

PONDSENTRY™

HERITAGE
SYSTEMS



Delivering
Liquid Solutions

Heritage Systems has developed the most powerful patent pending aeration control package available.

Proper control of dissolved Oxygen (D.O.) in a wastewater treatment pond/lagoon is critical for microorganism health and viability, solids breakdown, BOD removal, odor control and cost containment. Most operators control the aeration process by placing their aerators on timers or by manually turning them on and off. Decisions to increase or decrease aeration time are made by guesswork or the occasional lab D.O. test. All the while production process' continue and wastewater is generated. If a heavy load of wastewater is sent to the pond when the aerators are off, or just after a spot D.O. check indicates that all is okay, oxygen will be rapidly consumed and the pond's viability threatened.

Conversely, when operating the aerators by timer or D.O. spot check, over-aeration usually occurs driving the oxygen levels much higher than they need to be. Our experience maintaining wastewater ponds shows that D.O. levels usually run between five and thirteen mg/l. This is two to three times higher than necessary. By maintaining D.O. levels this high the aerators are running much longer than they need to. This extra run time consumes electricity and costs you money.

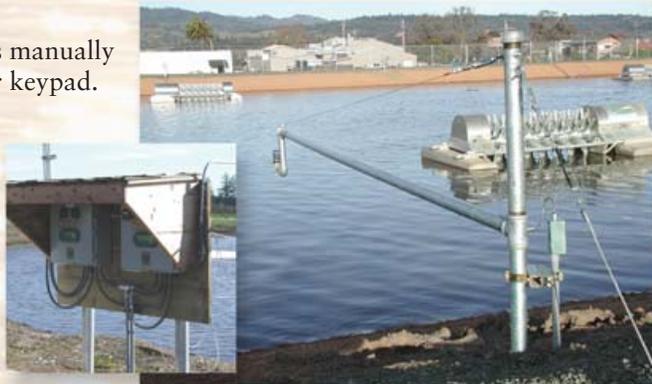
At the center of our service is our PondSentry™ aeration controller. PondSentry is a powerful aeration control and data acquisition product that Heritage Systems owns, installs and maintains as part of our pond management service. Heritage Systems will install all equipment with the exception of electrical connection between our panel and existing motor starters.

PondSentry consists of a control panel (installed near your existing aerator motor starters) and a sensor platform(s) floated in your wastewater treatment pond(s). In addition an ultrasonic level sensor is suspended over the pond for automatic freeboard measurement and environmental compliance.

pH, D.O. and Level sensors send continuous signals to corresponding analyzers located in the PondSentry panel. These signals are continuously displayed on the face of the panel and also imported into a data logger located within the panel. The data logger collects pH, D.O., freeboard, and aerator run time values every few minutes and places these values in memory.

The pond D.O. signal is also brought into a panel-mounted microprocessor. Heritage Systems has developed software that allows the PondSentry microprocessor to operate under any of four modes of operation:

1. Time Mode: starts and stops aerators based on set time values.
2. Manual Mode: user starts and stops aerators manually from the password protected microprocessor keypad.
3. Automatic Mode: Aerators are started and stopped automatically and in sequence based on D.O. set points, which are programmed into the microprocessor.
4. PowerSave Mode: The aerators are started and stopped in the same manner as Automatic mode with a twenty-four hour clock tied in. PondSentry will make smart decisions on starting aerators while entering and exiting peak electrical periods.





The microprocessor also contains an operational cost bank that keeps track of the amount of time each aerator has run and automatically calculates the cost of operation and overall savings from an electrical consumption standpoint. We program your electrical power factor costs into the program so the data is accurate for your location.

To support PondSentry Heritage Systems integrates the following pond maintenance services:

Every two to four weeks a Heritage Systems technician, or licensed dealer will visit the sight to clean and calibrate the pH and D.O. probes and analyzers. Data will be downloaded from the data logger for evaluation by our technical staff.

A separate water sample can also be collected and analyzed for water quality compliance reporting. This service is optional but welcomed by many of our clients. Once the lab results are back we summarize the data and generate your monthly water quality report ready for you to deliver to your governing agency.

A report will be generated each month that shows a graph of pond pH, D.O., freeboard and aerator run-time. Statistics are also provided that show high, low and mean values over the operating period. Analysis from the cost register shows expense associated with operation of the aerators. Any microbiological analysis results will be included, along with any recommendations necessary for improving pond viability through bio-augmentation. Heritage Systems locally warehouses and distributes bacteria specifically formulated for wastewater ponds.

If our optional chain of custody and water quality reporting service is utilized we will include the water analysis in the report along with our summary of the data. This integrated service eliminates the time that you spend scheduling samples and generating monthly water quality compliance reports. We have done the work for you thereby saving you time and money.

Where our PondSentry service has been implemented we are seeing a 55% average reduction in electrical costs associated with pond aerator operation. In addition our clients report that they are saving hundreds of dollars per month related to water quality compliance report generation. Our microbiological services predict and respond to changes in the pond that otherwise would go unnoticed until a major upset occurs. At that time it is too late and the operator risks odors and more importantly violating it's water quality discharge permit.

In addition to our routine service visits, Heritage Systems technicians are available for same day response if a trouble call is received. There are no additional charges for extra service visits.

There are no capital costs associated with the above monitoring and control platform. We charge a flat monthly service fee which includes unlimited service visits, cleaning, calibrating, microbiological water analysis, data retrieval and report generation along with a compliance monitoring report for your regulatory agency (if you choose to have us do this on your behalf). This fee also covers the PondSentry™ control panel and pond sensor flotation platform(s).

State certified lab charges vary for water quality compliance testing. You will be able to eliminate your current service. Heritage Systems simply passes this cost on to you without markup. No additional charges are incurred for data analysis and incorporation into our monthly report.

In the event that microbiological analysis shows that bio-augmentation is necessary Heritage Systems will recommend a bio-augmentation program and seeding schedule.

By implementing Heritage Systems pond maintenance service along with our PondSentry aeration controller and compliance reporting, you will have the most thorough, complete and cost effective program in the industry. The people at Heritage Systems become an extension of your facilities operations and maintenance function. Our service is analogous to having a full time employee at the pond twenty-four hours a day, seven day a week at a fraction of the cost.

Please contact us to learn more about PondSentry and it can impact your operation.