

**To Whom it May Concern :**

Adelaide Zoo has experienced problems with some of the exhibit water bodies that provide either a natural swimming environment or a water boundary in animal enclosures over the years.

Some of these ponds have experienced water quality problems like odour, water clarity issues and large amounts of various types of algae growth. These are often the result of nutrients or organic loads from the animal excretions and surrounding plants that drop leaves etc in the water being combined with warmer water temperatures (in summer) and shallow ponds.

Algae is a problem due to its unsightliness, it eats up precious oxygen in the water causing natural plant growth to struggle or die off and effects water health and vitality which in turn impacts on our visitors experience of the zoo. As a result we have been looking over the years at finding healthy ways to prevent its growth or kill it off naturally without the use of harmful or poisonous chemicals which may threaten plants or animals. Chemical treatments are dangerous to use near turtles, fish or aquatic life as well as Mandrills, Siamangs and the Sumatran Tigers, as their homes on man made islands are surrounded by this water which they can drink from regularly.

We installed a Hydrosmart unit on the Sumatran Tiger enclosure back in summer of 07 and saw some of the floating algae throughout the pond die off and drop to the bottom producing improved water clarity. At the same time a unit was fitted onto the main Siamang enclosure recirculation and an improvement was seen in the overall clarity and algae levels and in the adjacent pond and watercourse, however the Mandrill enclosure was still rich in algae so we talked it over with the guys at Hydrosmart who in Dec 08 provided another unit to treat the top pond which flows back to the Siamang Lake. When it was installed as instructed increasing the frequency of treated water flow, as well as moving the recirculation outlet to skim the surface and aerate the pond (the outlet was originally at the floor of the lake), the very rich algae of various types growing from the bottom up and the top down disappeared completely and has not returned this summer, we are very happy with this. This is the first summer we have not been required to remove large volumes of algae from the Mandrill Lake, which is not a simple task.

We now see a noticeable increase in the water clarity of the Mandrill lake and downstream in the Siamang lake. It looks much clearer than it was before the last unit was fitted and it also seems some of the smell has reduced too, thank you Hydrosmart.

**Before**



**After**



**Brenton Pike**  
Assistant Curator of Horticulture

