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Delivered Via Electronic Mail & FedEx

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RE: EPA review of Florida proposed amendments to human health based surface water quality criteria, rules 62-302.400 and 62-302.530, F.A.C.

Dear Mses. McCarthy and McTeer Toney,

Thank you for accepting these comments on behalf of St. Johns Riverkeeper and Miami Waterkeeper, and their thousands of members in Florida who will be affected by Florida's proposed revisions to rules 62-302.400 and 62-302.530, F.A.C. As discussed at our October 26th meeting with EPA employees from Region 4, we are submitting these comments to express our concerns regarding Florida's proposed revisions to the water quality criteria. These comments include sections addressing the process by which the proposed revisions were adopted in Florida, and a substantive technical assessment by Dr. JoAnn Burkholder, who has more than 30 years of experience in assessing water pollution impacts on freshwaters, estuaries, and marine coastal waters. All references to these comments and Dr. Burkholder's technical assessment are electronically attached (enclosed in a CD) and incorporated herein.

The St. Johns Riverkeeper's mission is to be an independent voice that defends, advocates, and activates others to protect and restore the St. Johns River. Miami Waterkeeper defends, protects, and preserves Biscayne Bay and surrounding waters through citizen involvement and community action. Miami Waterkeeper works to ensure swimmable, drinkable, fishable water in South Florida for all. The members of both organizations extensively use the waters of the State of Florida for swimming, drinking, fishing, boating, wildlife watching, study, contemplation, and other forms of recreation. Such activities are dependent on the water quality of the waters being maintained.

Pursuant to 40 C.F.R. § 131.6, when a water quality standard is submitted to EPA for review, the submission must include “[w]ater quality criteria sufficient to protect the designated uses,” “[m]ethods used and analyses conducted to support water quality standards revisions,” and “[c]ertification by the . . . appropriate legal authority within the State that the water quality standards were duly adopted pursuant to State law.” Because Florida cannot provide material to satisfy these three elements, EPA must disapprove Florida’s proposed revisions. First, as detailed by Dr. Burkholder, the proposed water quality criteria are not sufficient to protect the designated uses. Second, Dr. Burkholder details how the methods used and analyses conducted are inappropriate given the available data, and do not support the proposed Florida Department of Environmental Protection (“FDEP”) revisions. Finally, because the method of adopting the proposed revisions by the State of Florida violated state and federal law by failing to provide adequate opportunity for public participation and comment, EPA must disapprove the proposed revisions until the issues noted in these comments are addressed. Specifically, criteria should be developed for the chemical substances for which recommended protective levels are available from EPA (and which FDEP did not develop criteria for), and the more conservative recommendations for criteria suggested by EPA should be followed until the uncertainties used to parameterize the Monte Carlo probability model can be substantially reduced. Higher risk populations should be fully protected to EPA’s recommended standards by whichever model FDEP uses to calculate proposed criteria. Assessment of compliance should be based on seasonal medians from data collected at least monthly (rather than three samples being used to estimate annual averages). Drinking water testing and treatment should be increased to account for the additional pollutants allowed under the proposed criteria in drinking water sources, and FDEP should be required to follow public participation requirements.

The State of Florida Failed to Follow Public Participation Requirements

St. Johns Riverkeeper and Miami Waterkeeper echo the comments submitted by David A. Ludder on behalf of the Florida Clean Water Network, Inc. and Conservancy of Southwest Florida, Inc. The Florida Department of Environmental Protection did not adhere to the legal requirements for public participation. The State of Florida failed to hold any public hearings in South Florida or northeast Florida, depriving many people a critical entry-point into participating in the revision process. Moreover, critical information about the revisions (correction published August 4, 2016 clarifying the actual impacts of the rule, 42 Fla. Admin. R. 3457 (Aug. 4, 2016), *available at* [https://www.flrules.org/Faw/FAWDocuments/FAWVOLUMEFOLDERS2016/42151/42151doc .pdf](https://www.flrules.org/Faw/FAWDocuments/FAWVOLUMEFOLDERS2016/42151/42151doc.pdf)) was not made available until after the public participation process had already ended. 40 C.F.R. § 131.20(b) requires that public participation be “in accordance with provisions of State law and EPA’s public participation regulation (40 CFR part 25)” and that “[t]he proposed water quality standards revision and supporting analysis shall be made available to the public prior to the hearing.” The last public hearing was conducted by the Environmental Regulation Commission on July 26, 2016, *prior to* the publication by the Florida Department of Environmental Protection of additional information regarding the proposed water quality standards revision and supporting analysis regarding the proposed rule on August 4, 2016, in clear contravention of the requirements of 40 C.F.R. § 131.20(b). Furthermore, the Environmental Regulation Commission had two out of seven member seats vacant when the commission voted 3 to 2 to approve the proposed revisions, specifically the seats designated to represent the environment and the local

