

Case Histories- Beer, Wineries and Alcohol

Environmental Leverage® Inc.



Turning Liabilities Into Leverage!™



Winery Lagoon issues



Winery with issues meeting permit.

High levels of septicity in lift station, nutrient deficiency



Recommended adjustment to ammonia levels, bioaugmentation and process controls





Winery California



Winery with issues meeting permit during crush or after high spills.

Recommended adjustment to ammonia levels, bioaugmentation MicroClear 206 and MicroClear M100 Micronutrients and process controls



Winery-Napa

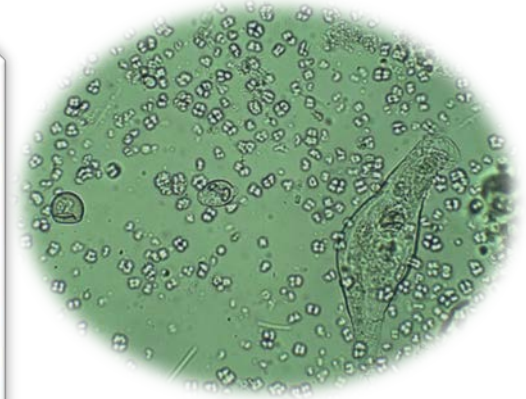


Winery EQ lagoons septicity and nutrient deficiency with high organic loading

Dredging of lagoons, addition of nutrients directly to lagoon



Winery Foam Napa



Plant loading seriously exceeded design capacity
Foaming continual
Tetrads and Type 021N filaments

EQ tank added
Nutrients increased
Bioaugmentation added when spills or high loading occurs





Biocide spill POAA



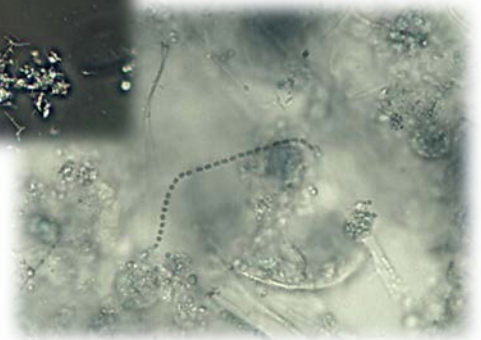
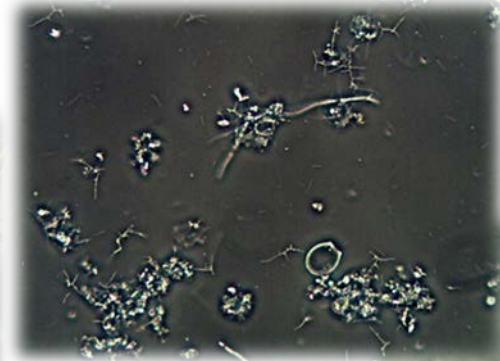
POAA is a biocide with a very long stable life in wastewater. High dosages can easily kill a small wastewater plant. Return of a small amount of RAS and bioaugmentation used upstream in EQ to help break down the biocides prior to entering the Aeration basin
Venturi used to increase DO levels in the EQ



Oils in Winery



Lubricating oils are used in wineries. Bioblocks can be used in the lift station to pretreat the oils. A DAF was used as well at this plant.





Australia Barossa winery



Onsite audit and training to help teach Critical 5 to increase BOD and TSS removal





