PROPOSED 2016 MANAGEMENT EFFORTS

Background

The annual peer review process was conducted in January of 2016. Input from national scientists/experts, Project consultants, as well as extensive plant community monitoring data from 2015 was used to develop the treatment plan for 2016.



Figure 1: 2016 Cayuga Inlet Sonar Genesis (liquid) Treatment Zone

CAYUGA INLET

Given the extensive reductions observed in hydrilla populations from 2013 - 2015, and a lack of hydrilla growth observed in Cayuga Inlet in 2014 and 2015, the HTF will scale back herbicide applications in Cayuga Inlet in 2016. This translates into a single Sonar application within Cayuga Inlet for the 2016 season, and no Aquathol-K (contact herbicide) application. With no Aquathol-K application planned for 2016, the Hydrilla Task Force (HTF) will NOT close the inlet to boat/recreation traffic for 24hrs in association with herbicide treatments. 2016 will be the first season that the inlet will remain open during treatment since Hydrilla Project inception in 2011.

Although hydrilla populations have been significantly reduced in Cayuga Inlet, continued management pressure will still be needed to address small remaining tuber populations. These measures will help ensure that hydrilla has been fully eradicated, and that re-infestation does not occur.

For 2016, the HTF will utilize the lowdose, systemic herbicide Sonar (active ingredient: fluridone) to address remaining

hydrilla populations and potential growth. Sonar Genesis (liquid) will be injected into the main channel of the inlet via an automated injection unit staged at the NYSDEC fish ladder (southern portion of inlet. **See Figure 1**). Sonar H4C (pellets) will be applied in backwater zones of Cayuga Inlet to provide additional treatment coverage for high priority areas (**See Figure 2, below**).

Following initiation, Sonar application in Cayuga Inlet will continue for 60 - 90 days. Cessation of Sonar treatments after 60 days, but prior to 90 days, will depend on hydrilla germination and growth observations conducted by Racine-Johnson Aquatic Ecologists. If hydrilla growth is sparse/non-existent, Sonar treatment will be ended early to reduce herbicide application quantities and overall Project costs.





Figure 3: Fall Creek Aq-K Injection Treatment Zone



FALL CREEK

Following ongoing treatments, hydrilla populations within Fall Creek have been significantly reduced compared to original levels observed during the August 2013 discovery. Similar treatment protocols to that of 2015 will be used in 2016 to manage remaining hydrilla populations in Fall Creek.

Primary treatment will consist of sub-surface injection of the contact herbicide Aquathol-K (active ingredient: endothall) to the main channel of Fall Creek over a 24hr period (Figure 3). A pump system will be installed at an upstream staging area in Fall Creek. This injection system will meter in the appropriate concentration of Aquathol-K product. Additional application of Aquathol-K to Fall Creek backwater areas will be conducted by boat/backpack equipment to ensure proper treatment coverage (Figure 4, below). Herbicide applicators and representatives from United Phosphorous Inc. (Aquathol-K producer) will be on hand to conduct the treatment.

Following the initial application of Aquathol-K to address hydrilla biomass in Fall Creek, Sonar H4C (pellets) will be applied to backwater/shallow areas of the Fall Creek system (**See Figure 5, below**). The goal of Sonar application will be the prevention of potential hydrilla regrowth following the initial Aquathol-K application. As in Cayuga Inlet, Sonar application to Fall Creek will continue for 60 - 90 days.

Figure 4: Fall Creek Aq-K Backwater Treatment Zones



SOUTHERN CAYUGA LAKE

2015 was the first season that active herbicide applications were conducted in the southern end of Cayuga Lake. A 30-acre treatment area in the southeast corner of the lake was treated with Sonar H4C (pellets) from July – September 2015. This experimental application was used to determine the effectiveness of herbicide applications for the treatment of hydrilla in open waters of southern Cayuga Lake.

With the high exchange rates and turnover of water in southern Cayuga Lake, maintaining target herbicide concentrations and retention time, even at the lower dosage rates of 1 to 2ppb, was incredibly challenging. Given the results observed in 2015, the HTF determined that herbicide application to the open waters of southern Cayuga Lake would not be the most effective hydrilla management strategy in 2016.

Based on these observations, as well as observations related to successful physical removal/benthic barrier installation in the southeast corner of Cayuga Lake in 2013 – 2015, the HTF determined that physical removal and benthic barrier installation would be the most feasible hydrilla management strategy in southern Cayuga Lake in 2016. An isolated patch of hydrilla was discovered in September 2015 in the southern end of Cayuga Lake (**See Figure 6, below**). This patch is adjacent to the Cornell Sailing Center (growing in approx. 3 to 3.5 meters of water). The HTF will plan to address this patch with physical removal/benthic barrier installation early in the 2016 season.