government stakeholders. Members of the public, including the St. John's Riverkeeper, had requested that the vacant seats be filled prior to the vote. While the environment seat was vacant for over a year and was never filled before the critical vote, the Governor did manage to appoint Craig Varn to the lay person seat just before the ERC vote. Mr. Varn had, just weeks before, retired from FDEP's General Counsel's office, disqualifying him from effectively filling the "lay person" position.

The State of Florida also violated the notice requirements of 40 C.F.R. part 25, which requires that notice of each public hearing be "well publicized" "at least 45 days prior to the date of the hearing." 40 C.F.R. § 25.5(b). Notice was not published until June 30, 2016, establishing that the hearing would be held on July 26, 2016, well less than 45 days later. 42 Fla. Admin. R. 2874 (June 30, 2016), *available at* <https://www.flrules.org/Faw/FAWDocuments/FAWVOLUMEFOLDERS2016/42127/42127doc.pdf>. Combined with the fact that key documents were not made available until after the public participation period ended at the state level, it is clear that the State of Florida violated not only the spirit of the public participation requirements of the Clean Water Act, but the legal requirements as well. For these reasons alone, EPA should disapprove of Florida's proposed revisions and ensure that the State of Florida follows the procedural requirements of the Clean Water Act and the regulations promulgated by EPA.

Florida's Methods for Setting Water Quality Standards are Critically Flawed

Given that there are several large cancer clusters in Florida, and that many of those types of cancers have been linked to contaminants in drinking water, Florida should be taking a conservative approach in setting water quality standards to protect human health, which the state fails to do here. Attached Burkholder Assessment at 3.

(1) Probabilistic Risk Analysis is Not Appropriate for Determining Human Health Criteria ("HHC")

Probability risk analysis, such as that employed by FDEP, is not recommended for use in setting HHC by the EPA and has never been relied upon for formal decision analysis because of the major limitations of the analysis. EPA identified four major limitations in Monte Carlo simulation which has discouraged the agency from accepting it as the sole or preferred risk assessment tool, including: 1) treating uncertainty as if it were variability; 2) ignoring correlations among exposure variables which can bias calculations; 3) exposure factors developed from short-term studies may not accurately represent long-term conditions in relatively small sub-populations; and 4) the low and high areas of risk distributions are very sensitive to the shape of the input distributions, and thus can easily be inaccurately depicted. Burkholder Assessment at 14. Indeed, the FDEP analysis includes many low-confidence inputs, which, cumulatively, lead to HHC levels that are not protective and allow toxins in concentrations well over EPA's recommended range. Burkholder Assessment at 13. For example, the cumulative uncertainty factor in estimating human health risk using these Monte Carlo "simulations" (which are misrepresented as "simulations" but are effectively "estimations") can easily be as high as several orders of magnitude due to sparse or poor data for many factors. Burkholder Assessment at 14. FDEP's reliance on using simple means for water intake and fish consumption, rather than the 90th percentile for both, uses point estimates that

double the criteria. The mean does not provide sufficient information regarding how much of the population is exposed to cancer risk levels exceeding EPA's recommendations. Estimates of the mean of the risk distribution can be calculated exactly, and therefore Monte Carlo is not necessary. FDEP also does not report confidence intervals in their Monte Carlo estimates. FDEP's complex model effectively hides this inherent uncertainty and confuses comparisons to EPA's methodology. In order to reduce uncertainty, FDEP should conduct and incorporate site-specific environmental parameters, allow for easier more transparent comparison to other EPA standards, and avoid using simple point values for risk factors.

(2) Synergistic Effects of Multiple Chemicals is Not Considered

Florida's analysis and proposed revisions consider each chemical substance separately. But these substances do not occur alone and they do not act alone in adversely affecting human health. FDEP, in its own technical support analysis, admits that "exposure could occur to more than one contaminant at the same time, and that these contaminants could produce a cumulative or even synergistic toxicity." FDEP Technical Support Document at 77. Yet, FDEP does nothing to account for this this uncertainty in its analysis to ensure that its risk management decisions are conservative. Burkholder Assessment at 4.