New Zealand winery



Algae issues in
the pond
MicroClear 101
used





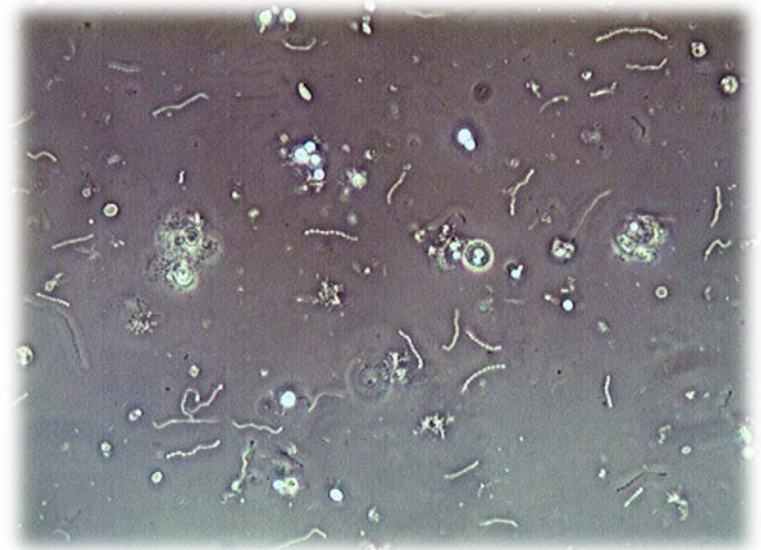
Australia Mc Claren Vale



Onsite audit and training to help teach
Critical 5 to increase BOD and TSS
removal



Antifoams at a winery CA



Many times antifoams are used when foaming occurs. Antifoams can be oil based and cause not only higher organic loading, but Free floating filaments or Nocardia or Zoogloea due to oils. Antifoams can have a BOD of 2-700,000 ppm BOD. Nutrient deficiency can occur as well. Fix the issue instead of using band-aid

Here nutrients were added along with bioaugmentation MicroClear 206 and problem solved no more antifoams needed.

www.EnvironmentalLeverage.com





Foaming in Wineries

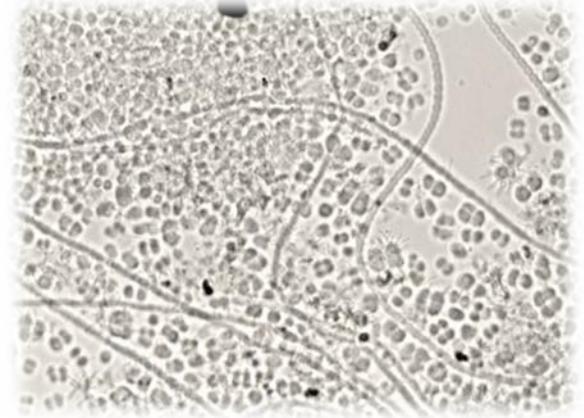


Wineries can have spills from 50-100,000 ppm when a tank is cleaned out. Typical reaction is to reach for the antifoam when foaming occurs. Instead adjust N, add MicroClear 206 and skip the antifoams. Better solutions





High BOD and Nutrient deficiency



High BOD spill- TSS and BOD in effluent,
as well as foaming

Solution- Increase ammonia and add
bioaugmentation to help degrade excess
BOD loading temporarily



