



Agricultural Wastewater Treatment

The Sionix Solution



SIONIX
CORPORATION

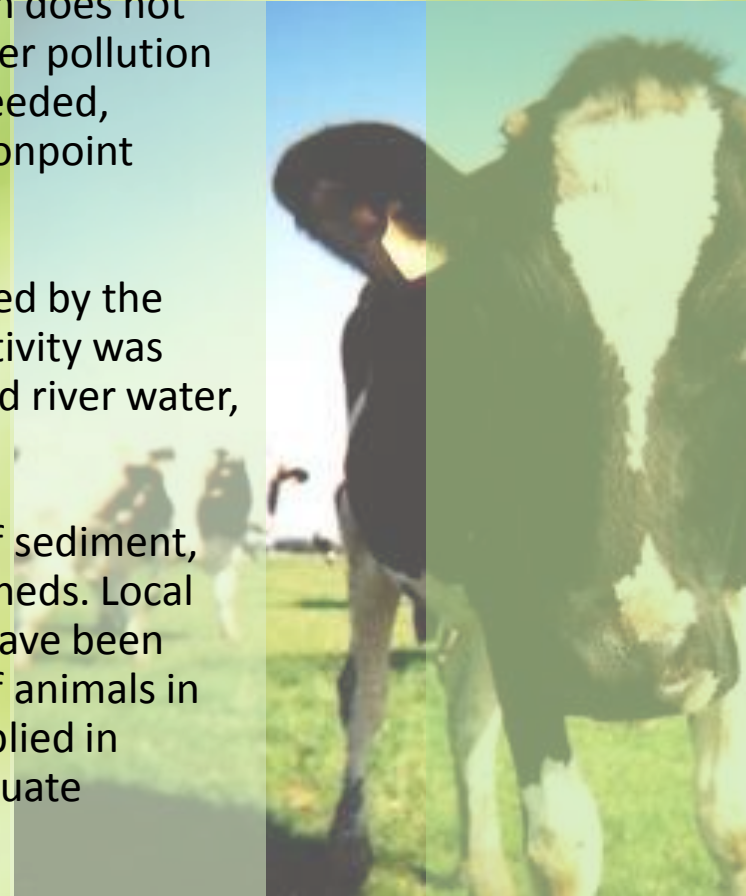
The Problem

- The most significant threat to water resources across the U.S. now comes from nonpoint source pollution - pollution which does not come out of the end of a pipe. As efforts to reduce water pollution from factories and sewage treatment plants have succeeded, attention is now turning to the largest contributor to nonpoint pollution: agriculture.

- In the 2000 National Water Quality Inventory conducted by the Environmental Protection Agency (EPA), agricultural activity was identified as a source of pollution for 48% of stream and river water, and for 41% of lake water.

- Current farming practices often result in the release of sediment, fertilizers, pesticides and animal wastes to local watersheds. Local impacts have often worsened as smaller family farms have been replaced by corporate operations housing thousands of animals in assembly-line conditions. These operations have multiplied in recent years, spreading into many states that lack adequate environmental controls.

- The estimated one billion tons of feces and urine produced each year by livestock, and the way in which it is treated, pose one of America's serious pollution threats.



Segments

- Food Processing
 - Produce
 - Meat processing
 - Egg production
 - Dairy operations
 - Beverages
- Crop Run-off
 - Pollution resulting from planting, cultivating, fertilizing, weed and pest control, and harvesting caused by rain or irrigation
- Animal Waste
 - Nitrates, antibiotics, syn. hormones, parasites, cryptosporidium, giardia, bacteria, etc.



Waste Impact

- Food Processing (avg. wastewater flow m³/ton of product)

 - Meat packing: 13.5-18

 - Milk products: 9-18

 - Bread: 2-3.5

 - Beer: 9-11.5

 - Whiskey: 54.5-73

- Crop Runoff

 - Around 320 million U.S. acres crops faced with runoff

- Animal Waste

 - Almost 2 trillion pounds per year in U.S.



