

Qs for Elke Ursin (850-245-4444 x 2708) – June 6, 2013

Elke is the contract manager for the \$5 million State program on septics. Hazen-Sawyer (HS) is the contractor.

Technology to be developed is non-proprietary. HS is building on work an earlier contractor had done re the two-step de-nitrification process. The end product will not be a product per se – it will be information and specs that engineers can use to develop and build systems for companies to market.

The discussion in High Springs in May 2013 was somewhat confusing but in fact the systems currently being tested by HS are add-ons to existing septic tanks. There could be either one or two additional tanks performing the aerobic and anaerobic (saturated) steps. Modifications may be required to existing tanks. For instance, the effluent must flow into the bottom of the saturated step.

When will these new systems be available, ideally? If all works well in further testing, cost estimates as well as specs will be available in mid-2015. There will probably have to be a testing/approval process to verify that the new systems are meeting their claims. This could be done by NSF in their lab in TX. The extensive HS testing could presumably shorten the time needed for NSF approval.

Are any good de-nitrifying systems out there now? Has FL-DOH tested any? Yes, they initially tested the proprietary Nitrex system. She didn't know the results but it apparently claims to remove lots of N. I am somewhat surprised that FL has funded work that may put a private company out of business. Clearly, the intent of the legislature was to develop a cheaper non-proprietary N-removal system.

The High Springs panel was asked for simple suggestions for improving N-removal. Elke mentioned that greater use could be made of the spodic layer, which currently must be removed around a septic tank installation because its hard-pan, high-organic qualities make for slow drainage of septage. Leaving the layer there might in fact enhance de-nitrification. This would require a change in State regs.

Another suggestion was to end grandfathering when failing systems are replaced or repaired. For example, we could require that replacements meet current standards of siting (e.g. 24" from water table) rather than older, shallower standards. But this could be a big cost-burden on some who couldn't afford the upgrade.

She showed 95-98 percent N-removal in her studies. These are only from lab-scale work, albeit work extending over one year. Full-scale systems haven't been tested yet, not has the longevity of the additives (e.g. sulfur). Three full-scale systems will be tested soon in Seminole County.