



Wastewater Challenges – Solids Reduction

Webinar brought to you by BioLynceus®

All rights reserved ©

WASTEWATER CHALLENGES

- Wastewater challenges are both dynamic and unique
 - Problems with nitrification
 - See webinar from 3/25/2020 (COVID-19)
 - Problems with F:M
 - See webinar from [4/22/2020](#)
 - Problems with FOG
 - See webinar from 5/20/2020
 - **Solids reduction**
- What to do with sludge?
 - Natural product of wastewater treatment
 - Accumulates and requires handling



SLUDGE

- Natural product of the wastewater treatment process
- Contains inert solids and volatile solids
- Volatile solids
 - Cellulose, colloids (proteins), microbial cells
 - Degraded via bioaugmentation
- Inert solids
 - Sand, silt, clay
 - Cannot be degraded via bioaugmentation



SLUDGE

- The federal Clean Water Act Part 503 identifies two categories of pathogen reduction:
- Class A
 - Undergo a process to further reduce pathogens (PFRP)
 - No detectible pathogens
 - Can be used where public contact is likely
 - Parks, golf courses, home lawns and gardens
- Class B
 - Undergo a process to significantly reduce pathogens (PSRP)
 - Using class B biosolids requires additional best management practices (BMP)
 - Site permits are required for use
- Controversy?
 - Heavy metals, excess nutrients, pathogens, chemical irritants, pharmaceutical residues, etc.



9) Are biosolids safe?

As reported in the 2002 National Research Council of the National Academies report, *Biosolids Applied to Land: Advancing Standards and Practices*, the Council concluded that, "There is no documented scientific evidence that the Part 503 rule has failed to protect public health. However, additional scientific work is needed to reduce persistent uncertainty about the potential for adverse human health effects from exposure to biosolids."

WHAT YOU CAN DO

- Mechanically dredge
 - Very expensive
 - \$300 – \$500/dry ton
 - Dredged, dewatered, hauled away
 - Could cause damage to lagoon liner
- Ultimately unavoidable
 - Inert solids like sand, silt, clay and whatever else winds up at your facility cannot be degraded