Regulation

- Federal - Clean Water Act

- Regulation dictates that agriculture companies have either zero discharges or obtain a National Pollutant Discharge Elimination System Permit

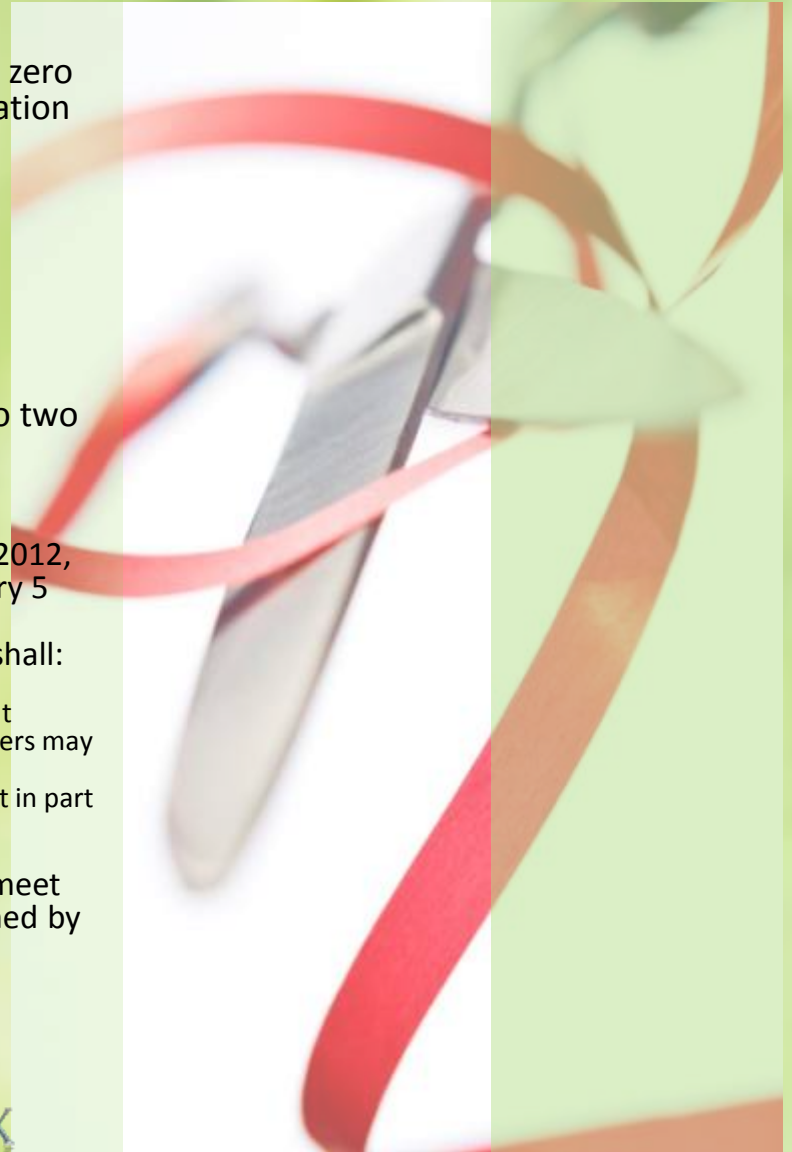
Potential result: Fines

- California Senate Bill x7-7

- Enacted in November 2009, requires all water suppliers to increase water use efficiency. This legislation is divided into two sectors, Urban Water Conservation and Agricultural Water Conservation. Agriculture as follows:

- Agricultural water suppliers shall prepare and adopt agricultural water management plans by December 31, 2012, and update those plans by December 31, 2015, and every 5 years thereafter.
 - On or before July 31, 2012, agricultural water suppliers shall:
 - Measure the volume of water delivered to customers. The Department of Water Resources shall adopt regulations that provide for a range of options that agricultural water suppliers may use to comply with the measurement requirement.
 - Adopt a pricing structure for water customers based at least in part on quantity delivered.
 - Implement additional efficient management practices.
 - Effective 2013, agricultural water suppliers who do not meet the water management planning requirements established by this bill are not eligible for state water grants or loans.

Potential Result: Increased water cost



Sionix

- Water treatment company based in Los Angeles, CA
- Provides customers with portable water treatment and water reclamation solutions that co-locate with the source of contamination.
- Supports the environment in responsible ways to reduce energy consumption and recycle water
- Caters to customers in need of scalable, modular water solutions
- Extremely cost-effective water treatment solution for any entity faced with organic water contamination issues
- Fully reporting company (SINX: OTC BB)



The Solution

- Sionix accelerates a natural process that could take Mother Nature decades or centuries to accomplish
 - The two most important constituents to a water treatment system are Sun and Air. In the Sionix method of water treatment, the role and efficacy of air is maximized, resulting in a minimal need for the use of energy consuming UV
 - Sionix MWTS - Mother Nature's Assistant
- Sionix provides the means and capability to recycle and reclaim contaminated water, for multiple uses, with the convenience of 'one-stop shopping.' Sionix can be the start to finish source and ultimately bridge your operation's needs with the needs of the environment.
- Every individual farm has potential to become their own power company
- Sionix systems use Dissolved Air Flotation (DAF)
 - Technology Creates micron size bubbles (compared to historical sizes of 50+ microns. The bubbles flocculate the contaminants and permit the formation of a cohesive mat. The mat rises and bonds with or traps organic contaminants, which are then skimmed off the surface.
- Basic technology in use for almost 100 years
- Eleven patents granted, five patents currently active, and 3 patent applications on file for advancement of DAF and evaporation technology
- Not a chemical-based treatment
 - Eliminates chlorine-resistant contaminants
 - Avoids chlorine byproducts such as Trihalomethanes
- Our standard MWTS produces approximately 400,000 gallons of treated water per day, but can range from 50K to 1.2MMGPD.



