Technical Bulletin

Date: **February 17, 2017**

Product Line: **Bambi**

Models: **All Bambi Buckets**

Subject: **Preventing Aquatic Invasive Species Transport**

Background

Preventing the transport of harmful invasive species between bodies of water is important in order to protect vulnerable marine habitats. Invasive organisms can be transported between bodies of water by Bambi Buckets, so buckets should be properly decontaminated when changing between untreated water sources in sensitive areas.

Different forestry services and government agencies may already have guidelines or regulations in place to address this issue. Customers should always adhere to local regulations and guidelines where they exist. This document is only intended to provide supplemental information.

Recommendations

In many instances thorough drying is considered an acceptable method of decontamination. Clean the bucket of any debris and allow the bucket to dry in the sun until it is completely dry to the touch

When there is not adequate time to thoroughly dry the bucket, alternative decontamination methods include power washing using hot water and chemical decontamination.

Power Washing

Power washing is an acceptable method of decontamination. Water temperature should not exceed 150° F and extra caution should be taken when washing around the bottom of valves to avoid damaging the butyl tape seal.

Chemical Decontamination

The Bambi Bucket fabrics can tolerate exposure to diluted bleach and quaternary ammonium compounds, but extra caution should be taken to thoroughly rinse the bucket with fresh water after treatment, as the chemicals used accelerate corrosion of the metal components of the buckets. Decontamination should be performed a safe distance away from the helicopter.

The National Wildfire Coordinating Group has published the following recommendations for decontaminating **general equipment** with quaternary ammonium compounds and bleach solutions (published in "Guide to Preventing Aquatic Invasive Species Transported by Wildland Fire Operations"). Please note that the National Wildfire Coordinating Group does not recommend chemical decontamination for helicopter buckets.

To Decontaminate Gear with Quat Disinfectants

The quaternary ammonium formulations *Super HDQ®* and *Green Solutions High Dilution256®* (which replaces the discontinued *Sparquat* 256®) were recently found to be most effective against a variety of AIS. *Green Solutions Neutral Disinfectant®* is a less concentrated version of *Green Solutions 256®*. These formulations can be used at concentrations according to their labels (see below). Soak gear in a bucket for 10 minutes. Alternatively, gear may be disinfected by spraying with quat from a backpack weed sprayer or spray bottle. Afterwards, **rinse gear thoroughly in clean water**. Quat compounds are highly toxic to aquatic organisms but are immobile in soil. Keep effluent, containing this product, at least 100 feet from lakes, ponds, streams or other waters. Do NOT allow product to enter storm drains, lakes, streams, or other waterbodies.

Volume of Tap Water	***Super HDQ®***	***Green Solutions Neutral Disinfectant High Dilution 256®***	***Green Solutions Neutral Disinfectant®*** (this product is a lower concentration)	**Soak Time**	**Spray Time**
1 gallon water	½ oz	½ oz	2 oz	10 min	5 sec spray; let stand 10 minutes; rinse

To Decontaminate Gear with Chlorine Bleach

Bleaches are corrosive to canvas, gaskets, and metal and have limited effectiveness against snails. However, bleaches are extremely effective against other invasive organisms, especially pathogens, and the bleach concentration below has been found to be effective for chytrid fungus and other AIS. Soak gear in a bucket for 10 minutes. Afterwards**, rinse gear thoroughly in clean water**.

Volume of Tap Water	**"*Regular Clorox® Bleach*" (6% sodium hypochlorite)**	**Soak Time**
1 gallon water	9 oz	10 min

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