to 5pm E.S.T.
www.sepro.com

Emergency telephone number (with hours of operation) : **INFOTRAC - 24-hour service 1-800-535-5053**

The following recommendations for exposure controls and personal protection are intended for the manufacture, formulation and packaging of this product. For applications and/or use, consult the product label. The label directions supersede the text of this Safety Data Sheet for application and/or use.

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : EYE IRRITATION - Category 2B
AQUATIC HAZARD (ACUTE) - Category 3
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Signal word : Warning

Hazard statements : H320 - Causes eye irritation.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : P273 - Avoid accidental release to the environment.
P264 - Wash hands thoroughly after handling.

Response : P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical attention.

Storage : Not applicable.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

Ingredient name	%	CAS number
Proprietary ingredient 3	40 - 60	-
Proprietary ingredient 4	20 - 40	-
Proprietary ingredient 1	10 - 20	-
Fluridone	5	59756-60-4
Proprietary ingredient 2	1 - 5	-

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. If irritation persists, get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Section 4. First aid measures

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). May be harmful to the environment if accidentally released in large quantities.

Methods and materials for containment and cleaning up

Spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid accidental release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Fluridone	None.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Section 8. Exposure controls/personal protection

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid. [Pellets.]

Color : Brown to gray.

Odor : Faint earthy/musty.

Odor threshold : Not available.

pH : 7.8 [Conc. (% w/w): 31%]

Melting point : Not available.

Boiling point : Not available.

Flash point : Not applicable.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 1.02 at 20°C

Solubility : Not available.

Solubility in water : Insoluble. Pellet disintegrates in water.

Partition coefficient: n-octanol/water : Not available.

Section 9. Physical and chemical properties

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Flow time (ISO 2431) : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
SonarOne® Aquatic Herbicide	LD50 Dermal LD50 Oral	Rabbit Rat	>2000 mg/kg >5000 mg/kg	- -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
SonarOne® Aquatic Herbicide	Eyes - Mild irritant	Rabbit	-	-	-

There is no data available.

Sensitization

Product/ingredient name	Route of exposure	Species	Result
SonarOne® Aquatic Herbicide	skin	Guinea pig	Not sensitizing

Mutagenicity

Conclusion/Summary : Based on active ingredients: no known evidence.

Carcinogenicity

Conclusion/Summary : Based on active ingredients: no known evidence.

Reproductive toxicity

Conclusion/Summary : Based on active ingredients: no known evidence.

Teratogenicity

There is no data available.

Section 11. Toxicological information

Neurotoxicity

Conclusion/Summary : Based on active ingredients: no known evidence.

Immunotoxicity

Conclusion/Summary : Based on active ingredients: no known evidence.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : Causes eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Section 11. Toxicological information

Numerical measures of toxicity

Acute toxicity estimates

There is no data available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Fluridone	EC50 3 mg/L LC50 8 mg/L LC50 >5.2 mg/L LC50 >6.5 mg/L Chronic NOEC 0.84 mg/L Chronic NOEC 0.43 mg/L	Daphnia - *Daphnia magna* Crustaceans - *Eucyclops sp.* Fish - *Cyprinodon variegatus* Fish - *Pimephales promelas* Daphnia - *Daphnia magna* Fish - *Oncorhynchus tshawytscha*	48 hours 48 hours 96 hours 96 hours 21 days 75 days

Persistence and degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Fluridone	3.16	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.

AERG : Not applicable.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

Section 15. Regulatory information

Composition/information on ingredients

Name	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Fluridone	No.	No.	No.	Yes.	No.

SARA 313

There is no data available.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : The following components are listed: Proprietary ingredient 3

Pennsylvania : The following components are listed: Proprietary ingredient 3

California Prop. 65

No products were found.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
EYE IRRITATION - Category 2B AQUATIC HAZARD (ACUTE) - Category 3 AQUATIC HAZARD (LONG-TERM) - Category 3	On basis of test data Calculation method Calculation method

History

Date of issue mm/dd/yyyy : 06/30/2017

Date of previous issue : 09/15/2015

Version : 5

Prepared by : KMK Regulatory Services Inc.

Notice to reader

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Sonar Genesis®

Aquatic Herbicide

SPECIMEN

SePRO

FOR MANAGEMENT OF FRESHWATER AQUATIC VEGETATION IN PONDS, LAKES, RESERVOIRS, POTABLE WATER SOURCES, DRAINAGE CANALS AND IRRIGATION CANALS.

For use in New York State, comply with Section 24 (C) Special Local Need labeling for Sonar Genesis, SLN NY 120006

Active Ingredient	
Fluridone: 1-methyl-3-phenyl-5-[3-(trifluoromethyl)phenyl] -4(1*H*)-pyridinone	6.3%
Other Ingredients	93.7%
TOTAL	100.0%

Contains 0.5 pounds active ingredient per gallon.

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.)

Refer to inside of label booklet for additional precautionary statements and directions for use including storage and disposal.

Notice: Read the entire label before using. Use only according to label directions. Before buying or using this product, read *Warranty Disclaimer* and *Misuse* statements inside label booklet. If terms are unacceptable, return at once unopened.

SePRO Corporation
11550 North Meridian Street, Suite 600 • Carmel, IN 46032, U.S.A.

EPA Reg. No. 67690-54
FPL20170208

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Keep Out of Reach of Children
DANGER/PELIGRO

Corrosive. Causes irreversible eye damage. Harmful if swallowed. Avoid contact with skin. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Wear long-sleeved shirt and long pants, socks, shoes, and chemical resistant (nitrile or butyl; ≥ 14 mils) gloves. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

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 to 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 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.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.	

HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. In case of emergency endangering health or the environment involving this product, call **INFOTRAC** at **1-800-535-5053.**

Environmental Hazards

Do not apply to water except as specified on the label. Do not apply directly to tidal saltwater sites. Do not contaminate water by disposal of equipment washwaters. Lowest rates should be used in shallow areas where the water depth is considerably less than the average depth of the entire treatment site, for example, shallow shoreline areas. Trees and shrubs growing in water treated with this product may occasionally develop chlorosis. Follow use directions carefully so as to minimize adverse effects on non-target organisms.

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.

Ensure spray drift to nontarget susceptible species does not occur.

DO NOT apply this product in any manner not specifically described in this label.

Observe all cautions and limitations on this label and on the labels of products used in combination with this product. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. **DO NOT** use this product other than in accordance with the instructions set forth on this label. Keep containers closed to avoid spills and contamination.

IN CASE OF EMERGENCY

In case of large-scale spillage regarding this product, call INFOTRAC at 1-800-535-5053.

In case of medical emergency regarding this product, call:
- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- INFOTRAC: 1-800-535-5053

Steps to be taken in case material is released or spilled:
- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing, and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

Product Information

This product is a selective systemic aquatic herbicide for management of freshwater aquatic vegetation in ponds, lakes, reservoirs, drainage canals and irrigation canals, including dry or de-watered areas of these sites. It is absorbed from water by plant shoots and from hydrosoil by the roots of aquatic vascular plants. For in-water treatments, it is important to maintain the specified concentration of this product in contact with the target plants for a minimum of 45 days. Rapid water movement or any condition which results in rapid dilution of this product in treated water will reduce its effectiveness. In susceptible plants, this product inhibits the formation of carotene. In the absence of carotene, chlorophyll is rapidly degraded by sunlight. Herbicidal symptoms appear in seven to ten days and appear as white (chlorotic) or pink growing points in many susceptible plant species. Under optimum conditions, a minimum of 30 to 90 days may be required before the desired level of aquatic plant management is achieved. Plant species susceptibility may vary depending on time of year, stage of growth, and water movement. For best results, apply this product prior to initiation of weed growth or when weeds begin active growth. Application to mature target plants may require an application rate at the higher end of the specified rate range and may take longer to control.

This product is not corrosive to application equipment.

This label provides recommendations on the use of a laboratory analysis for the active ingredient. SePRO Corporation recommends the use of high-performance liquid chromatography (HPLC) for the determination of fluridone concentrations in water. It is recommended to contact SePRO

Corporation for the incorporation of this test, known as a FasTEST, in a treatment program. FasTEST is referenced in this label as the preferred method for the rapid determination of the active ingredient in water. Other proven chemical analyses for the active ingredient may also be used.

Application rates and calculations for this product are provided to achieve a desired concentration of fluridone in parts per billion (ppb). **The maximum application rate or sum of all application rates is 90 ppb in ponds and 150 ppb in lakes, reservoirs and static canals per annual growth cycle.** For purposes of this product's labeling, a pond is defined as a body of water 10 acres or less in size. A lake or reservoir is greater than 10 acres. This maximum concentration is the amount of product calculated as the target application rate, NOT determined by testing the concentration of fluridone in the treated water.

