



Blue Green Algae Task Force Update

Wendy D. Graham, Professor and Carl S. Swisher Eminent Scholar in Water Resources
Director, University of Florida Water Institute



Dr. Tom Frazer, Moderator
Florida Chief Science Officer

Task Force Leader

Charge: Provide guidance and science-based recommendations with the goal of expediting improvements and restoration of Florida's water bodies that have been adversely affected by blue-green algae blooms

Task Force Members



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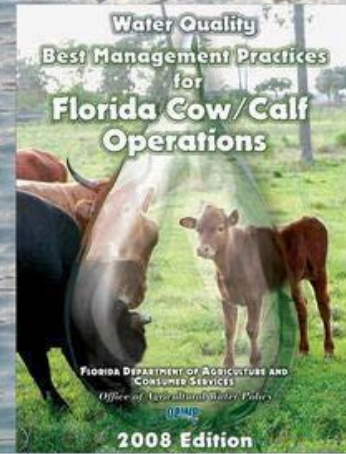
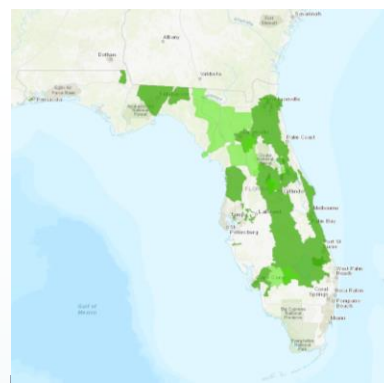
Dr. Jim Sullican
Marine Ecologist
Florida Atlantic Univ

Task Force Process to Date

- Series of six public meetings
 - Review of nutrient sources (agriculture, urban stormwater, septic tanks, biosolids, wastewater effluent, sanitary sewer overflows)
 - Review of regulatory programs (TMDLs, BMAPS, Agricultural BMPs, Biosolids, Wastewater, Stormwater)
 - Discussion of goals and review criteria for potential innovative treatment technologies
 - Public Health implications of blue green algae blooms
- Discussion, Revision and Approval of Consensus Document drafted by Chief Science Office

Task Force Consensus Document

- BMAPs: account for legacy nutrients; consider future land use changes; improve selection, funding and assessment of BMAP projects; be protective of downstream water bodies
- Agricultural BMPS: increase enrollment, assess effectiveness, improve inspection and monitoring, revisit presumption of compliance
- Urban Stormwater: update stormwater design criteria, improve inspection and monitoring, revisit presumption of compliance



Evaluation of Current Stormwater Design Criteria within the State of Florida

Final Report

Prepared for:



FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
FDEP Contract No. SO108

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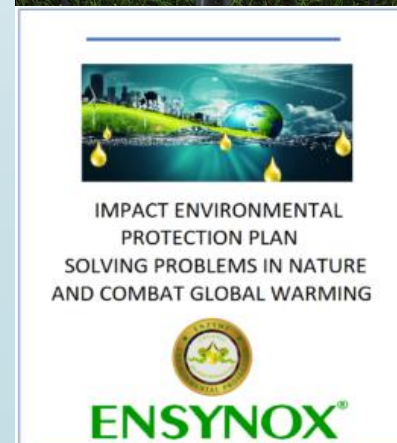
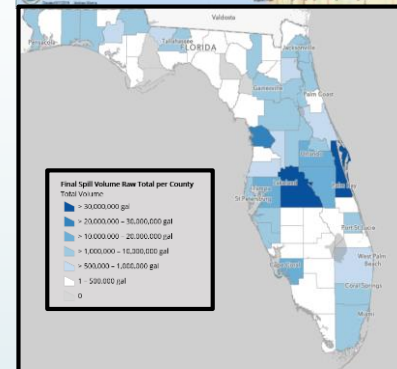
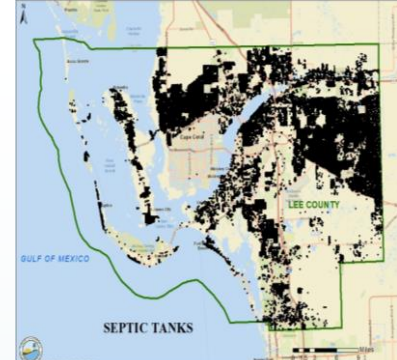
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Task Force Consensus Document

- Septic tanks: permit, inspect and monitor based on nutrient pollution in addition to public health
- Sanitary sewers: proactively address infiltration and inflow, reduce sanitary sewer overflows
- Develop defensible public Health advisories and water quality criteria for algal toxins
- Invest in development of innovative technologies to prevent, cleanup and mitigate harmful algae blooms
- Improve state-wide water quality monitoring and assessment



Next Steps

- Next Task Force meeting March 16 2020: Public health advisories and water quality criteria for algal toxins
- State legislation and funding to address nutrient enrichment problem: TBD
- Future goals and foci of the task force: TBD
- ???



Scientific Synthesis to Inform Development of the New Lake Okeechobee System Operating Manual

An Independent Technical Review coordinated by the University of
Florida Water Institute

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Findings

- Water quality and water quantity should be managed together in both LOSOM planning and LOSOM operations
- Improved data and predictive tools are needed to better couple management of hydrology to water quality and ecological impacts in LOSOM planning and operations.
- Water quality and ecological antecedent conditions and forecasts should be incorporated quantitatively into LOSOM release guidance flowcharts, along with antecedent conditions and forecasts of climate and hydrology.
- The data used to drive LOSOM planning models should be expanded to include more AMO/ENSO variability, hurricanes, droughts, and other extreme events, as well as near-term projections of climate and sea level rise.
- Improved performance measures, tradeoff analyses and decision-making frameworks should be explored for the next phase of LOSOM planning and future LOSOM schedules.

Challenges

- Unless new performance measures are adopted and/or changes are made in the way tradeoffs are assessed only incremental changes in the operation of the South Florida Water Management System can be expected with the limited infrastructure scheduled to be operational and included within the next LOSOM.
- Increased and sustained State and Federal funding to provide additional water storage and treatment is critical before the system becomes so degraded that the damage cannot be reversed.
- Increased research, monitoring and assessment of the system's performance are essential to provide a basis for improved planning of regulation schedules, guide operations, evaluate effectiveness of projects, and detect and adapt to unforeseen events.



Questions?