

A Case Study;



Faculative Lagoons Jackpot, Nevada

Background

The town of Jackpot is located in the northeast corner of Nevada. The population is approximately 1,300, with an influx of visitors during the summer months, increasing the number to about 6,000.

Problem

The town was faced with a typical problem; their faculative lagoons were overloaded and producing strong odors. The existing faculative lagoons were four feet deep. This caused concern since strong, efficient aeration and mixing was needed without endangering the clay bottom liner. Winter operation had to be considered also, because temperatures can fall below zero and remain there for days.

Solution

The city chose the AEROMIX TORNADO Self Aspirating Aerator to solve their problems. This type of aerator is ideal for lagoon applications because of its efficient mixing and aeration. AEROMIX designed a special deflector shield to work with the TORNADO Aerator, to protect the clay pond liner and deflect the flow horizontally.



Sixteen (16) 10HP, stainless steel, float mounted TORNADO Aerators with these shields were installed. Start-up occurred on September 24, 1994. Eight (8) aerators are in the primary pond and eight (8) in the secondary pond. Each pond is approximately 8.5 million gallons. Only two (2) aerators in each pond are currently needed to maintain a 2 ppm dissolved oxygen level and provide a circular motion to partially mix each lagoon. The special self-heating design of the TORNADO Aerator allows it to completely freeze-in and restart without the need for heat tape or accessories. During an unusually cold period during the 1994-95 winter, all the aerators were turned on. The pond was completely thawed in less than two days.

According to Mark Rohr, Public Works Supervisor, "The aerators performance has been outstanding and the maintenance is easy." Since the start-up, the odors have been eliminated and the city has reduced their effluent BOD concentration by about 75% over the previous lagoon system.