Use Restrictions

- **Obtain Required Permits:** Consult with appropriate state or local pesticide and/or water authorities before applying this product in or around public waters. Permits and posting or treatment notification may be required by state or local public agencies.
- **Chemigation:** Do not apply this product through any type of irrigation system.
- **Hydroponic Farming:** Do not use water from a Sonar-treated area for hydroponic farming unless one of the following has been verified for the relevant active water intake and its withdrawal of surface water:
  - o A FasTEST has been run and the concentration in water at the intake is less than 1 ppb; or
  - o A filtration or water treatment process following water intake has been verified analytically to reduce the concentration in potential irrigation water below 1 ppb.
- **Greenhouse and Nursery Plants:** Do not use water from a Sonar-treated area for greenhouse and nursery irrigation unless one of the following has been verified for the relevant active water intake and its withdrawal of surface water:
  - o For the irrigation of woody ornamental plants, a FasTEST has been run and the concentration at the intake is less than 5 ppb; or
  - o For the irrigation of other greenhouse or nursery plants, the concentration is confirmed less than 1 ppb; or
  - o A filtration or water treatment process following water intake has been verified analytically to reduce the concentration in potential irrigation water below either the 1 or 5 ppb levels cited above.
- **Water Use Restrictions Following Applications With Sonar Genesis (Days)**

Application Rate	Drinking†	Fishing	Swimming	Livestock/Pet Consumption	Irrigation††
Maximum Rate (150 ppb) or less	0	0	0	0	See irrigation instructions below

† Note below, under *Potable Water Intakes*, the information for application of this product within ¼ mile (1,320 feet) of a functioning potable water intake.

†† Note below, under *Irrigation*, specific time frames or fluridone concentrations that provide the widest safety margin for irrigating with treated water.

- **Potable Water Intakes:** In lakes and reservoirs or other sources of potable water, do not apply this product at application rates greater than 20 ppb within one-fourth mile (1,320 feet) of any functioning potable water intake. At application rates of 4 to 20 ppb, this product may be applied where functioning potable water intakes are present. **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.**

Use Precautions

- **Irrigation:** Irrigation from area treated with this product may result in injury to the irrigated vegetation. Follow these precautions and inform those who irrigate from areas treated with this product of the irrigation time frames or FasTEST requirements presented in the table below. Follow the following time frames and assay directions to reduce the potential for injury to vegetation irrigated with treated water. Greater potential for crop injury occurs where treated water is applied to crops grown on low organic and sandy soils.

	DAYS AFTER APPLICATION		
Application Site	Established Tree Crops	Established Row Crops/ Turf/Plants	Newly Seeded Crops/ Seedbeds or Areas to be Planted Including Overseeded Golf Course Greens
Ponds and Static Canals†	7	30	Assay required
Canals	7	14	Assay required
Lakes and Reservoirs††	7	14	Assay required
Dry or De-watered Canals†††	0	0	†††

† For purposes of this labeling, a pond is defined as a body of water 10 acres or less in size. A lake or reservoir is greater than 10 acres.

†† In lakes and reservoirs where one-half or greater of the body of water is treated, use the pond and static canal irrigation precautions. When applying this product to exposed sediments of aquatic sites such as lakes and reservoirs, follow these time frames prior to using water for irrigation once sites are reflooded.

††† When this product is applied to exposed sediments of dry or de-watered irrigation canals, treatments must be made at least 2 weeks prior to when the canals are to be refilled, and allow canals to refill for a minimum of 24 hours before using water for irrigation.

Where the use of Sonar Genesis treated water is desired for irrigating crops prior to the time frames established above, the use of FasTEST analysis is recommended to measure the concentration of fluridone in the treated water. Where a FasTEST has determined that the fluridone concentrations are less than 10 parts per billion, there are no irrigation precautions for irrigating established tree crops, plants, row crops or turf. **For tobacco, tomatoes, peppers or other plants within the Solanaceae Family and newly seeded crops or newly seeded grasses such as overseeded golf course greens, do not use treated water if measured fluridone concentrations are greater than 5 ppb. Furthermore, when rotating crops, do not plant members of the Solanaceae family in land that has been previously irrigated with fluridone concentrations in excess of 5 ppb in the previous year without direct consultation with a SePRO Aquatic Specialist. It is recommended that a SePRO Aquatic Specialist be consulted prior to commencing irrigation of these sites.**

Plant Control Information

This product's selectivity is dependent upon dosage, time of year, stage of growth, method of application and water movement. The following categories, controlled and partially controlled are provided to describe expected efficacy under ideal treatment conditions using higher to maximum label rates. Use of lower rates will increase selectivity of some species listed as controlled or partially controlled. Additional aquatic plants may be controlled, partially controlled, or tolerant to this product. It is recommended to consult a SePRO Aquatic Specialist prior to application to determine a plant's susceptibility to the planned treatment.

Vascular Aquatic Plants Controlled by Sonar® Genesis:

Submersed Plants:
bladderwort (*Utricularia* spp.)
common coontail *(Ceratophyllum demersum*)
common elodea *(Elodea canadensis)*
egeria, Brazilian elodea *(Egeria densa)*
fanwort, cabomba *(Cabomba caroliniana)*
hydrilla *(Hydrilla verticillata)*
naiad (*Najas* spp.)
pondweed (*Potamogeton* spp., except Illinois pondweed)
watermilfoil (*Myriophyllum* spp., including *M. spicatum* x *sibiricum* hybrids)

Emersed Plants:
spatterdock *(Nuphar luteum)*
water-lily (*Nymphaea* spp.)
watershield *(Brasenia schreberi)*

Floating Plants:
common duckweed *(Lemna minor)*
Salvinia (*Salvinia* spp.)

Vascular Aquatic Plants Partially Controlled by Sonar® Genesis:

Submersed Plants:
Illinois pondweed *(Potamogeton illinoensis)*
limnophila *(Limnophila sessiliflora)*
tapegrass, American eelgrass *(Vallisneria americana)*

Emersed Plants:
alligatorweed *(Alternanthera philoxeroides)*
American lotus *(Nelumbo lutea)*
cattail (*Typha* spp.)
creeping waterprimrose *(Ludwigia peploides)*
parrotfeather *(Myriophyllum aquaticum)*
smartweed (*Polygonum* spp.)
spikerush (*Eleocharis* spp.)
waterpurslane *(Ludwigia palustris)*

Floating Plants:
common watermeal *(Wolffia columbiana)*†

Shoreline Grasses:
barnyardgrass *(Echinochloa crusgalli)*
giant cutgrass *(Zizaniopsis miliacea)*
reed canarygrass *(Philaris arundinaceae)*
southern watergrass *(Hydrochloa caroliniensis)*
torpedograss *(Panicum repens)*

† Consult with a SePRO Aquatic Specialist about techniques to enhance efficacy of watermeal, including incorporation of Galleon S.C. Aquatic Herbicide into a treatment program, in difficult to control sites.

Mixing and Application Directions

The aquatic plants present in the treatment site should be identified prior to application to determine their susceptibility to this product. It is important to determine the area (acres) to be treated and the average depth in order to select the proper application rate. Do not exceed the maximum labeled rate for a given treatment site per annual growth cycle.

This product may be applied or metered directly into the treated area or diluted with water prior to application. Add the specified amount of this product to water in the spray tank during the filling operation. Surface and subsurface application of the spray can be made with conventional spray equipment. This product can also be applied near the surface of the hydrosoil using weighted trailing hoses. A minimum spray volume of 5 to 100 gallons per acre may be used. This product may also be directly metered into the pumping system where it is diluted with water.

Tank Mix Directions
This product may be tank mixed with other aquatic herbicides and algaecides to enhance efficacy and plant selectivity provided that this label does not prohibit such mixing. When tank mixing, read and follow the labeled precautionary statements, directions for use, weeds controlled, and other restrictions for each tank mix product. **It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.** No labeled rate or dose should be exceeded. To ensure compatibility, a jar test is recommended before field application of any tank mix combination. It is recommended to consult with SePRO Corporation for latest tank mix recommendations.

NOTE: Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be at the exclusive risk of the user, applicator and/or application adviser, to the extent allowed by applicable law.

Application Rate Calculation

The amount of this product to be applied to provide the desired ppb concentration of active ingredient in treated water may be calculated as follows:

Gallons of product required per treated surface acre = surfaces acres **x** average water depth of treatment site (feet) **x** desired ppb concentration of active ingredient **x** 0.0054.

For example, the amount per acre of product required to provide a concentration of 30 ppb of active ingredient in a 1 acre pond with an average depth of 5 feet is calculated as follows:

1 acre **x** 5 feet **x** 30 ppb **x** 0.0054 = 0.81 gallons per treated surface acre

or

0.81 gallons **x** 4 quarts/gallon = 3.2 quarts per treated surface acres

or

0.81 gallons **x** 128 ounces/gallon = 104 ounces per treated surface acre

Application to Ponds

This product may be applied to the entire surface area of a pond. For single applications, rates may be selected to provide 30 to 90 ppb to the treated water. Use the higher rate within the rate range where there is a dense weed mass, when treating more difficult to control species, and for ponds less than 5 acres in size with an average depth less than 4 feet. Application rates necessary to obtain these concentrations are shown in the following table. For additional application rate calculations, refer to the *Application Rate Calculation* section of this label. Split or multiple applications may be used to control more difficult target plants and/or where dilution of treated water is anticipated; however, the sum of all applications must not exceed a total of 90 ppb per annual growth cycle.