(3) Bioaccumulation Factors Have High Uncertainty

The bioaccumulation factor, relied upon by FDEP, is an input into the model with high uncertainty. FDEP used unreliable bioconcentration (as opposed to bioaccumulation) factors for 4 substances, relied upon national data rather than Florida-specific data for another 11 substances, a method that derived an estimate based on a food web model for 59 substances, and an estimate based on limited data for the other bioconcentration factors. Burkholder Assessment at 21. For six substances, bioaccumulation factors were calculated using geometric means, rather than medians, which systematically leads to higher, less protective human health criteria. Burkholder Assessment at 21. In addition to these major uncertainties, FDEP then further modified the bioaccumulation factors using faulty data, determined by making assumptions about uptake based on dissolved organic carbon and particulate organic carbon ratios that introduced as much as another 20% uncertainty factor into the analysis. Burkholder Assessment at 22.

(4) Relative Source Contribution Estimates Relied on Non-Florida Specific Data

For relative source contribution estimates, FDEP was forced to rely on EPA for non-carcinogenic substances because sufficient Florida data could not be found, which belies FDEP's assertion that revised criteria needed to be based on Florida-specific conditions. Burkholder Assessment at 18.

(5) Cancer Slope Factor Estimates Derived Using Methods That Impart High Uncertainty

Cancer slope factor estimates were also derived using methods that imparted high uncertainty, using assumptions that have not been tested. Burkholder Assessment at 19-20.

(6) FDEP Fails to Protect Sensitive Populations

FDEP also erred by making assumptions about Florida's population that excluded millions of Floridians from the analysis. For example, FDEP used an "all treated water"

weighted mean in its calculations, improperly failing to consider the concentration in groundwater, thereby not adequately protecting millions of Floridians who obtain their treated drinking water from groundwater. Burkholder Assessment at 23. FDEP also failed to calculate the weights of children in its analysis, and instead relied on the weight of “average adults,” completely failing to protect the most vulnerable population during early life development. Burkholder Assessment at 25. The analysis has a similar failing for people aged 65 and over and the population with compromised immune systems. Burkholder Assessment at 25. Similarly, by underestimating fish consumption rates for subsistence fishers, and assuming that subsistence fishers have the same “average” health, weight, drinking water consumption, etc., as the “average” Floridian, the proposed revisions fail to protect this population, which is disproportionately composed of minority groups and the elderly. Burkholder Assessment at 26. Members of indigenous nations in Florida especially rely on subsistence fishing, and such proposed increases in allowed concentrations of harmful chemicals could violate their member’s rights and any treaty rights that tribal members hold for fishing rights.

(7) Proposed Enforcement of HHC Standards is Inadequate

FDEP proposes to take only three samples per year to ensure compliance with the annual average water quality standards. This enforcement strategy will fail to calculate a reliable average toxic load, because such an extremely low sampling frequency would easily miss events that result in elevated concentrations of the harmful substances. Burkholder Assessment at 27. Dr. Burkholder’s assessment discusses many other serious deficiencies in FDEP’s analysis.

(8) Annual average toxin levels replace maximum concentrations

“Annual averages” replace maximum concentrations for 14 dangerous toxins. Critically, annual average has no theoretical maximum of a toxin allowed, as long as the annual average in a water body is below that of the average. An annual average is significantly less protective of a designated use of a water body than setting a maximum concentration limit, and DEP does not offer sufficient justification for this decision, which yields a drastic decrease in protection. The 14 toxins going from maximum concentrations to annual averages are Acenaphthene; Anthracene; Carbon Tetrachloride; Chlorophenoxy Herbicide (2,4,5-TP); Chlorophenoxy Herbicide (2,4-D); Fluoranthene; Fluorene; Methoxychlor; Pentachlorophenol; Trichloroethylene (TCE); 1,1-Dichloroethylene; 2-Chlorophenol; 2,4-Dichlorophenol; and 2,4-Dinitrophenol.

