

Comments/Questions on WQEA and SB1532

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I would like to make a formal comment regarding the SB1532 rule making

- A downstream ERP requesting to purchase credits from an upstream WQEA/credit bank should do so at a reduced rate or not be allowed to purchase credits from an upstream credit bank. All credits should be purchased from a site hydraulically connected and located between the development site and the receiving waterbody (WBID) that is being protected. This would prioritize and drive WQEAs to be constructed just before the water enters the receiving water body to be protected. Thus resulting in the greatest effectiveness for water quality.

The reasons: the water that would come off the site will not be treated by the credit bank. It is also exponentially more difficult to reduce nutrients at lower concentrations than it is at higher concentrations. This is well understood in the wastewater treatment industry. See the link below for table 3 and note how it is non-linear to get a 50% reduction, 80% reduction, or 95% reduction in the waste stream. [Treatment for Low Nitrogen and Phosphorus: Process Performance and Reliability \(waterrf.org\)](https://www.waterrf.org). Example it takes 1 unit of treatment to get reductions to 50% in the waste stream, 4 units to get to 80% reduction and 10 units to get to 95% reduction. All environmental efforts for nutrient reduction involve getting nutrients from a low level to a very low level.

An example: Assume we are within a coastal drainage basin such as Charlotte County and the Myakka River basin. A water quality project upstream receives limited drainage that is of relatively low nutrient concentration (e.g. TN incoming is 0.80 mg/L and the project has a modelled reduction of 40% TN.) The modelled output from the lake would be 0.48 mg/l. This is much lower than is actually ever recorded on any of the FDEP WIN water quality data monitoring programs. The actual output from the lake would be approximately 0.70 mg/l. A downstream development project under current rules would have to build the same project (modelled at 40% TN Reduction), but their offsite nutrient discharge for TN (This is still currently assumed based on EMC) would be estimated at 1.33 mg/l. After the water quality reduction of 40% TN the output from the site would be 0.80 mg/l into the Myakka river. The discharge into the Myakka river if credits are used from an upstream bank would be the 1.33mg/l

Likely Impact: This will increase the cost per credit because it will drive the WQEA closer to the coast. Property values are higher along the water. Treating the water at the coast though will actually achieve our clean water goals and in many cases also provide coastal flood protection and added resilience to surge & heavy rain storm events. The benefits should be easy to understand. This may also drive some innovation for creative uses to technologies at scale, as well as save vulnerable coastal lands from development that will become an inevitable risk to flood control and a burden for insurance and state policy holders.

I would be happy to discuss in more detail if desired. Thank you for your work and I support the state's efforts for evaluating and enacting WQEA for the purpose of concentrating our stormwater quality efforts to allow the most effective solutions to arise.

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