Average Water Depth of Treatment Site (feet)	Gallons of Product per Treated Surface Acre†	
	30 ppb	90 ppb
1	0.16	0.48
2	0.32	0.97
3	0.48	1.45
4	0.64	1.94
5	0.81	2.43
6	0.97	2.91
7	1.13	3.40
8	1.29	3.88
9	1.45	4.37
10	1.62	4.86

†To calculate the number of quarts of product required, use the calculation as follows:
gallons per surface acre x 4 quarts/gallon = quarts per surface acre

For example: targeting a concentration of 30 ppb in a one acre pond with average depth of 5 feet would require 0.81 gallons or 3.2 quarts.

Application to Lakes and Reservoirs

The following treatments may be used for treating both whole lakes or reservoirs and partial areas of lakes or reservoirs (bays, etc.). For best results in treating partial lakes and reservoirs, treatment areas should be a minimum of 5 acres in size. Treatment of areas smaller than 5 acres or treatment of narrow strips such as boat lanes or shorelines may not produce satisfactory results due to dilution by untreated water. Rate ranges are provided as a guide to include a wide range of environmental factors, such as, target species, plant susceptibility, selectivity and other aquatic plant management objectives. Application rates and methods should be selected to meet the specific lake/reservoir aquatic plant management goals.

Whole Lake or Reservoir Treatments (Limited or No Water Discharge)

Single Application to Whole Lakes or Reservoirs
Where single applications to whole lakes or reservoirs are desired, apply this product at an application rate of 10 to 90 ppb. Application rates necessary to obtain these concentrations in treated water are shown in the following table. For additional rate calculations, refer to the Application Rate Calculation section of this label. Choose an application rate from the table below to meet the aquatic plant management objective. **Where greater plant selectivity is desired such as when controlling Eurasian watermilfoil and curlyleaf pondweed, choose an application rate lower in the rate range.** For other plant species, it is recommended to contact a SePRO Aquatic Specialist for determining when to choose application rates lower in the rate range to meet specific plant management goals. Use the higher rate within the rate range where there is a dense weed mass or when treating more difficult to control plant species. Retreatments may be required to control more difficult to control species or in the event of a heavy rainfall event where dilution of the treatment concentration has occurred. In these cases, a second application or more may be required; however, the sum of all applications cannot exceed 150 ppb per annual growth cycle. Refer to the section of this label entitled, *Split or Multiple Applications to Whole Lakes or Reservoirs*, for guidelines and maximum rate allowed.

SINGLE APPLICATION		
Average Water Depth of Treatment Site (feet)	Gallons of Product per Treated Surface Acre to Achieve†	
	10 ppb	90 ppb
1	0.05	0.48
2	0.10	0.97
3	0.16	1.45
4	0.21	1.94
5	0.27	2.43
6	0.32	2.91
7	0.37	3.40
8	0.43	3.88
9	0.48	4.37
10	0.54	4.86

†To calculate the number of quarts product required, use the calculation as follows:
gallons per surface acre x 4 quarts/gallon = quarts per surface acre

For example: targeting a dose of 10 ppb in a 20 acre lake with average depth of 5 feet would require 0.27 gallons per surface acre or 1.0 quarts.

Split or Multiple Applications to Whole Lakes or Reservoirs
To meet certain plant management objectives, split or multiple applications may be desired in making whole lake treatments. Split or multiple application programs are desirable when the objective is to use the minimum effective dose and, through the use of a water analysis, e.g. FasTEST, add additional product to maintain this lower dose for the sufficient time to ensure efficacy and enhance selectivity. Water may be treated at an initial application concentration of 4 to 50 ppb. Additional split applications should be conducted to maintain a sufficient concentration for a minimum of 45 days or longer. **In controlling Eurasian watermilfoil and curlyleaf pondweed and where greater plant selectivity is desired, choose an application rate lower in the rate range.** For other plant species, it is recommended to contact a SePRO Aquatic Specialist for assistance in selecting the appropriate concentrations and timing of application to meet specific plant management goals. When utilizing split or multiple applications of this product, the utilization of FasTEST is strongly recommended to determine the actual concentration in the water over time. For split or multiple applications, the sum of all applications must not exceed 150 ppb per annual growth cycle.

NOTE: In treating lakes or reservoirs that contain functioning potable water intakes and the application requires treating within ¼ mile of a potable water intake, no single application can exceed 20 ppb. Additionally, the sum of all applications cannot exceed 150 ppb per annual growth cycle.

Partial Lake or Reservoir Treatments

Where dilution with untreated water is anticipated, such as in partial lake or reservoir treatments, split or multiple applications may be used to extend the contact time to the target plants. The application rate and use frequency of this product in a partial lake is highly dependent upon the treatment area. An application rate at the higher end of the specified rate range may be required and frequency of applications will vary depending upon the potential of untreated water diluting the product's concentration in the treatment area. Use a rate at the higher end of the rate range where greater dilution with untreated water is anticipated.

Treatment Areas Greater Than ¼ Mile from a Functioning Potable Water Intake
For single applications, apply this product at application rates from 30 to 150 ppb. Split or multiple applications may be made; however, the sum of all applications cannot exceed 150 ppb per annual growth cycle. Split applications should be conducted to maintain a sufficient concentration in the target area for a period of 45 days or longer. The use of a FasTEST is recommended to maintain the desired concentration in the target area over time.

Treatment Areas within ¼ Mile of a Functioning Potable Water Intake
In treatment areas that are within ¼ mile of a potable water intake, no single application can exceed 20 ppb. When utilizing split or multiple applications for sites which contain a potable water intake, a FasTEST is required to determine the actual concentration in the water. Additionally, the sum of all applications cannot exceed 150 ppb per annual growth cycle.

Application to Sediments of Dry or De-Watered Aquatic Sites

For application to sediments of dry or de-watered aquatic sites, including exposed sediments of lakes or reservoirs, irrigation canals, non-irrigation canals and drainage canals, apply a maximum of 4 gallons of product per surface acre per annual growth cycle. Apply product evenly to the sediment surface, with a minimum spray solution of 30 to 100 gallons per surface acre. High levels of organic matter in treated sediments may reduce efficacy. This product may be applied with other aquatic herbicides labeled for this use. It is recommended that a SePRO Aquatic Specialist be consulted for further use recommendations.

Direct foliar application to floating, topped-out and emerged aquatic vegetation

For application to floating, topped-out and emerged aquatic vegetation in ponds, lakes, reservoirs, drainage canals and irrigation canals, including dry or de-watered areas of these sites, apply a maximum of 4 gallons of product per surface acre per annual growth cycle. Apply product evenly to the treatment area using properly calibrated broadcast equipment in a minimum spray solution of 20 to 100 gallons per surface acre. For treatment of vegetation in or on water, do not exceed a water concentration of 150 ppb. Spot treatments can be made with up to 5% of this product by volume when application rate does not exceed 4 gallons of product per surface acre. It is recommended that a SePRO Aquatic Specialist be consulted for site specific recommendations.

Application to Drainage Canals and Irrigation Canals

Static Canals:
In static drainage and irrigation canals, apply this product at the rate of 30 to 150 ppb. The maximum application rate or sum of all application rates cannot exceed 150 ppb per annual growth cycle.

Moving Water Canals:
In slow moving bodies of water use an application technique that maintains a concentration of 10 to 40 ppb in the target area for a minimum of 45 days. This product can be applied by split or multiple broadcast applications or by metering in the product to provide a uniform concentration of the herbicide based upon the flow pattern. The use of a FasTEST is recommended to maintain the desired concentration in the target area over time.

Static or Moving Water Canals Containing a Functioning Potable Water Intake:
In treating a static or moving water canal which contains a functioning potable water intake, applications greater than 20 ppb must be made more than ¼ mile from a functioning potable water intake. Applications less than 20 ppb may be applied within ¼ mile from a functioning potable water intake; however, if applications are made within ¼ mile of a functioning potable water intake, a FasTEST analysis must be utilized to demonstrate that concentrations do not exceed 150 ppb at the functioning potable water intake.

Application Rate Calculation — Moving Water Drainage and Irrigation Canals:
The amount of product to be applied through a metering system to provide the desired ppb concentration of active ingredient in treated water may be calculated as follows:

1. Average flow rate (feet per second) **x** average canal width (ft.) **x** average canal depth (ft.) = CFS (cubic feet per second).
2. CFS **x** 1.98 = acre feet per day (water movement)
3. Acre feet per day **x** desired ppb **x** 0.0054 = Gallons of product required per day

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.
Pesticide Storage: Keep from freezing. Store in original container only. Do not store near feed or foodstuffs. In case of leak or spill, use absorbent materials to contain liquids and dispose as waste.
Pesticide Disposal: Wastes resulting from use of this product may be used according to label directions or disposed of at an approved waste disposal facility.
Container Handling
Non-refillable Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.
Triple rinse containers small enough to shake (capacity ≤ 5 gallons) 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 ¼ 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.
Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Warranty Disclaimer: SePRO Corporation warrants that this product conforms to the chemical description on the product label. Testing and research have also determined that this product is reasonably fit for the uses described on the product label. To the extent consistent with applicable law, SePRO Corporation makes no other express or implied warranty of fitness or merchantability nor any other express or implied warranty and any such warranties are expressly disclaimed.