In sum, FDEP relegates millions of Floridians to the lowest protection range allowed by the EPA. However, their analysis also obscures potentially orders of magnitude of uncertainty in their inputs and assumptions, combined with scant enforcement. Taken together, this low protection baseline and the high likelihood of erroneous inputs will result in exposures that dramatically exceed EPA’s range of allowable protection limits. Thus, EPA must disapprove of FDEP’s proposed HHC revisions.

The Proposed Revisions Fail to Protect the Designated Uses of the Waters

The proposed standards are woefully inadequate to protect the designated uses of Florida’s waters.

First, the proposed revisions fail to protect designated uses by failing to regulate many dangerous toxins, including 22 substances that appear on EPA's National Recommended Water Quality Criteria – Human Health Criteria Table, *available at* <https://www.epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table>. Those 22 substances are alpha-Hexachlorocyclohexane (HCH); Asbestos; Bis(Chloromethyl) Ether; Dinitrophenols; Endosulfan Sulfate; Endrin Aldehyde; Hexachlorobenzene; Hexachlorocyclohexane (HCH) –Technical; Methylmercury; Nitrosamines; Nitrosodibutylamine; Nitrosodiethylamine; Nitrosopyrrolidine; N-Nitrosodimethylamine; N-Nitrosodi-n-Propylamine; N-Nitrosodiphenylamine; 1,1-Dichloroethylene; 1,2,4,5-Tetrachlorobenzene; 2,4-Dinitrotoluene; 2,4,5-Trichlorophenol; p,p'-Dichlorodiphenyldichloroethane(DDD); p,p'-Dichlorodiphenyldichloroethylene (DDE). Given that most of Florida's waterbodies are impaired for mercury based on fish consumption, and the dangers that methylmercury in particular poses to human health, *see* <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3139210/>, the development of stringent water quality criteria for methylmercury should be a top priority for the waters of Florida.

For the toxins proposed for regulation, most proposed limits are simply inadequate to protect the designated uses of Florida's waters and therefore violate 40 C.F.R. § 131.6 and the Clean Water Act. The proposed revisions increase the average maximum concentration limit for 25 chemicals for at least one water class. The concentrations allowed for 62 of the 82 added or updated toxins exceed EPA's National Recommended Water Quality Criteria (Human Health) in Florida surface water classes I, II, and III, without considering the uncertainty factors in FDEP's methodology.

Under the proposed revisions, the allowable amounts in Florida's waters of some toxins increase drastically, without accompanying evidence showing that the toxicity or bioaccumulation factor of these toxins has been similarly found to be lower than previously thought, and with fish consumption rates also being increased. To ensure that the designated uses of Florida's waters are protected, Florida should be enacting more stringent water quality standards, not standards that allow significantly more toxic pollutants in Florida's waters.

Benzene is a known human carcinogen. High exposure through food or drink can cause vomiting, irritation of the stomach, dizziness, sleepiness, convulsions, rapid heart rate, and death. Long-term exposure causes harmful effects to bone marrow and can cause a decrease in red blood cells.¹ Under the new rules, Benzene limits would increase roughly 70% for Class I waters (from 1.18 mcg/L to 2.0 mcg/L).

Beryllium is a known human carcinogen that has been found in fracking wastewater.² Beryllium ores are used to make specialty ceramics for electrical and high-technology

¹ *Toxic Substances Portal – Benzene*, Agency for Toxic Substances & Disease Registry, <http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=38&tid=14#bookmark05> (last updated March 12, 2015).

² G. Jay Habas & Jon Casey Watson, *Natural Gas “Gold Rush” – Injury and Occupational Exposure in Pennsylvania from the Marcellus Shale Gas Exploration*, Mondaq (Sept. 28, 2011) 2011 WLNR 19838899.

applications. Beryllium alloys are used in cars and computers.³ Under the new rule, maximum levels would increase 1429%.

Bromoform typically enters the environment as a byproduct when chlorine is added to water. It is also found in fracking wastewater.⁴ Bromoform slows down normal brain activities and causes sleepiness when ingested in large amounts. Exposure to very high amounts can cause unconsciousness or death.⁵ Under the new rule, maximum levels would increase 349%.

Methylene Chloride is an industrial solvent and paint stripper, and can be found in aerosol and pesticide products. Gas field workers have reported that methylene chloride is used for cleaning fracking wells.⁶ It is reasonably anticipated to be a human carcinogen. Breathing in small amounts may make a person become less attentive and less accurate in tasks requiring hand-eye coordination. Skin contact causes burning and redness.⁷ Under the proposed rule, maximum levels would increase 774%.