Animal Waste Case Study

- Wenning Poultry, Inc.

- Ohio egg farm with 1.2 million laying hens, producing approximately 1.1 million eggs per day

- Operates on a closed loop power system

- In cooperation with an anaerobic digester, the Sionix Mobil Water Treatment System serves as a functional bridge between energy and the environment

Chicken waste is basis for CH₄ (methane) production used to power system and sell excess energy to grid

- High levels of minerals elevated pH levels in the digester, causing NH₃ (ammonia) to bond with inert solids, leading to :

- Diminished methane production

- Lack of reliable energy source Reduced revenue per kilowatt sold

Purchased Sionix Mobile Water Treatment System in 2010

- Treats contaminated water from the digester, providing for the health and productivity of the methane producing bacteria

- MWTS removes NH₃ and other contaminants (i.e., Phosphorus & Sulphur) that inhibit or impair CH₄ production.

- Reduces ammonia levels to acceptable levels

- Aids in balancing of bio-digester pH levels for optimal operation

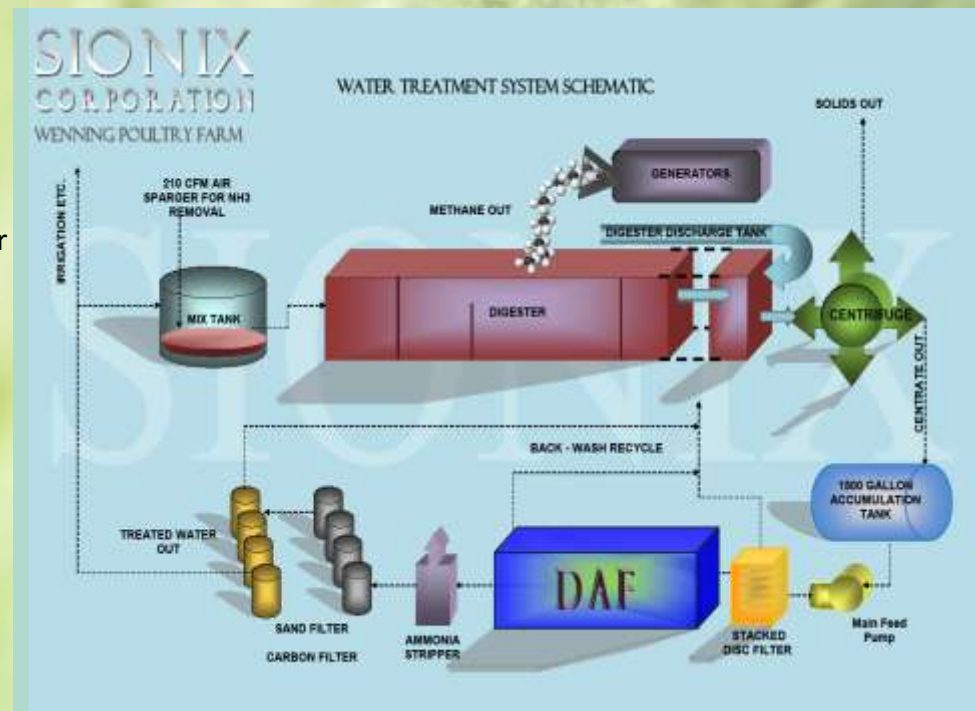
- Closed loop: no discharges = no fines

- Return on investment realized through:
Higher methane production

- Sale of excess power back to the grid

- Clean water available for other uses

- Viable cost-effective solution to remediate contamination



Why Sionix

- Proven: Field Proven, Commercialized Product
- Units co-locate with the source of contamination.
- Inexpensive: Economical, Easily Maintained
- Easy to use: Portable, Mobile, Expandable, Upgradeable
- Third Party Validated: Under agreement with PACE and PERC
- Rapid Deployment: A MWTS can be installed in 24-72 hrs and fully commissioned in 3 to 6 weeks depending on application
- Diversely Effective:
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