Misuse: Federal law prohibits the use of this product in a manner inconsistent with its label directions. To the extent consistent with applicable law, the buyer assumes responsibility for any adverse consequences if this product is not used according to its label directions. In no case shall SePRO Corporation be liable for any losses or damages resulting from the use, handling or application of this product in a manner inconsistent with its label.

For additional important labeling information regarding SePRO Corporation's Terms and Conditions of Use, Inherent Risks of Use and Limitation of Remedies, please visit *http://seprolabels.com/terms* or scan the image below.

SePRO Corporation
11550 North Meridian Street, Suite 600
Carmel, IN 46032, U.S.A.

SAFETY DATA SHEET

Sonar® Genesis

SonarOne® Aquatic Herbicide

Section 1. Identification

GHS product identifier : Sonar® Genesis
Aquatic Herbicide

Other means of identification : Not available.

EPA Registration No. : 67690-54

Relevant identified uses of the substance or mixture

Aquatic herbicide.

Supplier's details : SePRO Corporation
11550 North Meridian Street
Suite 600
Carmel, IN 46032 U.S.A.
Tel: 317-580-8282
Toll free: 1-800-419-7779
Fax: 317-580-8290
Monday - Friday, 8am to 5pm E.S.T.
www.sepro.com

Emergency telephone number (with hours of operation) : **INFOTRAC - 24-hour service 1-800-535-5053**

The following recommendations for exposure controls and personal protection are intended for the manufacture, formulation and packaging of this product. For applications and/or use, consult the product label. The label directions supersede the text of this Safety Data Sheet for application and/or use.

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : ACUTE TOXICITY (inhalation) - Category 4
SKIN IRRITATION - Category 2
SERIOUS EYE DAMAGE - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
AQUATIC HAZARD (ACUTE) - Category 2
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Hazard pictograms :

Signal word : Danger

Section 2. Hazards identification

Hazard statements : H332 - Harmful if inhaled.
H318 - Causes serious eye damage.
H315 - Causes skin irritation.
H335 - May cause respiratory irritation.
H401 - Toxic to aquatic life.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : P280 - Wear protective gloves. Wear eye or face protection.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid accidental release to the environment.
P261 - Avoid breathing vapor.
P264 - Wash hands thoroughly after handling.

Response : P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
P332 + P313 - If skin irritation occurs: Get medical attention.
P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage : P405 - Store locked up.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

Ingredient name	%	CAS number
Proprietary ingredient 1	30 - 40	-
Proprietary ingredient 2	40 - 50	-
Proprietary ingredient 3	40 - 50	-
Proprietary ingredient 4	5 - 10	-
Fluridone	6.3	59756-60-4
Proprietary ingredient 5	1 - 10	-
Proprietary ingredient 6	1 - 10	-
Proprietary ingredient 7	0.1 - 1	-
Proprietary ingredient 8	0.1 - 1	-

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : Harmful if inhaled. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Section 4. First aid measures

Ingestion : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). May be harmful to the environment if accidentally released in large quantities.

Methods and materials for containment and cleaning up

Spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid accidental release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Proprietary ingredient 1	**AIHA WEEL (United States, 10/2011).** TWA: 10 mg/m³ 8 hours.
Proprietary ingredient 2	None.
Proprietary ingredient 3	None.
Fluridone	None.
Proprietary ingredient 5	None.
Proprietary ingredient 6	None.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Section 8. Exposure controls/personal protection

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid. [Clear.]

Color : Golden yellow.

Odor : Sweet, non-pungent. [Slight]

Odor threshold : Not available.

pH : 4.6 [Conc. (% w/w): 1%]

Melting point : Not available.

Boiling point : Not available.

Flash point : Open cup: >93.3°C (>200°F)

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Section 9. Physical and chemical properties

Vapor density : Not available.

Relative density : 0.97

Solubility : Not available.

Solubility in water : Dispersible in water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): 0.303 cm^2/s (30.3 cSt)

Flow time (ISO 2431) : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Sonar® Genesis	LC50 Inhalation Dusts and mists LD50 Dermal LD50 Oral	Rat Rat Rat	>2.04 mg/L >5000 mg/kg 5000 mg/kg	4 hours - -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Sonar® Genesis	Skin - Primary dermal irritation index (PDII) Eyes - Cornea opacity	Rabbit Rabbit	4.9 43	- -	60 minutes 24 hours

There is no data available.

Sensitization

Product/ingredient name	Route of exposure	Species	Result
Sonar® Genesis	skin	Guinea pig	Not sensitizing

Section 11. Toxicological information

Mutagenicity

Conclusion/Summary : Based on active ingredients: no known evidence.

Carcinogenicity

Conclusion/Summary : Based on active ingredients: no known evidence.

Reproductive toxicity

Conclusion/Summary : Based on active ingredients: no known evidence.

Teratogenicity

There is no data available.

Neurotoxicity

Conclusion/Summary : Based on active ingredients: no known evidence.

Immunotoxicity

Conclusion/Summary : Based on active ingredients: no known evidence.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Proprietary ingredient 3 Proprietary ingredient 6	Category 3 Category 3	Not applicable. Not applicable.	Respiratory tract irritation Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : Harmful if inhaled. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Section 11. Toxicological information

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Inhalation (vapors)	1100 mg/L

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Proprietary ingredient 1	Acute EC50 >110 mg/L Fresh water	Daphnia - *Daphnia magna*	48 hours
	Acute LC50 1020 mg/L Fresh water	Crustaceans - *Ceriodaphnia dubia*	48 hours
	Acute LC50 710 mg/L Fresh water	Fish - *Pimephales promelas*	96 hours
Proprietary ingredient 3	Acute EC50 5 mg/L Fresh water	Algae - *Pseudokirchneriella subcapitata*	72 hours
	Acute LC50 21 mg/L Fresh water	Fish - *Oncorhynchus mykiss*	96 hours
Fluridone	EC50 3 mg/L	Daphnia - *Daphnia magna*	48 hours
	LC50 8 mg/L	Crustaceans - *Eucyclops sp.*	48 hours
	LC50 >5.2 mg/L	Fish - *Cyprinodon variegatus*	96 hours
	LC50 >6.5 mg/L	Fish - *Pimephales promelas*	96 hours
	Chronic NOEC 0.84 mg/L	Daphnia - *Daphnia magna*	21 days
	Chronic NOEC 0.43 mg/L	Fish - *Oncorhynchus tshawytscha*	75 days

Persistence and degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Proprietary ingredient 1	-1.07	-	low
Proprietary ingredient 3	3.44	-	low
Fluridone	3.16	-	low
Proprietary ingredient 6	2.9	25.33	low

Section 12. Ecological information

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.

AERG : Not applicable.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR**: Proprietary ingredient 8

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Commerce control list precursor: Proprietary ingredient 7

Section 15. Regulatory information

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Proprietary ingredient 2	No.	No.	No.	Yes.	No.
Proprietary ingredient 3	No.	No.	No.	Yes.	No.
Fluridone	No.	No.	No.	Yes.	No.
Proprietary ingredient 4	No.	No.	No.	Yes.	No.
Proprietary ingredient 5	Yes.	No.	No.	Yes.	No.

SARA 313

There is no data available.

State regulations

Massachusetts : The following components are listed: Proprietary ingredient 6

New York : None of the components are listed.

New Jersey : The following components are listed: Proprietary ingredient 1

Pennsylvania : The following components are listed: Proprietary ingredient 1; Proprietary ingredient 6

California Prop. 65

No products were found.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
ACUTE TOXICITY (inhalation) - Category 4	On basis of test data
SKIN IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE - Category 1	On basis of test data
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
AQUATIC HAZARD (ACUTE) - Category 2	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method

History

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Prepared by : KMK Regulatory Services Inc.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SonarOne®

Aquatic Herbicide

SPECIMEN

AN HERBICIDE FOR MANAGEMENT OF AQUATIC VEGETATION IN FRESH WATER PONDS, LAKES, RESERVOIRS, POTABLE WATER SOURCES, DRAINAGE CANALS, IRRIGATION CANALS AND RIVERS.

Active Ingredient	
fluridone: 1-methyl-3-phenyl-5-[3-(trifluoromethyl) phenyl]-4(1H)-pyridinone	5.0%
Other Ingredients	95.0%
TOTAL	100.0%

Contains 0.05 pound active ingredient per pound of product.

Keep Out of Reach of Children

CAUTION/PRECAUCIÓN

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.)

Refer to the inside of the label booklet for additional precautionary Statements and Directions for Use including Storage and Disposal.

NOTICE: Read the entire label before using. Use only according to label directions. Before buying or using this product, read *Warranty Disclaimer* and *Misuse* statements inside label booklet. If terms are unacceptable, return at once unopened.

