

Out of Sight, Out of Mind - Biosolids

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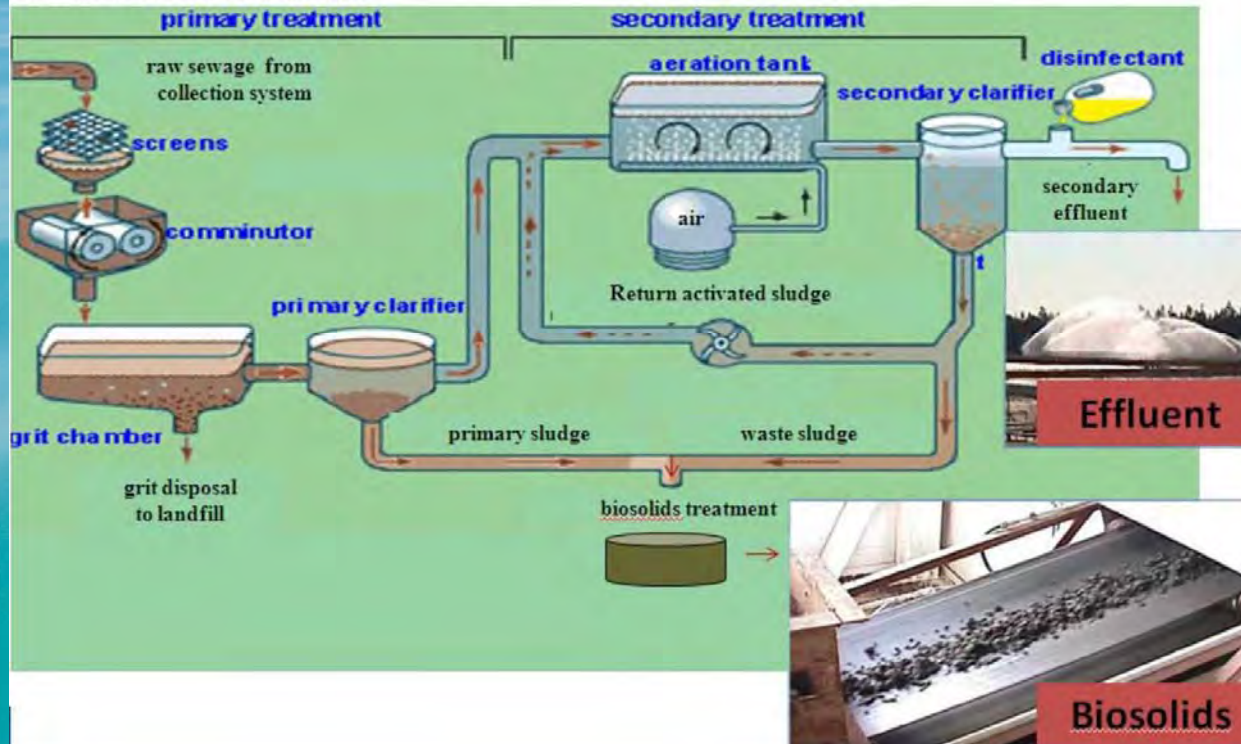
Florida Stormwater Association
Annual Conference
July 16, 2020

Janicki Environmental, Inc.



What are biosolids?

The treatment of domestic wastewater produces two principal end products: effluent and biosolids



What are biosolids?

