

## Attachment I

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Subject: Re: Increasing Vulnerability of CEPP to Third-Party Challenges on the Mercury Issue  
From: Larry E. Fink (larryfink@waterwiseconsulting.com)  
To: Shannon\_Estenoza@ios.doi.gov; evergladesrestoration@yahoo.com; mjmorris@sfwmd.gov; Robert\_Johnson@nps.gov; dduke@sfrestore.org;  
Cc: achildress@sfrestore.org; barry\_rosen@usgs.gov; greg.knecht@dep.state.fl.us; Nick\_Aumen@nps.gov;  
Date: Monday, March 26, 2012 1:33 PM

March 26, 2012

Shannon Estenoza, Director  
Office of Everglades Restoration Initiatives  
United States Department of the Interior  
Florida International University  
11200 SW 8th Street, OE 165  
Miami, FL 33199

Phone: (305) 348-1665  
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Dear Ms. Estenoza:

The set of questions I posed to SFWMD and USACE-Jacksonville staffs at the January 25, 2012, public workshop on the PIR/EIS went to the heart of the matter of how sound science guides sound restoration decision-making in the accelerated CEPP process. The absence of a timely and substantive response from SFWMD and USACE staffs is problematic. I will continue to escalate the issue until a substantive response from support staffs is forthcoming, even if it is no longer timely.

The exception to the unresponsiveness of USACE and SFWMD staffs is SFWMD's Walter Wilcox, who replied at the January 25, 2012, meeting that a rigorous probabilistic uncertainty analysis had not been and could not be performed on the hydrology models used in planning Everglades and Florida Bay restoration infrastructure design, operation, maintenance, and repair. Follow-up questioning at and between subsequent meetings revealed this was also true of the water quality models.

Thus, decision-makers were, are, and will be uninformed as to the quantitative probabilities of incorrectly concluding that Everglades will meet its water quantity and quality performance objectives when it will not. Instead, restoration decision-makers will have to rely on qualitative representations of the confidence the modelers have in their own work. Not surprisingly, the modelers are comfortable with their results, even after USGS staff brought to their attention the uncertainties introduced by their mathematical

representations of such fundamental properties as evapotranspiration and resistance to flow. The former significantly impacts the Everglades water budget and the latter the flow-stage relationship.

Therefore, your reliance on SFWMD and USACE staffs for CEPP technical support is also problematic. Nevertheless, if you are relying on the experts in other Federal agencies for oversight and peer review on issues such as mercury and sulfate, I recommend that SFERTF hold a public workshop on the issue with presentations and Q&A session with recognized experts on the Everglades mercury and sulfate problem, including USGS's David Krabbenhoft, Ph.D. and William Orem, Ph.D.

Thank you for your attention to these concerns and recommendation for a public workshop on the mercury and sulfate issue.

Sincerely,

Larry E. Fink, M.S.  
Waterwise Consulting, LLC

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**From:** "Estenoz, Shannon A" <Shannon\_Estenoz@ios.doi.gov>  
**To:** Larry E. Fink <larryfink@waterwiseconsulting.com>  
**Cc:** "mjmorris@sfwmd.gov" <mjmorris@sfwmd.gov>; "Johnson, Robert" <Robert\_Johnson@nps.gov>; "dduke@sfrestore.org" <dduke@sfrestore.org>; "achildress@sfrestore.org" <achildress@sfrestore.org>; "barry\_rosen@usgs.gov" <barry\_rosen@usgs.gov>; "greg.knecht@dep.state.fl.us" <greg.knecht@dep.state.fl.us>; "Aumen, Nick" <Nick\_Aumen@nps.gov>  
**Sent:** Monday, March 26, 2012 11:58 AM  
**Subject:** RE: Increasing Vulnerability of CEPP to Third-Party Challenges on the Mercury Issue

Dear Mr. Fink,

Thank you for your e-mail dated March 15, 2012 regarding the US Army Corps of Engineers Central Everglades Planning Project. You indicate in this e-mail that the SFWMD has not yet answered technical questions that you posed through the SCG sponsored public workshop on February 13-14, 2012. At this time I do not know the status of the SFWMD staff's responses to your questions, however I am copying Matt Morrison at the SFWMD so that he knows you have communicated with me on the subject. I do know that the CEPP staff is extremely busy and that they are working very hard to be responsive to the public while managing the considerable workload and schedules imposed by CEPP.