SePRO Corporation
11550 N. Meridian Street, Suite 600 • Carmel, IN 46032, U.S.A.
EPA Reg. 67690-45 FPL20170208

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Harmful If Swallowed. Causes moderate eye irritation. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Avoid contact with eyes or clothing. Wear protective eyewear.

Keep Out of Reach of Children

CAUTION/PRECAUCIÓN

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 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.
If in eyes	• Hold eye open and rinse slowly and gently with water for 15 to 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 to 20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. In case of emergency endangering health or the environment involving this product, call **INFOTRAC** at **1-800-535-5053.**	

ENVIRONMENTAL HAZARDS

Do not apply to water except as specified on the label. Do not contaminate water outside the intended treatment area by disposal of equipment washwaters. Do not apply in tidal saltwater. Lowest rates should be used in shallow areas where the water depth is considerably less than the average depth of the entire treatment site, for example, shallow shoreline areas. Trees and shrubs growing in water treated with this product may occasionally develop chlorosis. Follow use directions carefully so as to minimize adverse effects on non-target organisms.

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.

PRODUCT INFORMATION

SonarOne herbicide is a selective systemic aquatic herbicide for management of aquatic vegetation in fresh water ponds, lakes, reservoirs, drainage canals, irrigation canals, and rivers. This product is a pelleted formulation containing 5% fluridone. It is absorbed from water by plant shoots and from hydrosoil by the roots of aquatic vascular plants. It is important to maintain this product in contact with the target plants for as long as possible. Rapid water movement or any condition which results in rapid dilution of this product in treated water will reduce its effectiveness. In susceptible plants, this product inhibits the formation of carotene. In the absence of carotene, chlorophyll is rapidly degraded by sunlight.

Herbicidal symptoms of SonarOne appear in 7 - 10 days and appear as white (chlorotic) or pink growing points. Under optimum conditions 30 - 90 days are required before the desired level of aquatic weed management is achieved. Species susceptibility to this product may vary depending on time of year, stage of growth and water movement. For best results, apply this product prior to initiation of weed growth or when weeds begin active growth. Application to mature target plants may require an application rate at the higher end of the specified rate range and may take longer to control.

SonarOne is not corrosive to application equipment.

This label provides recommendations on the use of a chemical analysis for the active ingredient. SePRO Corporation recommends the use of High-Performance Liquid Chromatography (HPLC) for the determination of the active ingredient concentration in the water. Contact SePRO Corporation to incorporate this test, known as a FasTEST, into your treatment program. Other proven chemical analyses for the active ingredient may also be used. The FasTEST is referenced in this label as the preferred method for the rapid determination of the concentration of the active ingredient in the water.

Application rates are provided in pounds of SonarOne to achieve a desired concentration of the active ingredient in part per billion (ppb). **The maximum application rate or sum of all application rates is 90 ppb in ponds and 150 ppb in lakes and reservoirs per annual growth cycle.** This maximum concentration is the amount of product calculated as the target application rate, NOT determined by testing the concentrations of the active ingredient in the treated water.

Use Restrictions

- **Obtain Required Permits:** Consult with appropriate state or local water authorities before applying this product to public waters. Permits and/or posting treatment notification may be required by state or local public agencies.
- **New York State:** Application of SonarOne is not permitted in waters less than two (2) feet deep, except as permitted under FIFRA Section 24(c), Special Local Need registration.
- **Hydroponic Farming:** Do not use water from a Sonar-treated area for hydroponic farming unless one of the following has been verified for the relevant active water intake and its withdrawal of surface water:
  - o A FasTEST has been run and the concentration in water at the intake is less than 1 ppb; or
  - o A filtration or water treatment process following water intake has been verified analytically to reduce the concentration in potential irrigation water below 1 ppb.
- **Greenhouse and Nursery Plants:** Do not use water from a Sonar-treated area for greenhouse and nursery irrigation unless one of the following has been verified for the relevant active water intake and its withdrawal of surface water:
  - o For the irrigation of woody ornamental plants, a FasTEST has been run and the concentration at the intake is less than 5 ppb; or
  - o For the irrigation of other greenhouse or nursery plants, the concentration is confirmed less than 1 ppb; or

o A filtration or water treatment process following water intake has been verified analytically to reduce the concentration in potential irrigation water below either the 1 or 5 ppb levels cited above.

- **Water Use Restrictions Following Application with SonarOne (Days)**

Application Rate	Drinking†	Fishing	Swimming	Livestock/Pet Consumption	Irrigation††
Maximum Rate (150 ppb) or less	0	0	0	0	See irrigation instructions below

† Note below, under *Potable Water Intakes,* the information for application of this product within ¼ miles (1,320) feet of a functioning potable water intake.

†† Note below, under *Irrigation*, specific time frames or fluridone concentrations that provide the widest safety margin for irrigating with fluridone treated water.

- **Potable Water Intakes:** Concentrations of the active ingredient fluridone up to 150 ppb are allowed in potable water sources; however, in lakes and reservoirs or other sources of potable water, do not apply this product at application rates greater than 20 ppb within one-fourth (1/4) mile (1,320 feet) of any functioning potable water intake. At application rates of 8 - 20 ppb, this product may be applied within ¼ mile where functioning potable water intakes are present. **NOTE:** Existing potable water intakes which are no longer in use, such as those replaced by connections to potable water wells or a municipal water system, are not considered to be functioning potable water intakes.

Use Precautions

- **Irrigation:** Irrigation with treated water may result in injury to the irrigated vegetation. Follow these precautions and inform those who irrigate from areas treated with SonarOne of the irrigation time frames or water FasTEST requirements presented in the table below. Follow the following time frames and FasTEST directions to reduce the potential for injury to vegetation irrigated with treated water. Greater potential for crop injury occurs where treated water is applied to crops grown on low organic and sandy soils.

	Days After Application		
Application Site	**Established Tree Crops**	**Established Row Crops/ Turf/Plants**	**Newly Seeded Crops/Seedbeds or Areas to be Planted Including Overseeded Golf Course Greens**
Ponds and Static Canals†	7	30	FasTEST required
Canals	7	7	FasTEST required
Rivers	7	7	FasTEST required
Lakes and Reservoirs††	7	7	FasTEST required

† For purposes of SonarOne labeling, a pond is defined as a body of water 10 acres or less in size. A lake or reservoir is greater than 10 acres.

†† In lakes and reservoirs where one-half or greater of the body of water is treated, use the pond and static canal irrigation precautions.

Where the use of SonarOne treated water is desired for irrigating crops prior to the time frames established above, use the FasTEST to measure the concentration in the treated water. Where a FasTEST has determined that concentrations are less than 10 parts per billion, there are no irrigation precautions for irrigating established tree crops, established row crops or turf. **For tobacco, tomatoes, peppers or other plants within the Solanaceae Family and newly seeded crops or newly seeded grasses such as overseeded golf course greens, do not use treated water if concentrations are greater than 5 ppb; furthermore, when rotating crops, do not plant members of the Solanaceae family in land that has been previously irrigated with fluridone concentrations in excess of 5 ppb. It is recommended that a SePRO Aquatic Specialist be consulted prior to commencing irrigation of these sites.**

PLANT CONTROL INFORMATION

SonarOne selectivity is dependent upon dosage, time of year, stage of growth, method of application, and water movement. The following categories: controlled, partially controlled, and not controlled, are provided to describe expected efficacy under ideal treatment conditions using higher to maximum label rates. Use of lower rates will increase selectivity of some species listed as controlled or partially controlled. Additional aquatic plants may be controlled, partially controlled, or tolerant to this product. It is recommended to consult a SePRO Aquatic Specialist prior to application of this product to determine a plant's susceptibility to SonarOne. **NOTE: algae (chara, nitella, and filamentous species) are not controlled by SonarOne.**

Vascular Aquatic Plants Controlled By SonarOne:[1]

Submersed Plants:
bladderwort (*Utricularia* spp.)
common coontail *(Ceratophyllum demersum)*†
common Elodea *(Elodea canadensis)*†
egeria, Brazilian Elodea *(Egeria densa)*
fanwort, Cabomba *(Cabomba caroliniana)*
hydrilla *(Hydrilla verticillata)*
naiad (*Najas* spp.) †
pondweed (*Potamogeton* spp., except Illinois pondweed)†
watermilfoil (*Myriophyllum* spp. except variable-leaf milfoil)

Floating Plants:
salvinia (*Salvinia* spp.)
duckweed (*Lemna*†, *Spirodela*†, and *Landoltia* spp.)
mosquito fern (*Azolla caroliniana*)†

Shoreline Grasses:
paragrass (*Urochloa mutica)*

[1] Species denoted by a dagger (†) are native plants that are often tolerant to fluridone at lower use rates. Please consult a SePRO Aquatic Specialist for recommended SonarOne use rates (not to exceed maximum labeled rates) when selective control of exotic species is desired.