Class AA

- Highest quality for beneficial use
- Pathogens **ELIMINATED**

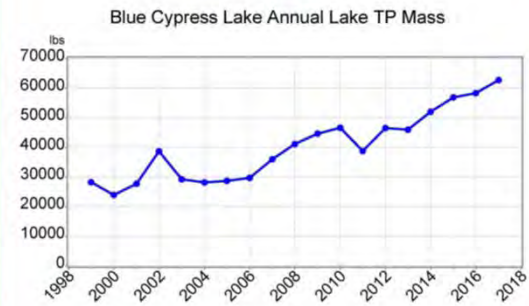
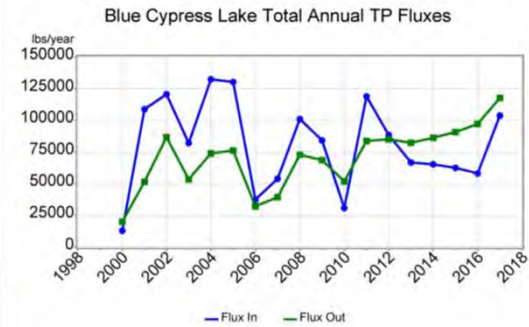
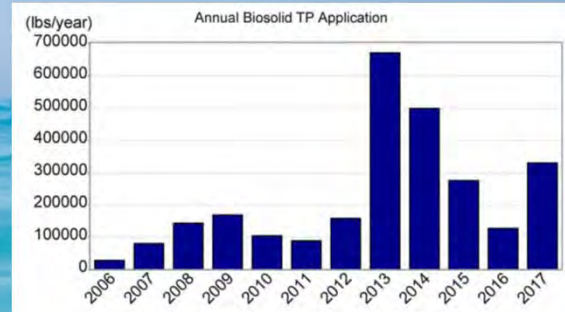
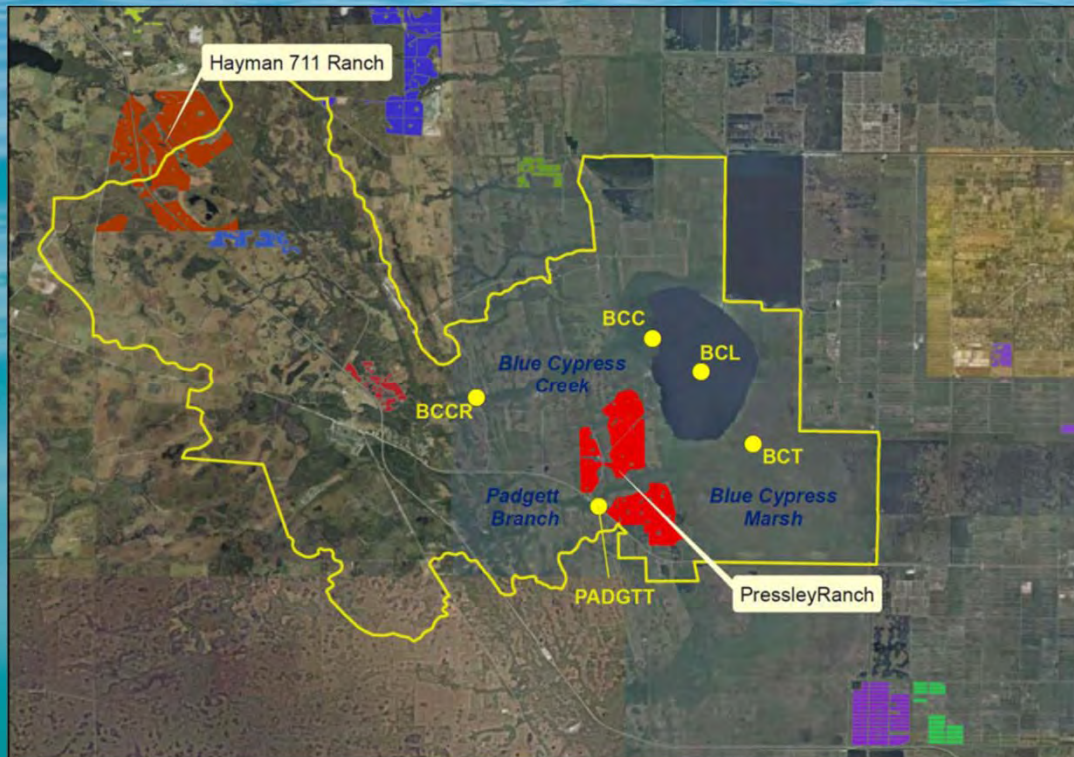


Class B

- Minimal quality for beneficial use
- Pathogens **SIGNIFICANTLY REDUCED**
- Site restrictions are required



Blue Cypress Lake Recap

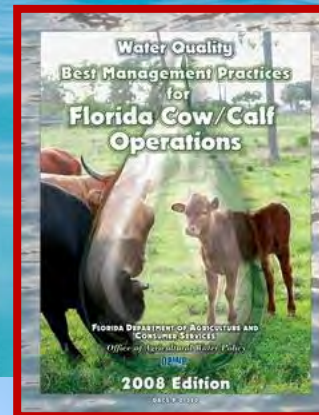


FDEP Biosolids TAC

- **Met 4 times in the fall of 2018/winter of 2019**
- **Presentations from many experts + public comment**
- **Recommendations from the TAC include:**
 - **Modify current permitting rules**
 - **Establish site specific biosolids application rates**
 - **Evaluate percentage of water extractable phosphorus (%WEP) in all biosolids to inform appropriate application rate**
 - **Establish criteria for low, medium and high-risk sites that guide application practices and required water quality monitoring**

FDEP Biosolids TAC

- Increase the inspection rate
- Site specific monitoring protocols
- Conduct biosolid and nutrient management research
- Promote innovative technology for biosolids processing that could provide a wider range of beneficial end products.