Lagoon effluent violations

- Dredge lagoons
- Add nitrogen
- Add bioaugmentation





Winery Sonoma Plant foam-over

High organic loading lead to foam over in tanks

Solution, add sprayers for mixing and foam suppression in EQ tank

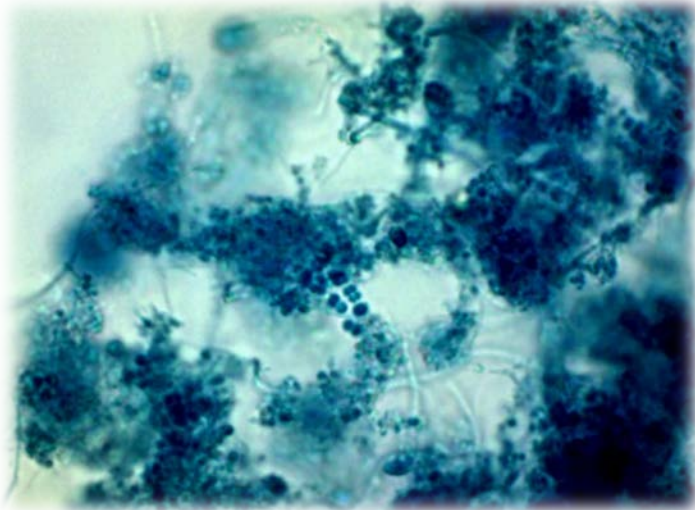
Add more nitrogen

Add more bioaugmentation when spills occur

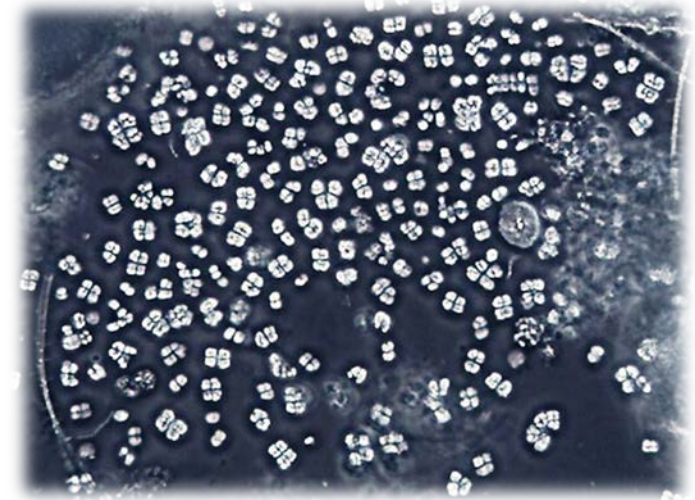




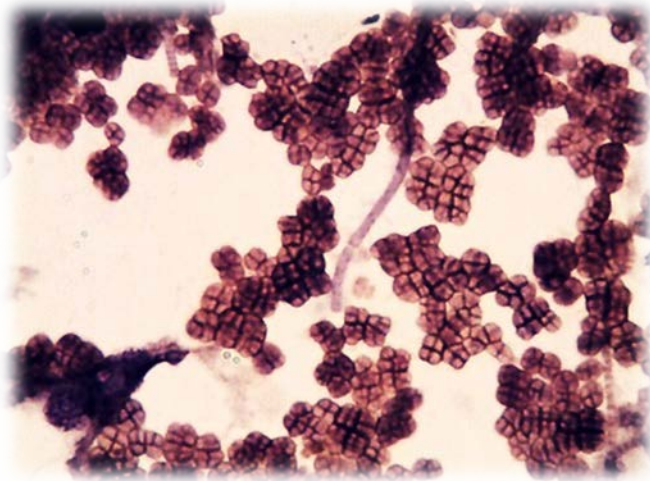
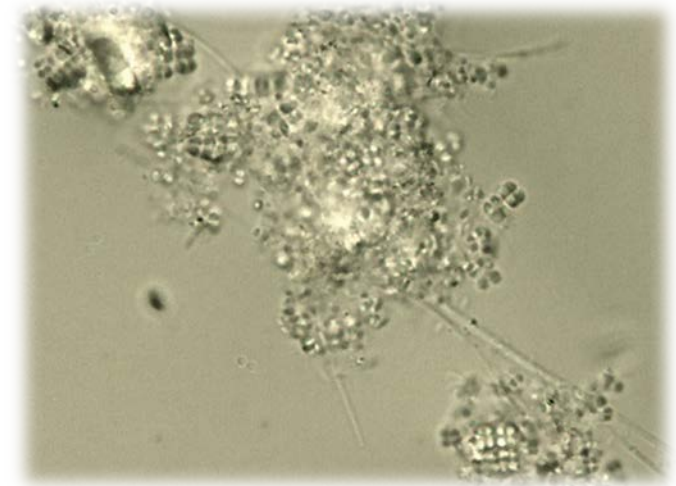
Winery with Nitrogen deficiency



This winery
had high TSS
High loading
caused
nutrient
deficiency



Whenever you
see Tetrads
they always
indicate
nitrogen
deficiency



This is
common at
wineries



Winery and Restaurant TX



Unable to meet permits- BOD and TSS



Training on operations, solids handling, nutrient addition. Bioaugmentation added





Alcohol Manufacturing-Midwest

- Plant has Anaerobic and Aerobic system
- Onsite troubleshooting and audit- nutrient optimization and bioaugmentation used
- Increased BOD removal, TSS removal, methane production





Ethanol production- Guatemala

- Plant had new anaerobic digesters installed
- Did not work, or produced poor quality gas with high sulfur content
- Onsite audit, training, addition of nutrients and bioaugmentation
MicroClear 105 and MicroClear M100 increased BOD& TSS removal, increased methane production quantity and quality





Beet sugar with Anaerobic digester

- Plant has Anaerobic and Aerobic system
- Onsite troubleshooting and audit- nutrient optimization and bioaugmentation used
- Increased BOD removal, TSS removal, methane production
- MicroClear® M100 and
- MicroClear® 206