Vascular Aquatic Plants Partially Controlled By SonarOne:

Submersed Plants:
Illinois pondweed (*Potamogeton illinoensis)*
limnophila *(Limnophila sessiliflora)*
tapegrass, American eelgrass *(Vallisneria americana)*
watermilfoil--variable-leaf *(Myriophyllum heterophyllum)*

Emersed Plants:
alligatorweed (*Alternanthera philoxeroides)*
American lotus *(Nelumbo lutea)*
cattail (*Typha* spp.)
creeping waterprimrose *(Ludwigia peploides)*
parrotfeather (*Myriophyllum aquaticum)*
smartweed (*Polygonum* spp.)
spatterdock *(Nuphar luteum)*
spikerush (*Eleocharis* spp.)
waterlily (*Nymphaea* spp.)
waterpurslane *(Ludwigia palustris)*
watershield *(Brasenia schreberi)*

Shoreline Grasses:
barnyardgrass *(Echinochloa crusgalli)*
giant cutgrass *(Zizaniopsis miliacea)*
reed canarygrass *(Philaris arundinaceae)*
southern watergrass *(Hydrochloa caroliniensis)*
torpedograss (*Panicum repens)*

Vascular Aquatic Plants Not Controlled By SonarOne:

Emersed Plants:
American frogbit (*Limnobium spongia)*
arrowhead (*Sagittaria* spp.)
bacopa (*Bacopa* spp.)
big floatingheart, banana lily *(Nymphoides aquatica)*
bulrush (*Scirpus* spp.)
pickerelweed, lanceleaf (*Pontederia* spp.)
rush (*Juncus* spp.)
water pennywort (*Hydrocotyle* spp.)

Floating Plants:
floating waterhyacinth *(Eichhornia crassipes)*
waterlettuce *(Pistia stratiotes)*

Shoreline Grasses:
maidencane *(Panicum hemitomon)*

NOTE: Algae (chara, nitella, and filamentous species) are not controlled by SonarOne.

APPLICATION DIRECTIONS

The aquatic plants present in the treatment site should be identified prior to application to determine their susceptibility to SonarOne. It is important to determine the area (acres) to be treated and the average depth in order to select the proper application rate. Do not exceed the maximum labeled rate for a given treatment site per annual growth cycle.

Application to Ponds
SonarOne may be applied to the entire surface area of a pond. For single applications, rates may be selected to provide 30 - 90 ppb to the treated water, although actual concentrations in treated water may be substantially lower at any point in time due to the slow-release formulation of this product. When treating for optimum selective control, lower rates may be applied for sensitive target species. Use the higher rate within the rate range where there is a dense weed mass, when treating more difficult to control species, and for ponds less than 5 acres in size with an average depth less than 4 feet. Application rates necessary to obtain these concentrations in treated water are shown in the following table. For additional application rate calculations, refer to the *Application Rate Calculation—Ponds, Lakes and Reservoirs* section of this label. Split or multiple applications may be used where dilution of treated water is anticipated; however, the sum of all applications should total 30 - 90 ppb and must not exceed a total of 90 ppb per annual growth cycle.

Average Water Depth of Treatment Site (feet)	Pounds of SonarOne per Treated Surface Acre	
	45 ppb	90 ppb
1	2.5	5.0
2	5.0	10.0
3	7.5	15.0
4	10.0	20.0
5	12.5	25.0
6	15.0	30.0
7	17.0	34.0
8	19.5	39.0
9	22.0	44.0
10	24.5	49.0

Application to Lakes and Reservoirs
The following treatments may be used for treating both whole lakes or reservoirs and partial areas of lakes or reservoirs (bays, etc.). For best results in treating partial lakes and reservoirs, SonarOne treatment areas should be a minimum of 5 acres in size. Treatment of areas smaller than 5 acres or treatment of narrow strips such as boat lanes or shorelines may not produce satisfactory results due to dilution by untreated water. Rate ranges are provided as a guide to include a wide range of environmental factors, such as target species, plant susceptibility, selectivity and other aquatic plant management objectives. Application rates and methods should be selected to meet the specific lake/reservoir aquatic plant management goals.

NOTE: In treating lakes or reservoirs that contain potable water intakes and where the application requires treating within one-fourth (¼) mile of a potable water intake, no single application can exceed 20 ppb. Additionally, the sum of all applications cannot exceed 150 ppb per annual growth cycle.

A. Whole Lake or Reservoir Treatments (Limited or No Water Discharge)

Single Application to Whole Lakes or Reservoirs
Where single applications to whole lakes or reservoirs are desired, apply SonarOne at an application rate of 16 - 90 ppb. Application rates necessary to obtain these concentrations in treated water are shown in the following table. For additional application rate calculations, refer to the *Application Rate Calculation—Ponds, Lakes and Reservoirs* section of this label. Choose an application rate from the table below to meet the aquatic plant management objective. **Where greater plant selectivity is desired such as when controlling Eurasian watermilfoil and curlyleaf pondweed, choose an application rate lower in the rate range.** For other plant species, SePRO recommends contacting a SePRO Aquatic Specialist in determining when to choose application rates lower in the rate range to meet specific plant management goals. Use the higher rate within the rate range where there is a dense weed mass or when treating more difficult to control plant species or in the event of a heavy rainfall event where dilution has occurred. In these cases, a second application or more may be required; however, the sum of all applications cannot exceed 150 ppb per annual growth cycle. Refer to the section of this label entitled, *Split or Multiple Applications to Whole Lakes or Reservoirs,* for guidelines and maximum rate allowed.

Average Water Depth of Treatment Site (feet)	Pounds of SonarOne Per Treated Surface Acre	
	16 ppb	90 ppb
1	0.9	5.0
2	1.7	10.0
3	2.6	15.0
4	3.5	20.0
5	4.3	25.0
6	5.2	30.0
7	6.0	34.0
8	6.9	39.0
9	7.8	44.0
10	8.6	49.0
11	9.5	54.0
12	10.4	59.0
13	11.2	64.0
14	12.1	68.0
15	13.0	73.0
16	13.8	78.0
17	14.7	83.0
18	15.6	88.0
19	16.4	93.0
20	17.3	98.0

Split or Multiple Applications to Whole Lakes or Reservoirs
To meet certain plant management objectives, split or multiple applications may be desired in making whole lake treatments. Split or multiple application programs are desirable when the objective is to use the minimum effective dose and to maintain this lower dose for the sufficient time to ensure efficacy and enhance selectivity. Under these situations, use the lower rates (16 - 75 ppb) within the rate range. **In controlling Eurasian watermilfoil and curlyleaf pondweed and where greater plant selectivity is desired, choose an application rate lower in the rate range.** For other plant species, SePRO recommends contacting a SePRO Aquatic Specialist in determining when to choose application rates lower in the rate range to meet specific plant management goals. For split or repeated applications, the sum of all applications must not exceed 150 ppb per annual growth cycle.

B. Partial Lake or Reservoir Treatments

Where dilution of SonarOne with untreated water is anticipated, such as in partial lake or reservoir treatments, split or multiple applications may be used to extend the contact time to the target plants. The application rate and use frequency of this product in a partial lake is highly dependent upon the treatment area. An application rate at the higher end of the specified rate range may be required and frequency of applications will vary depending upon the potential of untreated water diluting the productconcentration in the treatment area. Use a rate at the higher end of the rate range where greater dilution with untreated water is anticipated.

Application Sites Greater Than ¼ Mile from a Functioning Potable Water Intake
For single applications, apply SonarOne at application rates from 45 - 150 ppb. Split or multiple applications may be made; however, the sum of all applications cannot exceed 150 ppb per annual growth cycle. Split applications should be conducted to maintain a sufficient concentration in the target area for a period of 45 days or longer. The use of a FasTEST is recommended to maintain the desired concentration in the target area over time.

Application Sites within ¼ Mile of a Functioning Potable Water Intake
In treatment areas that are within ¼ mile of a potable water intake, no single application can exceed 20 ppb. When utilizing split or repeated applications of SonarOne for sites which contain a potable water intake, a FasTEST is required to determine the actual concentration in the water. Additionally, the sum of all applications cannot exceed 150 ppb per annual growth cycle.

Application Rate Calculation — Ponds, Lakes and Reservoirs

The amount of SonarOne to be applied to provide the desired ppb concentration of active ingredient equivalents in treated water may be calculated as follows:

Pounds of SonarOne required per treated acre =
Average water depth of treatment site **x** Desired ppb concentration of active ingredient equivalents **x** 0.054

For example, the pounds per acre of SonarOne required to provide a concentration of 25 ppb of active ingredient equivalents in water with an average depth of 5 feet is calculated as follows:

5 **x** 25 **x** 0.054 = 6.75 pounds per treated surface acre.

NOTE: Calculated rates may not exceed the maximum allowable rate in pounds per treated surface acre for the water depth listed in the application rate table for the site to be treated.

Application to Drainage Canals, Irrigation Canals and Rivers

Static Canals
In static drainage and irrigation canals, apply SonarOne at the rate of 20 - 40 pounds per surface acre.

Moving Water Canals and Rivers
The performance of SonarOne will be enhanced by restricting or reducing water flow. In slow moving bodies of water use an application technique that maintains a concentration of 10 - 40 ppb in the applied area for a minimum of 45 days. This product can be applied by split or multiple broadcast applications or by metering in the product to provide a uniform concentration of the herbicide based upon the flow pattern. The use of a FasTEST is recommended to maintain the desired concentration in the target area over time.

