

Talking Points
for
Everglades Coalition
Annual Meeting Break-Out Session --
Looking Upstream: Slime and
Other Threats to the Everglades

by

Larry E. Fink, M.S.

Waterwise Consulting, LLC

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Executive Summary

- The goal of environmental laws is to protect the:
 - physical, chemical, and biological integrity of natural resources for their own sake
 - public health, safety, and welfare
 - public interest in the public trust, e.g., T&E sp.
 - uses to which the resources are or may be put
 - ... with an ample margin of safety (MOS) to prevent falsely concluding the resource is not impaired at an acceptable confidence level.
- Environmental quality standards can be derived based on the upper bound threshold of unimpaired conditions or the lower bound threshold of impaired conditions.
- The former has a greater MOS than the latter.

Executive Summary

- Environmental quality-based pollutant discharge limits are calculated to consistently meet protective standards at appropriate compliance points in the receiving environment
- ... taking into account physical, chemical, and biological processes that dilute and degrade and concentrate and preserve each pollutant of concern under seasonally appropriate conditions.
- As a trade-off, the public subsidizes for-profit entities by allowing them to externalize waste management costs by using nature's waste treatment services for free without compromising the public health, trust, uses, or services.
- In general, the goal of a for-profit entity is to maximize the use of nature's waste treatment services and minimize its compliance costs.

Executive Summary

- In general, it is less cost-effective for a private entity to invest in internalizing its treatment costs than in directly, overtly influencing the legislative, administrative, or judicial processes to weaken:
 - standards
 - criteria for obtaining SSACs and variances
 - criteria qualifying for or sizing a mixing zone
 - sampling and analysis methods or frequencies
 - discharge compliance formulas
 - the integrity of monitoring data used to derive or apply the standards, variances, or compliance formulae by censoring, scaling, or transforming

Executive Summary

- ... or in indirectly, covertly weakening them via:
 - delayed promulgation based on the need for other agency action, for new methods, or for more studies to reduce uncertainties,
 - reduced compliance inspection budgets, staffs, and schedules, or
 - reduced enforcement budgets, staffs, administrative actions, lawsuits, and fines
- ... until the desired effect is achieved: standards-based discharge limits with an ample margin of safety to ensure consistent compliance under the status quo at the expense of a decrease in the margin of safety to ensure receiving water quality

Executive Summary

- Irrespective of the approach, the effect of the weakening of standards, discharge limits, inspections, and enforcement actions by industry-friendly Florida legislatures and administrations over the last several decades is an increasing trend in the number, degree, and extent of impaired Florida waters over that same time period. (See recent Sierra Club study report.)
- In other words, we've been slimed.
- In what follows I provide:
 - relevant background to put the water quality issues in context and perspective,
 - discuss the most recent direct, overt initiatives to weaken water quality standards in general, and
 - their effect on the Everglades and the Everglades restoration effort in particular.

General Observations

- Natural fresh lakes, streams, and wetlands waters:
 - support water supply, fisheries, and recreational human uses
 - provide natural services, including solar-powered waste treatment for degradable wastes and dilution for nondegradable wastes
- The Federal Clean Water Act presumes all natural fresh waters are able to attain and maintain at least fishable and swimmable uses in the absence of natural sources of pollution or irreversible, human-induced, unnatural conditions precluding that attainment.

General Observations

- In Eastern water law, any person or private or public entity with riparian access can claim a right to its fair share of a water body's uses and services up to the point of individually or collectively impairing them for others.
- In Western water law, prior appropriation allocates all of a water body's uses and services to the individual or entity that accessed them first, so those who come after have to accept what is left over or pay the owner of the rights to those uses and services to release some to others, if they are for sale.

General Observations

- Water Quality Standards are promulgated to protect human uses, including primary production and the forage plants and animals required by sport and commercial fish and shellfish species
 - Narrative
 - Numerical
 - Anti-degradation
- WQS compliance is measured in terms of an acceptable spatial extent and magnitude, duration, and frequency of occurrence of manifestations of stress (narrative) or concentration (numerical), taking into account natural seasonal variation and the irreducible imprecision in sampling and analysis.

General Observations

- Mixing zones of limited width, length, and dilution are allowed by some states in some water bodies, but the discharge cannot cause Criteria Maximum Concentrations (CMCs) to be exceeded within and Criteria Continuous Concentrations (CCCs) at its edge.
- A variance can be granted that temporarily suspends a WQS if the discharger is making a good faith effort to comply in a timely manner and the receiving water will otherwise be able to attain and maintain the WQS when the discharger(s) come into compliance.
- A variance expires in three years and can only be extended if there is no irreversible damage and adequate progress has occurred.