Municipality with Anaerobic

- Foaming in Digester
- High TSS and Zooglea
- MicroClear 207 and MicroClear M100 used





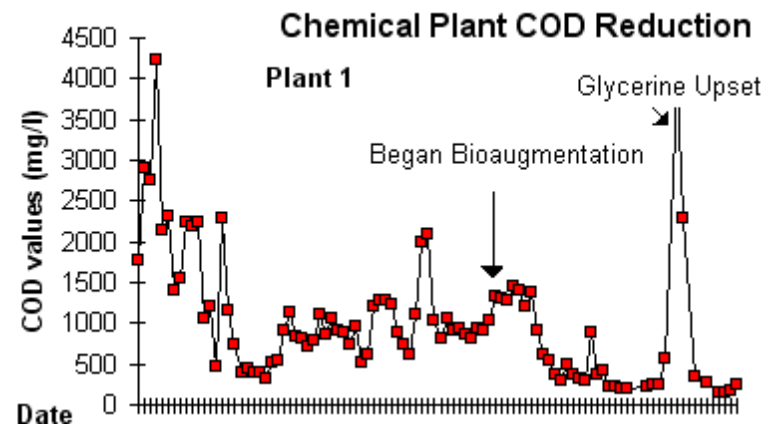
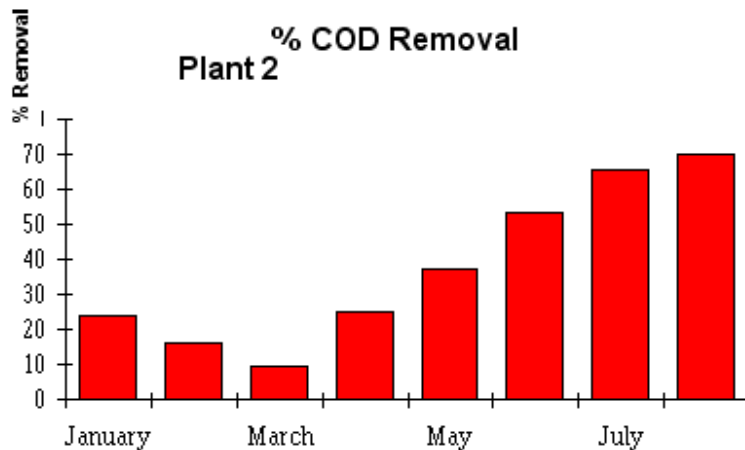
Brewery

- Anaerobic and Aerobic not meeting permits
- Addition of bioaugmentation, onsite audit and training, optimization of nutrient addition



Bioaugmentation

- **Bioaugmentation Case Histories**
- Two food and chemical plants that needed to pretreat prior to a local POTW. Bioaugmentation programs were implemented. At plant #2, COD removal was 24-39% prior to bioaugmentation. After only a few months on the program, the plant was achieving between 70-79% COD removal. Below, a graph of COD reduction at plant #1.



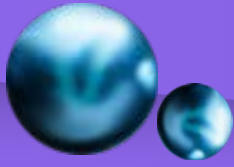


Environmental Leverage

The Next Generation of Solutions

- **Chemicals, Laboratory, Training, Consulting, Total Systems Approach**
 - Onsite Audits & Consulting
 - Beneficial Reuse & Biosolids Alternatives
 - Training Programs
 - MicroClear® & MicroSolv™ Bioaugmentation Products
 - Cooling Tower & Wastewater Lab Services
 - Computer Based Dosing Wizards
 - Wastewater Audits
 - Online ELearning Courses





Wastewater Audits

Full onsite audit of Treatment plant, or "Virtual Audits"

Evaluation of Equipment, Process Recommendations, System Optimization, Troubleshooting, Testing, Solids Handling, etc.