Static or Moving Water Canals or Rivers Containing a Functioning Potable Water Intake
In treating a static or moving water canal or river which contains a functioning potable water intake, applications of SonarOne greater than 20 ppb must be made more than ¼ mile from a functioning potable water intake. Applications less than 20 ppb may be applied within ¼ mile from a functioning potable water intake; however, if applications of this product are made within ¼ mile from a functioning water intake, a FasTEST must be utilized to demonstrate that concentrations do not exceed 150 ppb at the potable water intake.

Application Rate Calculation — Drainage Canals, Irrigation Canals and Rivers

The amount of SonarOne to be applied through a metering system to provide the desired ppb concentration of active ingredient in treated water may be calculated as follows:

1. Average flow rate (ft. per second) **x** average width (ft.) **x** average depth (ft.) **x** 0.9 = CFS (cubic feet per second)
2. CFS **x** 1.98 = acre feet per day (water movement)
3. Acre feet per day **x** desired ppb **x** 0.054 = pounds SonarOne required per day.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.
Pesticide Storage: Store in original container only. Do not store near feed or foodstuffs. In case of leak or spill, contain material and dispose as waste.
Pesticide Disposal: Wastes resulting from use of this product may be used according to label directions or disposed of at an approved waste disposal facility.
Container Handling:
Non-refillable, rigid container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.
Triple rinse containers small enough to shake as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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.
Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.
Non-refillable, non-rigid container. DO NOT reuse or refill this container. Completely empty liner into application equipment by shaking and tapping sides and bottom to loosen clinging particles. If not emptied in this manner, the bag may be considered an acute hazardous waste and must be disposed of in accordance with local, state and federal regulations. When completely empty, offer for recycling if available or 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. If outer packaging is contaminated and cannot be reused, dispose of it in the manner required for its liner.

Warranty Disclaimer: SePRO Corporation warrants that this product conforms to the chemical description on the product label. Testing and research have also determined that this product is reasonably fit for the uses described on the product label. To the extent consistent with applicable law, SePRO Corporation makes no other express or implied warranty of fitness or merchantability nor any other express or implied warranty and any such warranties are expressly disclaimed.

Misuse: Federal law prohibits the use of this product in a manner inconsistent with its label directions. To the extent consistent with applicable law, the buyer assumes responsibility for any adverse consequences if this product is not used according to its label directions. In no case shall SePRO Corporation be liable for any losses or damages resulting from the use, handling or application of this product in a manner inconsistent with its label.

For additional important labeling information regarding SePRO Corporation's Terms and Conditions of Use, Inherent Risks of Use and Limitation of Remedies, please visit *http://www.seprolabels.com/terms/* or scan the image below.

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Attachment 7: Potential Environmental Impacts

Fluridone effects on non-target animals (including humans)

Any pesticide approved by the U.S. Environmental Protection Agency (USEPA) has undergone extensive testing to determine toxicity level through acute (high doses for short periods of time) and chronic (long term exposure) studies on animals (USEPA 1986). Sonar has been tested in both acute and chronic studies, as well as studies to examine genetic, cancer, and reproductive effects. Sonar was not shown to result in the development of tumors, adverse reproductive effects or offspring development, or genetic damage. Sonar has been texted extensively on target aquatic invasive plants, as well as in long-term residue monitoring studies in treated waters. Sonar is labeled with the signal word "caution" by the USEPA, indicating a level of toxicity lesser than those labeled with either "danger" (more toxic) or "poison" (most toxic).

The USEPA has approved Sonar's application in water used for drinking as long as residue levels do not exceed 0.15 parts per million (ppm) or 150 parts per billion (ppb). One ppm can be considered equivalent to approximately one second in twelve days or one foot in two hundred miles. Sonar applications can be made within one-fourth miles (1,320 ft.) of a potable water intake. This treatment concentration is well below the 0.15ppm (150ppb) allowable limit in water used for drinking (USEPA 1986). Human contact to fluridone may be through swimming in treated waters, drinking water from treated waters, by consuming fish from treated waters, or by consuming meat, poultry, eggs, or milk from livestock that were provided water from treated waters. Chena Lake, Chena Slough, and Totchaket Slough has no commercial agricultural use, so exposure through livestock is unlikely. There are no USEPA restrictions on the use of fluridone-treated water for swimming or fishing when used according to label directions (USEPA 1986).

The maximum non-toxic dose is characterized by the "no-observable-effect-level" or NOEL for pesticides. The dietary NOEL for fluridone (the highest dose at which no adverse effects were observed in laboratory test animals fed Sonar) is approximately 8 milligrams of Sonar per kilogram of body weight per day (8mg/kg/day). A 70-kg (150lb) adult would have to drink over 1,000 gallons of water containing the maximum legal allowable concentrations in potable water (0.15 ppm) for a significant portion of their lifetime to receive and equivalent dose. A 20 kg (40lb) child would have to drink approximately 285 gallons of Sonar treated water every day to receive a NOEL-equivalent dose. The risk therefore is negligible even if a human were to accidentally ingest water directly after Sonar treatment. As Sonar is only applied intermittently throughout the year and in limited areas, and because it disappears from the environment, continuous exposure over a lifetime for humans, mammals, and other animals is improbable. Fluridone has been tested for acute and chronic toxicity, as well as reproductive effects, on mammals (rats, mice, guinea pigs, rabbits, dogs), birds (bobwhite quail, mallard duck), insects (honey bee, amphibods, daphnids, midge, chironomid), earthworms, fish (fathead minnows, catfish, mosquitofish, rainbow trout), and other aquatic animals (Hamelink et al. 2009, Kamarianos et al. 1989, Muir et al. 1982, McCowen et al. 1979).

Exposure of test animals dermally (skin contact) has shown minimal toxicity to mammals by acute, concentrated contact. Chronic dermal exposure in mammals showed no signs of toxicity and slight skin irritation. Mammals were shown to excrete fluridone metabolites within 72 hours of varying doses of up to 1400 ppm/day (McCowen et al. 1979). A dietary NOEL was established for birds that may feed on aquatic plants or insects in treated waters. The risk to birds via diet was considered negligible. The acute median lethal concentrations of fluridone were 4.3+/-3.7mg/L for invertebrates and 10.4 +/- 3.0 mg/L for fish. Fish in treated ponds have shown no fluridone metabolites after

treatment (Kamarianos et. al. 1989). Chronic studies showed no effects on daphnids, midge larvae, fathead minnows, or channel catfish and rapid rates of metabolic excretion (Hamelink et al. 2009, Muir et al. 1982). Insects that fed on bottom sediment had higher rates of fluridone intake and persistence than others (Muir et al. 1982). Honeybees and earthworms were not considered particularly sensitive to fluridone, even when directly dusted or placed in treated soil.

Fluridone has low bioaccumulation potential in fish, bird, or mammal tissues. Irrigation of crops using water treated with fluridone lead to only trace amounts detected in forage crops. Livestock consumption of Sonar-treated water resulted in negligible levels of Sonar in lean meat and milk. Sonar manufacturer recommendations indicate the livestock can be watered immediately from Sonar-treated water. The tolerance for milk is the same as for water (0.15 ppm).

Fluridone effects on non-target vegetation

The desired outcome is the eradication of elodea, but native submerged aquatic plants will be impacted as well. Madsen et al. (2002) evaluated nontarget plant effects in three lakes in southern Michigan that were treated with low-dosages of fluridone (Sonar AS) to control Eurasion watermilfoil. Despite achieving >93% reduction in the frequency of watermilfoil, native plant cover (composed mostly of *Ceratophyllum demersum, Chara spp., Heteranthera dui, Potamogeton spp., and Vallisneria Americana*) was maintained at >70% in the year of treatment and 1-year post treatment. Floating leaf plants (such as yellow pond lily) exhibiting chlorosis (due to lack of chlorophyll) usually recover within the year of treatment or become re-established within the following year (Kenaga 1992). In Chena Lake, Chena Slough, and Totchaket Slough, elodea grows both alone in monotypic stands and in mixed assemblages with other native aquatic species as the dominant species. At the low concentrations applied (≤150 ppb) fluridone is expected to be only lethal to elodea. The aquatic plant community is expected to shift back on one comprised entirely of native species. There may be a short time period when elodea is decaying that light and dissolved oxygen may be temporarily reduced; however, this was not detected in Lake Hood/Spenard average dissolved oxygen for 2015 (Figure 4). As the plant continues to decay, water clarity and dissolved oxygen as well as nutrient levels are expected to return to normal water quality levels.

Diquat effects on non-target animals (including humans)

Growth suppression of elodea infestations in the nearshore littoral zone (100 foot buffer of shoreline) may be accomplished with diquat to minimize plant fragmentation and decrease the likelihood of further spread within Lake Hood/Spenard to lakes elsewhere in the state. Diquat is a nonselective, contact algicide, defoliant, desiccant, and herbicide that is best applied when plant biomass and turbidity are low. Diquat will be applied at the maximum application rate of 2 gallons of Littora per surface acre no more than once a month during the summer months (June-August), by underwater boom.