General Observations

- For waterbodies that are not consistently attaining fishable and swimmable uses, the CWA-mandated response is not any of the following:
 - weaken the WQS,
 - grant a permanent variance, or
 - create an intermediate use
- ... but to promulgate a downgrade only after conducting a use attainability analysis (UAA) according to EPA-approved guidelines.
- The UAA is based on a waterbody-specific, intensive survey of natural background and unnatural pollution sources and natural and human-modified physical, chemical, and biological conditions in the watershed.

General Observations

- Only if the UAA demonstrates the water body cannot attain fishable and swimmable uses as a result of natural background sources or irretrievable, human-caused conditions can the use classification be downgraded to the highest use classification it can consistently attain.
- To justify a regional approach, the state would have to conduct a UAA for a statistically significant number of individual water bodies in each region and implement it with a margin of safety (MOS) to preclude incorrectly concluding that a water body cannot attain fishable and swimmable uses when it can at an acceptable confidence level.

General Observations

- Point source discharge permits issued per CWA Section 402(a) NPDES contain the more restrictive of technology-based and water quality-based effluent limitations.
- TBELs are established for each industrial category for existing and new sources.
- WQBELs are established for water bodies that will not attain all WQS when TBELs are met.
- Compliance with both is monitored at end-of-pipe using EPA-approved methods at frequencies appropriate to pollutant and industrial categories.
- TBELs and WQBELs force point source dischargers to internalize the costs of pollution control to the extent required to preclude impairing attainable uses or service capacities.

General Observations

- TBELs come in two forms:
 - Best Available Technology Economically Achievable (BAT)
 - Best Control Technology (BCT)
- BAT applies to existing sources and are derived based on what 95% of the industries can routinely achieve in terms of removing Section 307(a) priority pollutants using the results of a 30-year old national survey.
- BCT applies to new sources and substantial changes to existing sources.
- There is no expiration date on BAT, so industries are encouraged to keep old facilities running with *de minimis* upgrades below the BCT threshold.

General Observations

- WQBELs are calculated to achieve an acceptable extent, magnitude, duration, and frequency of compliance with attainable uses in the receiving water with end-of-pipe monitoring:
 - using USEPA-approved bioassays to implement the narrative WQC; or
 - concentrations using USEPA-approved analytical methods to implement the numerical WQC; and
 - taking into account other point and nonpoint sources and the design discharge high flow and the design receiving water low flow under seasonally appropriate conditions with an ample MOS to compensate for the compounded uncertainties in the WQBEL calculation.

General Observations

- Farms are exempt from point and nonpoint source permits but encouraged to use best management practices (BMPs) to pollute less.
- The goal of water quantity and quality laws, regulations, standards, and BMPs is to protect water resource uses and services with an ample MOS to reduce the likelihood of concluding that uses and services are not impaired when they are (Type II error) to an acceptable level.
- In general, the more a for-profit entity can shift the burden of treating its wastes to a water body, the greater its profit margin.
- The public subsidizes for-profit entities to the extent that it accepts the greater socialization of risk for the greater privatization of profit as being in the greater public interest.

General Observations

- TBELs, WQBELs, and BMPs set limits to that shift and profit margins, forcing dischargers to comply and internalize those costs using existing process designs and treatment technologies, redesign and/or innovate, cheat, influence, or move to more lenient states or countries.
- Rather than invest in highly uncertain technological breakthroughs to cut compliance costs, for-profit entities can invest instead in weakening water quantity and quality protection laws, regulations, and standards, discharge limits and the enforcement thereof with a much higher success rate and benefit-to-cost ratio.

General Observations

- Weakening WQS can occur in various ways:
 - adopt unnatural types of stress as acceptable
 - increase acceptable magnitude, duration, or extent of un-/natural stress to define impairment
 - underestimate time to recovery between impairing events to allow increase in frequency of recurrence
 - use less protective dose-response or exposure models or assumptions to reduce margin of safety
 - relax requirements for SSACs

General Observations

- Weakening WQS can occur in various ways: (continued)
 - create intermediate designated use categories
 - underfund routine monitoring of receiving waters as basis for defining unstressed baseline conditions or to detect impairment in water bodies meeting the WQS
 - shift and raise the burden of proof to/for the public to prove a water body is underprotected by the WQS on case-by-case basis without providing a mechanism for petitioning for same.

General Observations

- Weakening WQBELs can occur in various ways:
 - use inappropriate facility or receiving water design flows
 - overestimate receiving water assimilative capacity under seasonally appropriate conditions
 - provide no explicit MOS to compensate for uncertainties in load-conc. relationship or to allow for growth but claim implicit MOS in WQS is adequate for same purpose
 - ignore or underestimate contribution of background and nonpoint sources to pollutant load

General Observations

- Weakening WQBELs can occur in various ways: (continued)
 - increase acceptable extent, magnitude, duration, or frequency for noncompliance threshold
 - recalculate compliance formula by censoring, scaling, or transforming data in discharger operating reports
 - relax requirements for SSACs, variances, or mixing zones
 - underfund routine monitoring of sources and receiving waters to detect noncompliance or adverse impacts