Chloroform was once used as an anesthetic. Today, it is used to make chemicals, such as monochlorodifluoroethylene. It can be formed when chlorine is added to water, and has been found in fracking wastewater.⁸ It is classified by the ATSDR as “reasonably anticipated to be a human carcinogen.” Drinking water containing high levels of chloroform for long periods of

³ *Toxic Substances Portal – Beryllium*, Agency for Toxic Substances & Disease Registry, H.R. Rep. <https://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=184&tid=33#bookmark02> (last updated June 3, 2015).

⁴ *Toxic Chemicals in Unconventional Gas Exploration and Production*, National Toxics Network, <http://www.ntn.org.au/wp/wp-content/uploads/2013/02/NTN-Toxics-in-UG-Activities-Briefing.pdf> (last viewed July 22, 2016).

⁵ *Toxic Substances Portal – Bromoform & Dibromochloromethane*, Agency for Toxic Substances & Disease Registry, <https://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=712&tid=128#bookmark05> (last updated June 24, 2015).

⁶ Lisa Song, *Hazardous Air Pollutants Detected Near Fracking Sites*, Bloomberg (Dec. 4, 2012, 2:27AM), <http://www.bloomberg.com/news/2012-12-03/hazardous-air-pollutants-detected-near-fracking-sites.html>.

⁷ *Toxic Substances Portal – Methylene Chloride*, Agency for Toxic Substances & Disease Registry, <https://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=233&tid=42#bookmark02> (last updated March 20, 2014).

⁸ *Toxic Chemicals in Unconventional Gas Exploration and Production*, National Toxics Network, <http://www.ntn.org.au/wp/wp-content/uploads/2013/02/NTN-Toxics-in-UG-Activities-Briefing.pdf> (last viewed July 22, 2016).

time may damage your liver and kidneys.⁹ Under the new rules, maximum levels would increase 1058%.

Chlorophenoxy herbicides are widely used in the United States. At low levels, they enhance plant growth, but at high levels they are herbicidal. High exposure to 2,4-D can result in weakness, headaches, dizziness, nausea, abdominal pain, hypotension, renal and hepatic injury, and delayed neuropathy. Such herbicides are banned in some countries due to the health impacts. Human health effects from low environmental doses are unknown.¹⁰ Under the new rules, maximum levels would increase 1200-1600%.

Tetrachloroethylene (PCE) is used as a metal degreasing solvent, as a starting material for making other chemicals, and in some consumer products. Low-level exposure over longer periods can cause changes in mood, memory, attention, reaction time, and vision. Animal studies have shown liver and kidney effect, and changes in brain chemistry. The ATSDR found that PCE is likely to be carcinogenic.¹¹ Under the new rules, maximum levels would increase 2875%.

1,1-Dichloroethylene is an industrial chemical used to make plastic, as a flame retardant, in coating for steel pipes, and in adhesive applications. Breathing low levels for a long time may damage the nervous system, liver, and lungs.¹² Under the new rules maximum levels would increase 526,315%.

2,4-Dinitrophenol is used to manufacture dyes and wood preservatives, and as a pesticide. Acute oral exposure can cause nausea, vomiting, sweating, dizziness, headaches, and weight loss. Chronic exposure can cause cataracts, skin lesions, weight loss, and effects on the bone marrow, the central nervous system, and the cardiovascular system.¹³ Under the new rules, maximum levels would increase 17,216%.

⁹ *Toxic Substances Portal – Chloroform*, Agency for Toxic Substances & Disease Registry, <https://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=52&tid=16#bookmark05> (last updated March 12, 2015).

¹⁰ *Biomonitoring Summary 2,4-Dichlorophenoxyacetic Acid*, Centers for Disease Control and Prevention, https://www.cdc.gov/biomonitoring/2,4-DichlorophenoxyaceticAcid_BiomonitoringSummary.html (last updated Dec. 4, 2013).

¹¹ *Toxic Substances Portal – Tetrachloroethylene (PERC)*, Agency for Toxic Substances & Disease Registry, <https://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=264&tid=48> (last updated Dec. 15, 2014).

¹² *Toxic Substances Portal – 1,1-Dichloroethene*, Agency for Toxic Substances & Disease Registry, <https://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=130> (last updated Mar. 3, 2011).

