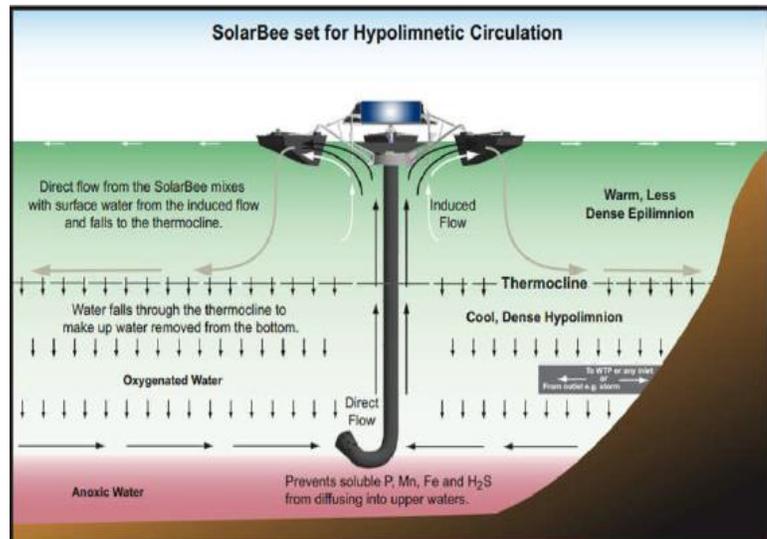


The SolarBee mixer is a solar-powered, non-turbulent, high flow device that was installed in the Prestwick Pond to improve the water quality and ecosystem health.

SolarBee helps to:

- Prevent water stagnation;
- Control blue-green algae blooms;
- Improve ecosystem; and
- Provide a healthy environment for aquatic organisms.



The SolarBee unit is a stand-alone floating unit and is held in position with mooring blocks, similar to a boat. The intake hose is set for deep aeration to address the issues leading to the production of sulfur compounds due to anaerobic decomposition in the pond sediments.

By setting the intake hose just above the sediment the oxygen poor water is brought to the surface for natural re-oxygenation, both across the air interface and from algal photosynthesis. More oxygen-rich water gets transported downward to the depth of the intake hose through displacement. The water brought up to the surface is radially spread from the machine through the patented distribution dish which allows the water to flow away from the unit in a near-laminar flow, enabling it to reach long distances up to 200 m or more.

The constant horizontal and vertical mixing of water by the SolarBee achieves aeration, effectively controlling and reducing algae blooms. The oxygen-rich water is dispersed within the water column and at the bottom and helps accelerate the decomposition of the organic load in the pond sediments.

The SolarBee is fully autonomous, solar powered and operates continuously day and night, even in extended overcast conditions. The on-board battery and electronic controller managing energy outputs, rpms, seasonal changes, allows the SolarBee to operate 24/7. Main components are 3x80Watts solar panels, an onboard battery, digital controller and a brushless direct drive motor. No electrical power source, no other equipment or appurtenances on shore or in the water are required. The device circulates 18950 liters of water per minute.

There is little concern with winter operations as the unit will run and very likely keep the ice cap open on a very large portion of the pond depending on the weather conditions.

There should be no attempt to go near the unit as circulation even under ice renders the ice cap to be extremely thin even far away from the unit.