Diquat is considered a moderately toxic material, labeled with the USEPA signal word “caution” (USEPA2002). Diquat exhibits low acute toxicity via oral and inhalation exposure, but has moderate to severe acute toxicity by dermal exposure. Humans drinking water containing diquat in excess of the maximum contaminant level (MCL) over many years could get cataracts. Diquat can cause eye

irritation, and can cause serious burns and scarring of the cornea (Sax 1984). Diquat may be harmful to the gastrointestinal tract, kidneys, and liver of mammals, causing severe congestion and ulceration of stomach and gastrointestinal tract (Gosselin et al. 1984).

Diquat is not known to cause genetic changes and is therefore not considered a mutagen in acute tests with mice. Diquat does not cause tumors in rat studies both acute and chronic. Tests have been conducted on mice, rats, guinea pigs, rabbits, dogs, and cows (Cochrane et al. 1994, Hayes and Laws 1990). Diquat causes cataracts in dogs and rats, and developmental effects in rats and rabbits (Cochrane et al. 1994). Oral diquat doses are metabolized mainly in the intestines with excretion in feces, in tests with rats, hens, and cattle. Minute traces (0.004—0.015% of diquat were found in cow milk, and cows are considered sensitive to diquat exposure.

Diquat is considered moderately toxic to practically nontoxic to birds, depending on the species. In mallards acute toxicity (LD50 or lethal dose fifty in which half of the subjects are killed with that dose) was 564 mg/kg. For hens, oral LD50 was 200-400 mg/kg, for rats 120/mg/L, for mice 233 mg/kg, and 188 mg/L in rabbits. Chronic exposure at the 4-week no-observed-effect-level (NOEL) for increased relative liver weight in rats from dietary exposure to diquat was 7.2 mg/kg-day (Cochrane et al.1994).

Diquat is toxic to aquatic invertebrates, which display varying levels of sensitivity. Diquat has shown to be 300 more times toxic to amphipods than mayfly, with addisfly, damselfly, and dragonfly less sensitive in that order (Nicholson and Clerman 1974, Wilson and Bond 1969). The Maximum Contaminant Level (MCL)is 0.02 milligrams per liter (mg/L) or 20 ppb for diquat (USEPA 2002).

Diquat effects on non-target vegetation

Diquat is a quick-acting herbicide, causing injuring only to the parts of the plant to which it is applied (Hayes and Laws1990). Diquat is absorbed by plant leaves where it interferes with cell respiration and prevents update of oxygen. Plants are at the highest risk of negative impacts because of diquat's specific mode of action targeting them. Due to the mode of action (inhibition of photosynthesis) diquat can take from a few days to about 2 weeks to control aquatic weeds, particularly if low rate technology is an issue. In 2015, when diquat was applied to Lake Hood/Spenard, control was observed starting in 7 days. It has been suggested that much lower concentrations than are typically used for control of aquatic weeds may be effective for the control of more sensitive weeds like sago pondweed, coontail, American waterweed and southern naiad (Hulbert, 1987 and Tatum and Blackburn, 1965). These species are typically completely controlled at 0.5 and 1.0 ppm c.e. but effective (95% control) is obtainable at 0.25 ppm c.e. Concentrations of diquat sufficient to control milfoil, a species similar to elodea, are typically high enough to adversely impact most aquatic plants. Furthermore, concentrations effective against milfoil will normally not be effective for longer than two months in Northwest waters, which was also observed in Lake Hood/Spenard during 2015. Therefore, in the Northwest, more than one treatment of diquat per season may be necessary to control milfoil (Water Investigations Branch, 1977 in Shearer and Halter, 1980). While sago pondweed is effectively controlled by diquat (Hiltibran et al, 1972), certain species of pondweed, including American pondweed (Hiltibran et al, 1972) Richardson's pondweed (Littora Label), reed canarygrass, white clover, Chara spp., Nuphar spp., Nymphaea spp.,

duckweed or curlyleaf pondweed are either not controlled by diquat or are controlled only for very limited periods of time (<6 weeks after application) (Eady andRenney, 1965; Ecology, 1992; Hulbert 1987; Tatum and Blackburn, 1965). In Lake Hood/Spenard, Richardson's pondweed was observed to be growing back 7 weeks after the 2015 diquat treatment. Diquat residue studies suggest that diquat is not persistent in water, as it binds to suspended particles in the water, which are then taken up by plants. The half-life is less than 48 hours in water. Affected plants decompose and release diquat, which is then degraded by microbes, photodegraded by sunlight (within 1 to3 weeks), or adsorbed to sediment particles. Adsorbed sediment diquat is also degraded by microbial activity, although diquat has been found in the bottom soil of pools and ponds four years after application. Adsorption rates are highest in loam, sandy clay loam, and sandy loam (Cochrane et al. 1994). Granular activated carbon can be used to remove diquat to below MCL.

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Attachment 8: Precautions

All personal and environmental use precautions listed in the MSDS sheets and product labels will be followed strictly. Transportation, storage, and application will all follow manufacturer guidelines. All applications will be done by certified DEC Pesticide Applicators with Category 6 Aquatic Pest control endorsements.

Appropriate signage will be placed in the application areas to inform the public of the potential safety concerns. All adjacent property owners will be kept informed of the application procedure, interaction concerns, and follow-up monitoring results.

Public notification of pesticide applications in public places will be posted in writing at each public access point of entry and exit. Signs will stay posted at least 24 hours after the application with contact names, phone numbers, time of application, and any appropriate restrictions.

Application of the pesticides will adhere to custom prescriptions formulated for Lake Hood/Spenard and followed accordingly. This will minimize any potential for adverse effects on all non-target environmental elements.

Attachment 10: Effects on Endangered Species

Lakes Hood/Spenard do not contain fish or other wildlife. For safety of aircraft, birds are discouraged from loitering on Lakes Hood/Spenard.

THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Environmental Conservation
DIVISION OF WATER
Wastewater Discharge Authorization Program

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www.dec.alaska.gov/water/wwdp

February 26, 2019

Alaska Department of Transportation and Public Facilities, Ted Stevens Anchorage International Airport
(ADOT&PF – AIA), Attention: Jim Szczesniak, Airport Manager
P.O. Box 196960
Anchorage, AK 99517

Re: AKG870023: ADOT&PF/AIA – Lake Hood/Lake Spenard Weed/Algae Pesticide Application

Dear Mr. Szczesniak:

The Alaska Department of Environmental Conservation (DEC) has completed its review of your AKG870000 Pesticide General Permit (PGP) Notice of Intent (NOI) and is issuing the following authorization number: **AKG870023**. The wastewater discharge is authorized in accordance with the terms of the general permit and any site specific requirements in this authorization for the following pest management areas identified in the NOI:

Pest Management Area: Lake Hood/Lake Spenard – Anchorage International Airport
Pesticide Use Patterns:

☐ Mosquito and Other Flying Insect Pest Control
☐ Animal Pest Control
☒ Weed and Algae Pest Control
☐ Forest Canopy Pest Control

Pest(s) to be controlled:	Pesticide Products	
	Product Name:	EPA Registration Number:
Nuisance Aquatic Vegetation	Diquat (Littora)	EPA 67690-53
Elodea	SonarGenesis (Fluridone)	EPA 67690-54
Elodea	SonarOne	EPA 67690-45

An electronic copy of the PGP is available at http://dec.alaska.gov/water/wnpspc/stormwater/docs/AKG870000_2017_PGP.pdf and a copy of this authorization letter is posted to the DEC water permit search website http://dec.alaska.gov/Applications/Water/WaterPermitSearch/Search.aspx.

The authorization effective date is 2/26/19

The authorization to discharge expires upon submittal of a Notice of Termination, see Permit Part 1.2.6.

The permittee is reminded of the following permit requirements: Technology-Based Effluent Limitations, Part 2.2, Decision-makers' Responsibilities for All Decision-makers

- Technology-Based Effluent Limitations, Part 2.2, Decision-makers' Responsibilities for Decision-makers Required to Submit NOIs
- Water Quality, Part 3
- Monitoring, Part 4
- Pesticide Discharge Management Plan, Part 5
- Corrective Action, Part 6
- Recordkeeping, Parts 7.1, 7.4, and 7.5
- Annual Report, Part 7.6

- Standard Permit Conditions, Permit Appendix A

If you are self-applying a pesticide, your requirements also include:

- Technology-Based Effluent Limitations, Part 2.1 Applicators' Responsibilities

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A copy of the PGP AKG870000 and this authorization must be kept at the address provided in the NOI. This authorization does not relieve the permittee from other local, state, or federal government permitting requirements.

If you have any questions regarding the above, please contact me at 907-334-2288 or via email at James.Rypkema@alaska.gov.

Sincerely,

James Rypkema
Section Manager, Storm Water and Wetlands

Enclosure: Pesticide Discharge map (if provided in NOI).

cc: w/enclosure (email)
Kenton Curtis, ADOT&PF – AIA
Brienna Demeris, ADOT&PF - AIA