FDEP 62-640 Rulemaking (2019)

- 3 workshops
- Permit applications “projects of heightened public interest”
- New rule to be applied to existing sites at permit renewal/within 3 years
- Biosolid sites to enroll in an FDACS BMP Program
- Monitoring of %WEP
- Prohibit land application where the seasonal high water table is within 15 cm of soil surface

FDEP 62-640 Rulemaking (2019)

Nutrient management plan (NMP) major revisions:

- Most NMPs previously focused on nitrogen
- More emphasis on phosphorus is included
- Application rates determined by most limiting nutrient and crop requirements
- Requires %WEP monitoring
- Allowable application rate dependent on %WEP and soil capacity
- Require annual soil fertility testing using IFAS “Phosphorus Index”
- Annual reporting provides allows for potential DEP action
- Must comply with BMAPs



FDEP 62-640 Rulemaking (2019)

~300 comment letters were submitted

- **Several major shortcomings:**

- **Allows application of P with no soil capacity**
- **Only requires monitoring after excessive applications may have caused harm**
- **Addresses BMAP issues but silent on the need to include in TMDL loads**

FDEP 2020 Rulemaking

- Notice published 04/14/2020
- ???



SB712 – Clean Waterways Act

- **403.0855 F.S. Biosolids Management**
 - **Not applied where water table within 6” of surface or depth of biosolids application**
 - **Enroll in FDACS BMP**
 - **Must be in compliance within three years.**
 - **Local policies in place prior to 11/1/2019 remain in effect until locally repealed**

Current Emerging Issues

- **Crescent Lake (WBID 2606B)**
 - Impaired for TSI
 - Modeling suggests that surface water loadings do not account for impairment
 - Groundwater entering lake “enriched in TP (0.09 mg/L)”
 - Suggested interaction with Hawthorne Formation
 - However, biosolids are currently applied in the watershed but not included in the loading estimates

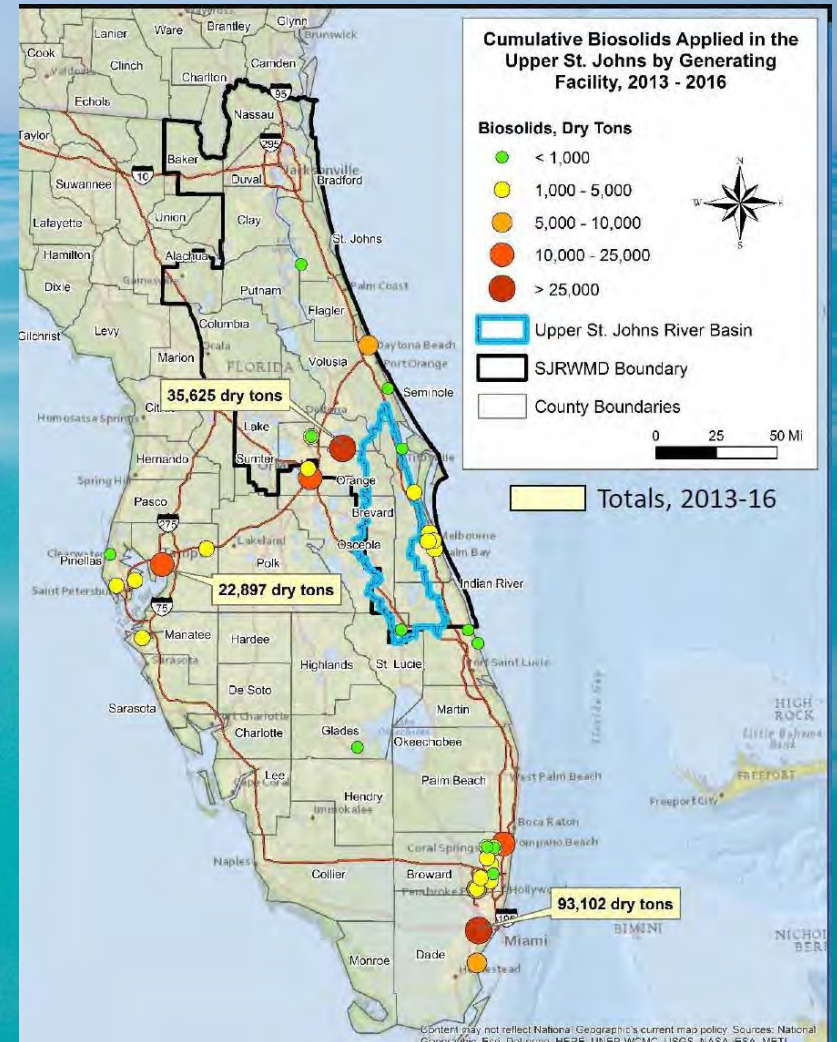
Current Emerging Issues

Haw Creek (WBID 2622A) Draft TMDL

- Impaired for dissolved oxygen
- Nutrients exceed stream NNC (no biological confirmation)
- TMDL addresses Haw Creek and Crescent Lake
- Haw Creek ambient conditions similar to Blue Cypress Lake – increasing trend in TP but no trend in TN
- Phosphorus loads from biosolids not included in the TMDL determination

SJRWMD Studies

- Under contract with FDEP to study:
 - Confirmation TP is contributing to loading
 - Identify what conditions lead to TP mobility
 - Investigating remediation efforts



To be continued...

