



Soil Health for a Healthy Lagoon

I am Bob Pickert, long-time Brevard resident, sailor, IRL supporter, career environmental professional, and EHS manager for Wakefield Biochar. I have provided previous comments proposing the beneficial reuse of IRL muck amended with biochar (and other Brevard natural resources) for a local industry to produce a slow-release fertilizer and soil amendment. I stand by my previous comments that the sale of this material could replace or supplement the SOIRL tax with \$20-40M of annual **non-tax net proceeds** to fund SOIRL programs, including muck dredging. Today, I would like to take a different tack and emphasize the soil health benefits for restoration of the Lagoon.

First, I want to make it clear my comments are mine and mine alone as a Brevard resident, and based on the limited muck analyses. Wakefield Biochar has been supportive, but the restoration of the IRL is not in the company's business plan. The County could produce all the biochar it would need. The Solid Waste Department is developing a plan to manage woody wastes from the curbside yard waste collection program and storm debris. The Director of Solid Waste has advised me that "the Solid Waste Department has no interest in a commercial venture in which we are attempting to sell a product". My 3-minute pitch to the SOIRL COC was not enough time to educate the Committee on the use of biochar to support the restoration of the IRL. I hope the COC invites me back for a more thorough presentation on the properties and relevant applications for biochar. The original SOIRL ordinance and Comprehensive Management Plan, requires the SOIRL COC to:

- "not only allow, but foster tools and techniques for restoration of the lagoon", and
- "To identify and develop **long-term funding sources** to preserve, protect, restore and enhance the IRL system".

Now to soil health. In all the IRL restoration projects discussed, there has been precious little focused on **soil health**. If I look at Virginia's slide on Pollution Sources vs. Fund Allocations, muck flux and stormwater treatment amount to over 50% of pollutant sources. I see an additional 26% where soil health is critical to the success of the lagoon restoration, including:

- Miscellaneous Base Flow,
- Atmospheric deposition, and
- Lawn Maintenance

Biochar provides habitat for beneficial soil microbes, absorbs water, and adsorbs nutrients in a way that makes nutrients bioavailable to plants and less leachable to groundwater and the lagoon. I recommend the SOIRL program convene a group of soil health experts and

stakeholders to evaluate the benefits of a muck-biochar-based fertilizer-soil amendment appropriate for Brevard's sandy soils. This effort could support a public soil health information campaign and become a galvanizing message for soil health in Brevard. But first additional testing of dewatered muck from each of the dredge watering sites, and an inventory of where the muck is being stored or land applied must be completed to properly manage the muck.

Biochar would help address 77% of IRL pollutant sources, and could serve as a long-term funding source for SOIRL, making biochar something of a silver bullet to support the IRL restoration. I support the re-authorization of the SOIRL tax, as a supplement and/or transition to more sustainable funding.