You also asked how I intend to ensure that mercury and sulfate are given due consideration by scientists and technical staff employed by or under contract to the federal and state government who are working on CEPP. Of course, I represent the Department of the Interior and therefore am better acquainted with DOI's CEPP efforts than I am with those of other state or federal agencies. I rely entirely on the expertise and counsel of the Department of the Interior's technical staff on scientific and technical matters and try hard not to interfere with the concerns they choose to raise or not to raise while discharging their duties at PDT meetings, public workshops, Task Force sponsored meetings or in the preparation of formal or informal comment letters or documents. This is particularly true on issues about which I personally have little or no expertise, like mercury and sulfate. In keeping with this general approach, I have copied Bob Johnson, DOI's CEPP lead so that he is aware that you have raised this specific issue and so that he can share it with the DOI CEPP team.

Thank you again for contacting me.

Sincerely,

Shannon Estenoz

Shannon Estenoz, Director

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**From:** Larry E. Fink [larryfink@waterwiseconsulting.com]  
**Sent:** Thursday, March 15, 2012 3:14 PM  
**To:** Estenoz, Shannon A  
**Cc:** evergladesrestoration@yahoo.com  
**Subject:** Increasing Vulnerability of CEPP to Third-Party Challenges on the Mercury Issue

March 15, 2012

Shannon Estenoz, Director  
Office of Everglades Restoration Initiatives  
South Florida Ecosystem Restoration Task Force  
c/o Florida International University  
11200 SW 8th Street, OE 165  
Miami, FL 33199

RE: Increasing Vulnerability of CEPP to Third-Party Challenges on the Mercury Issue

Dear Ms. Estenoz:

The U.S. Environmental Protection Area (USEPA) has identified various South Florida water bodies as mercury-impaired, including the Everglades, Biscayne Bay, and Florida Bay:  
[http://iaspub.epa.gov/tmdl\\_waters10/attains\\_watershed.waterslist\\_by\\_causes?p\\_state=FL&p\\_huc=03090202&p\\_cause\\_name=MERCURY%20IN%20FISH%20TISSUE&p\\_cycle=2010](http://iaspub.epa.gov/tmdl_waters10/attains_watershed.waterslist_by_causes?p_state=FL&p_huc=03090202&p_cause_name=MERCURY%20IN%20FISH%20TISSUE&p_cycle=2010)  
Mercury-impaired portions of the Everglades watershed include an L-67 Canal  
[http://iaspub.epa.gov/tmdl\\_waters10/attains\\_waterbody.control?p\\_list\\_id=FL3289J&p\\_cycle=2010&p\\_state=FL&p\\_report\\_type=T](http://iaspub.epa.gov/tmdl_waters10/attains_waterbody.control?p_list_id=FL3289J&p_cycle=2010&p_state=FL&p_report_type=T). segment in Everglades National Park. The rerouting of EAA stormwater runoff and Lake Okeechobee releases containing sulfate concentrations in excess of the CERP performance objective of 1 mg/L  
[http://www.evergladesplan.org/pm/recover/recover\\_docs/et/ge-10.pdf](http://www.evergladesplan.org/pm/recover/recover_docs/et/ge-10.pdf) out of WCA-3A and into ENP via the L-67 Canal is or may be causing or contributing to that mercury impairment. Conversely, the rainfall-influenced water chemistry of WCA-3A no longer manifests excess methylmercury production and bioaccumulation in the aquatic food chain, so atmospheric deposition alone is not the cause of the Everglades mercury problem. The State of Florida has listed the Everglades as a mercury-impaired water body pursuant to Section 303(d) of the Federal Clean Water Act that (CWA) requires a mercury Total Maximum daily Load (TMDL) pursuant to CWA Section 303(d)(1)(C). The Florida Department of Environmental Protection (FDEP) intends to develop and implement the mercury TMDL with a statewide plan by the court-ordered deadline of August, 2012 <http://www.dep.state.fl.us/water/tmdl/merctmdl.htm> under a 1999

Consent Decree in the matter of Florida Wildlife Federation, et al. v. Carol Browner, et al. (Case No. 98-356-CIV-Stafford).

In the context of the preceding, at the January 25, 2012, session of the SFERTF-sponsored public workshop on the development of the PIR/EIS for the Central Everglades Planning Project (CEPP), I asked the following set of questions regarding mercury:

“ How will the effects of changes in the timing, distribution, quantity, and quality of water on methylmercury production, bioaccumulation, exposure and toxic effects be taken into account explicitly in the PIR/EIS for the preferred option and the various viable alternatives? ... as constraints for project design, operation, maintenance, and repair, especially that which causes or contributes to a drying and rewetting cycle and/or the use of high-sulfate water? ... in the Federal, Florida, and county permitting process for the required reasonable assurances?