Environmental Leverage
14000 N. 10th Ave., Suite 200, Phoenix, AZ 85021
Tel: 602.998.1234 Fax: 602.998.1235
www.EnvironmentalLeverage.com

ASAC REPORT # 2000-0001

0000 1000000000 0000000000 0000000000
0000000000 0000000000 0000000000 0000000000
0000000000 0000000000 0000000000 0000000000
0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

Equipment	Manufacturer	Model	Year	Condition
Aeration Tank	Watts	1000	2005	Good
Clarifier	Watts	1000	2005	Good
Filter	Watts	1000	2005	Good

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

Equipment	Manufacturer	Model	Year	Condition
Aeration Tank	Watts	1000	2005	Good
Clarifier	Watts	1000	2005	Good
Filter	Watts	1000	2005	Good

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

Equipment	Manufacturer	Model	Year	Condition
Aeration Tank	Watts	1000	2005	Good
Clarifier	Watts	1000	2005	Good
Filter	Watts	1000	2005	Good

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000

0000000000 0000000000 0000000000 0000000000



Wastewater Training Programs

Wastewater Training Materials

4 – CD Set

Higher Life Forms CD

Filamentous Bacteria CD

An Overview of Wastewater Training

Wastewater Microbiology

Filamentous Identification



The Easy Way™ Training CD

Powerful Filamentous Training


Custom Training CD or Manuals

Microbiology Training

“How To Use The Microscope”



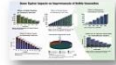
Training & Hands On Workshop
Presented by Tracy Finnegan



Wastewater Training


Visual Troubleshooting

Tracy Finnegan






© EnvironmentalLeverage.com

Microbiology Training In Wastewater




Training & Hands On Workshop
Presented by Tracy Finnegan




Microbiology Training


Indicator Organisms




Training & Hands On Workshop
Presented by Tracy Finnegan



Troubleshooting Microbiology




Training & Hands On Workshop
Presented by Tracy Finnegan





Microbiology Training

“Filamentous Identification The Easy Way”





Training & Hands On Workshop
Presented by Tracy Finnegan

An Overview of Wastewater Treatment

CUSTOM TRAINING MANUAL

Author Tracy Finnegan



Wastewater ELearning Training

- Online computer-based training
- Interactive courses with videos, photos, & quizzes
- Convenience and flexibility at individual pace
- No travel expenses or hassles.

WastewaterElearning.com/elearning
www.EnvironmentalLeverage.com

Online ELearning: Wastewater Training Courses Overview

Control and Minimization of Total costs of operations is always necessary, but guaranteed reliability and long term sustainability are the keys to transport your wastewater treatment system above and beyond normally targeted measures. These wastewater training programs are based upon years of experience and accumulation of practices on actual performance of thousands of treatment systems. These wastewater training programs have been consistently successful in teaching people how to be proactive and achieve their goals of reducing Total Costs of Operation while also achieving compliance.

You will learn step by step procedures which will enable you or your operators to develop quick, easy to establish system checks to control and monitor your system in order to predict upsets, minimize energy and chemical usage, and avoid costly repairs and unnecessary maintenance procedures.

These courses have been pre-approved for Wastewater CEU's in Alaska, Arkansas, California, Connecticut, Delaware, Georgia, Hawaii, Idaho, Illinois, Indiana, Louisiana, Maine, Massachusetts, Minnesota, Nevada, New Jersey, Kentucky, New York, North Carolina, Rhode Island, South Dakota, Tennessee, Vermont, Washington, Wisconsin and West Virginia. Some states do not require pre-approval. If you need these approved for your state, please contact our office.

These courses are eligible for CEU's, Contact Hours or PDH (Professional development hour) in Alabama, Arizona, Maryland, Virginia, South Carolina, Utah and more to come.

Now approved in Canada for Nova Scotia and Saskatchewan.

****Some states give different credits than others. Not all states give credits solely based upon contact hours. Please contact our office if you need to know the approval codes and credit hours for your specific state.**

Just Released ***

Secondary Clarifiers, Secondary Biological Wastewater Treatment systems, Nitrification and Denitrification, Spanish Wastewater Basics, Filamentous Identification Introductory Course Coming Soon :Filamentous ID the Easy Way



Environmental Leverage Analytical Services

- Wastewater Biomass Analysis
- Filamentous Identification
- Cooling Tower Microbio Analyses

Environmental Leverage Inc.

Wastewater
Microbiology
Lab Testing

Standard Wastewater

Biomass Analyses :

Cover letter with comments,
recommendations and
troubleshooting tips.