¹³ *2,4-Dinitrophenol*, United States Environmental Protection Agency, <https://www3.epa.gov/airtoxics/hlthef/dinitrop.html> (last updated Feb. 23, 2016).

Another example of heightened maximum levels can be seen with polycyclic aromatic hydrocarbons (PAHs). PAHs are a group of over 100 chemicals formed during the incomplete burning of coal, oil, gas, garbage, and other organic substances. Other PAHs are manufactured. They are found in coal tar, crude oil, creosote, and are used to make dyes, plastics, and pesticides. Some PAHs may reasonably be expected to be carcinogens. Animal studies have shown harmful effects on the skin, body fluids, and ability to fight disease.¹⁴

Before the revisions, section 62-302.530(57)(a), F.A.C., regulated 10 PAHs under a consolidated maximum of 0.0028 mcg/L for Class I waters, and 0.031 mcg/L for Classes II and III waters. The draft revision ceases to regulate Acenaphthylene, Benzo-(ghi)perylene, and Phenanthrene. The remaining seven toxins¹⁵ now appear individually and exceed EPA recommendations by a factor of 10.

Furthermore, it appears that FDEP failed to consider some of the latest toxicity data regarding PAHs. Some of the latest publications regarding their toxicity are listed here: <https://www.nwfsc.noaa.gov/research/divisions/efs/ecotox/pah.cfm>. Some of these publications are also attached.

EPA's Prior Actions Show That Disapproval is Warranted

The EPA, commenting on the State of Washington's proposed criteria when non-conservative fish consumption estimates were used, stated that "the state [of Washington] has not demonstrated how its use of a cancer risk level of 10^{-5} would result in water quality criteria that adequately protect tribal fish consumers as the target general population as opposed to a highly exposed subpopulation within the broader general population."¹⁶ Similarly, Florida is using a 10^{-5} cancer risk level for the highest risk population, subsistence fishers predominantly in the tribal communities, while also using highly uncertain inputs and assumptions. Therefore, the cumulative risk of the proposed revisions are almost certainly going to be *less protective* than a 10^{-5} risk level. Just as EPA found that Washington state's proposal to allow a cancer risk limit of 10^{-5} coupled with high uncertainty was unacceptable, so too is Florida's proposed criteria, which targets EPA's lowest allowable level of protection and couples it with extremely high uncertainty

¹⁴ *Toxic Substances Portal –Polycyclic Aromatic Hydrocarbons (PAHs)*, Agency for Toxic Substances & Disease Registry, <https://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=121&tid=25#bookmark02> (last updated Aug. 28, 2014).

¹⁵ Benzo(a)-anthracene; Benzo(a)pyrene; Benzo(b)-fluoranthene; Benzo(k)-fluoranthene; Chrysene; Dibenzo(a,h)-anthracene; Indeno(1,2,3-cd)-pyrene.

¹⁶ EPA's Comments on Proposed Revisions to Washington's Human Health Criteria and New and Revised Implementation Provisions at 7 (Mar. 23, 2015).

in multiple key inputs combined with complex statistical models that preclude clear comparisons with EPA's methodologies.

In Washington state, EPA ended up disapproving 143 of the proposed criteria, despite changes by the State of Washington to better comply with EPA's requirements. EPA decided that the criteria failed to protect the designated uses of Washington's waters, and that in order for Washington's criteria to be approved, the state needed to ensure that their criteria were "based on a sound scientific rationale and protect human health uses."¹⁷ Similarly, FDEP has demonstrably failed to base its proposed criteria on sound scientific rationale, and these comments demonstrate that the criteria fail to protect human health uses.

Conclusion

As shown by Dr. Burkholder's assessment, the methods used to allow these large increases of allowable amounts of toxins in Florida's waters are inappropriate, unsound and unsafe. The proposed revisions do not protect the designated uses of Florida's waters. EPA should disapprove of Florida's proposed revisions.

Until Florida addresses the procedural and substantive flaws in the proposed revisions to the human health based water quality criteria, EPA has no choice under the applicable law but to disapprove the proposed revisions. We would be happy to meet with EPA to discuss these concerns, or answer any questions that EPA might have.

Sincerely,



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¹⁷ EPA's Partial Approval/Partial Disapproval of Washington's Human Health Water Quality Criteria and Implementation Rules at 25 (Nov. 15, 2016).