OUR RECOMMENDATION

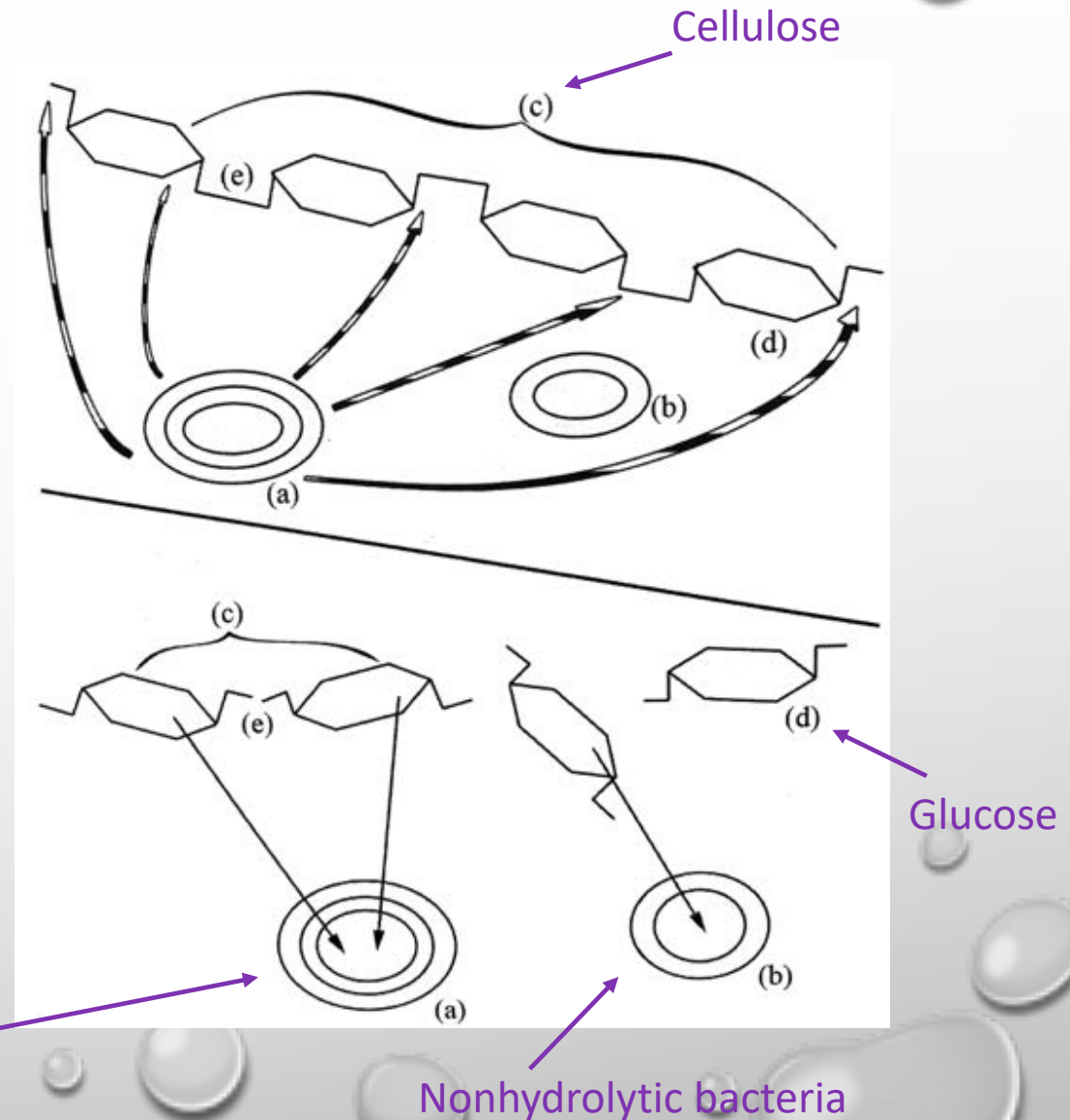
- BIOAUGMENTATION
- Can reduce the amount of sludge in both mechanical plants and lagoons
- ProBiotic Dredging®
 - Biologically breaks down the volatile solids
- Reduces the cost and frequency of mechanical dredging
 - Essentially a sludge maintenance program





BIOAUGMENTATION

- Introducing microbes that produce amylase enzymes
 - Hydrolyze the chemical bonds between glucose mers that make up cellulose
 - Dissolved glucose represents soluble cBOD that can be degraded
- If 1 lb. of glucose is degraded, approximately 0.6 lbs. of microbial cells (sludge) is produced
- Remaining mass (degraded cellulose/glucose) leaves the plant in the form of H_2O and CO_2



OUR RECOMMENDATION

- BioLynceus® ProBiotic Scrubber® II
 - Safely introduces a diverse population of bacteria capable of degrading sludge to your wastewater facility



PROBIOTIC SCRUBBER[®] II

- ProBiotic Scrubber[®] II is engineered to enhance regular wastewater operations by using several different species of beneficial bacteria – IT'S ALIVE!



OUR PRODUCTS

- Available in 5-gallon pails, 30- & 55- gallon drums, 275- & 330-gallon totes
- Ready to ship today



CONTACT US

- BioLynceus is a family-owned business in Estes Park, CO
- Our business hours are M-F from 8 AM – 5 PM (Mountain Time)
- Call us today at (970) 586-3391 to talk about your wastewater challenges or visit our newly renovated website BioLynceus.net



QUESTIONS?

Public Service Announcement: Wastewater Nitrification Amid COVID-19



Biolynceus®, LLC
(970) 586-3391

Providing Microbial Solutions for Wastewater,
Soil, Agriculture, & Turf

[Get a Free Quote](#)

Jason D. from Biolynceus, LLC
How can we help? We're here for you!

Reply to Jason D.

Chat by Drift



QUESTIONS?

Public Service Announcement: Wastewater Nitrification Amid COVID-19



Biolynceus®, LLC
(970) 586-3391

Providing Microbial Solutions for Wastewater,
Soil, Agriculture, & Turf

[Get a Free Quote](#)

Jason D. from Biolynceus, LLC
How can we help? We're here for you!
Reply to Jason D.
Chat by Drift



CALL TODAY!

(970) 586-3391