Higher life form sheet

Floc structure analyses

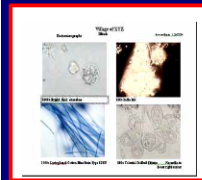
Photo Sheets

A CD with photos and videos

included \$250.00

India Ink and
LactoPhenol Cotton
Blue Stains

Filament Causes
and Controls



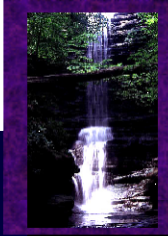
Wastewater Biomass Analyses with
Filamentous Identification including
Gram and Neisser stains, suggestions
on causes and control,
troubleshooting tips as well as the
standard analyses. \$350.00

Wastewater
Biomass
Analyses

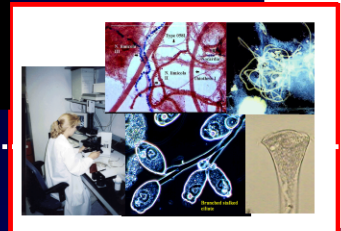
Floc Characterization Worksheet

Filamentous Identification Worksheet

Higher Life Forms or Indicator Organisms



Always striving to bring
the latest technology
available to you!



Send 50-100 ml sample in
plastic container overnight.
No ice cubes, blue ice only.
Call to set up sample testing
630-906-9791.
Results same day as sample
received

Filamentous
Identification



Quality • Service

Welcome

Environmental Leverage
Turning Liabilities Into Leverage

Quick Links

Products
Biological Products and Microsystems

Services
Labs, Consulting, Audits and Training

About Us
Professional Expertise

Contact Us
Call now to schedule a lab sample order

Site Map
Can't find your favorite link here

Training
Training CD's Manuals, Classes and Online

Home | Contact | Search

Home | Services | Products | Contact | Troubleshooting | Training

Quality Environmental Products and Services!

With all the concerns today about environmental liability, some of the key issues that manufacturers face include: Globalization, impact of new Science and Engineering technology, Information systems and e-Commerce, Supply chain management, Changes in production processes and manufacturing, Sustainability, Significant impact on Energy savings and Environmental performance. At Environmental Leverage all of these issues are important concerns.

Capabilities:

Delivering you innovative and technical expertise and sound business solutions to help you improve your bottom line is our goal.

What's New!

We have just added "Virtual Audits" to our capabilities. Check out our new Services. We are in the process of developing an "Online E-University" in order to meet the needs of our global customers that cannot travel to our



TURNING LIABILITIES INTO LEVERAGE

- Training & Treatment Systems Audits
- Newsletters (*digital monthly troubleshooting*)
- Troubleshooting
- Filamentous ID.
- Higher Life Forms
- Bug of the Month
- Microscopic Biomass Analyses

Photo Gallery - Mystery Bug of the Month

Home | Contact | Search

Home | Services | Products | Contact | Troubleshooting | Training

SEARCH

Navigate

- Home
- Products
- Services
- Environmental Lab
- About Us
- Contact
- Training
- Audits
- Troubleshooting
- Bug of the Month

Mystery Bug of the Month - From 2004 - 2017

Free swimming ciliates

These photomicrographs were taken from a wastewater sample. Most of the objectives used were 100x, 400x and 1000x. You can see this free swimmer open what looks like a flap to capture food. Notice how when you go from low power to a higher magnification, more details jump out. Do not be afraid to go up to a higher magnification, even 1000x!

What's New!

We now have a brand new "Higher Life Forms videos" in our Training CD list. Check out our new Training Materials. We are also in the process of developing an "Online University" in order to meet the needs of our global customers that cannot travel to our public classes. Stay tuned for details and updates.



Join Environmental Leverage® on a Journey into the Future with our next generation of Water & Wastewater Treatment solutions

The future begins now. . . .

Environmental Leverage® Inc. bringing you Tomorrow's Water Today !!!!



**Environmental Leverage® Inc.
1454 Louis Bork Drive
Batavia, IL 60510 USA**

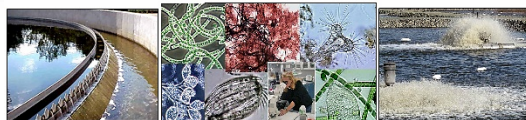
Phone: 630-906-9791

Fax: 630-906-9792

Admin@EnvironmentalLeverage.com

www.EnvironmentalLeverage.com

www.WastewaterELearning.com



TURNING LIABILITIES INTO LEVERAGE.

© EnvironmentalLeverage.com