Thanks.

Larry E. Fink, M.S.  
Waterwise Consulting, LLC”

Shannon Estenoz  
March 15, 2012  
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Due to their complexity, with the concurrence of his U.S. Army Corps of Engineers-Jacksonville counterpart, the South Florida Water Management District’s Matt Morrison indicated that SFWMD staff would post their responses to this and the other sets of questions I posed after the workshop. It is now approaching 60 days since those questions were posed and answers were promised with no indication of whether or when those answers will be forthcoming. That is unacceptable, especially in light of the responses of scientist, modelers, and resource, program, and project manager to mercury-related questions I posed since then at public workshops held on February 13-14, 2012, and March 9, 2012.

More disconcerting is your failure to disabuse the agencies and entities of the presumption that CEPP is going to get a pass on mercury as a constraint on the design, operation, or maintenance of Everglades and Florida Bay restoration infrastructure, because the source of the problem is atmospheric deposition originating with global sources uncontrollable under Federal or Florida water pollution control law. This ignores the ability of sulfate to stimulate excess methylmercury production up to a point when present in excess of the CERP/RECOVER sulfate restoration objective of 1 mg/L [http://www.evergladesplan.org/pm/recover/recover\\_docs/et/ge-10.pdf](http://www.evergladesplan.org/pm/recover/recover_docs/et/ge-10.pdf) . The excess sulfate derives from Lake Okeechobee releases and EAA stormwater runoff. The excess sulfate in Lake Okeechobee originates with stormwater runoff from farms and ranches in the Kissimmee River watershed. The sulfate in EAA stormwater runoff originates primarily from ongoing uses of sulfate cation soil amendments and oxidation of peat soil contaminated with legacy sulfur from its use as a soil amendment, and not seepage of high-sulfate connate water. [http://www.sfwmd.gov/portal/page/portal/pg\\_grp\\_sfwmd\\_sfer/portlet\\_prevreport/2011\\_sfer/v1/chapters/v1\\_ch3b.pdf](http://www.sfwmd.gov/portal/page/portal/pg_grp_sfwmd_sfer/portlet_prevreport/2011_sfer/v1/chapters/v1_ch3b.pdf)

The applicable portions of the Water Resources development Act of 1996 (PL 104-303; 110 STAT. 3770): <http://www.fws.gov/habitatconservation/Omnibus/WRDA1996.pdf> include the following

Section 528: Everglades and South Florida Ecosystem Restoration

(b) Restoration Activities

(4) General Provisions

(A) Water Quality – In carrying out the provisions of this section and sections 315 and 316, the Secretary--

(i) shall take into account the protection of water quality by considering applicable State water quality standards; and

(ii) may include in projects such features as are necessary to provide water to restore, preserve, and protect the South Florida ecosystem.

(B) Compliance With Applicable Law

In carrying out the activities of this subsection and subsection (c), the Secretary shall comply with any applicable federal law, ...

(c) Integration of Other Activities

(1) In General—In carrying out the activities described in subsection (b), the Secretary shall integrate such activities with ongoing Federal and State projects and activities, including--

(D) The Everglades Construction Project of the State of Florida

...

Shannon Estenoz

March 15, 2012

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So the design, operation, and maintenance of Everglades restoration infrastructure cannot cause or contribute to a violation of any applicable narrative or numerical water quality standard, including those for mercury, and CEPP planning process is constrained by those requirements. Neither the Dynamic Model for Stormwater Treatment Areas Version 2 (DMSTA2) <http://www.walker.net/dmsta/> or its reservoir counterpart nor the Everglades Landscape Model (ELM) include modules to simulate the production and bioaccumulation of methylmercury in response to the excess sulfate present in EAA stormwater runoff and Lake Okeechobee releases. Therefore, any CEPP-related plan, impact statement, engineering design, operation plan, maintenance plan, permit application, water quality-based effluent limit, or compliance monitoring program based on either is inherently deficient as regards water quality constraints. If USEPA Region 4's used DMSTA to develop plans and schedules for attainment of total phosphorus water quality-based effluent limits its Amended Determination, one can infer nothing about the appropriateness of using DMSTA or ELM to address other water quality impacts within or downstream of the reservoirs, including excessive turbidity, dissolved oxygen sags, and methylmercury production and bioaccumulation.

Please advise how you intend to ensure that water quality constraints in general and mercury and sulfate in particular are given due consideration in the CEPP planning process and the technical support being provided by scientists, engineers, and modelers employed by or under contract to the various Federal and State of Florida agencies involved in CEPP. Otherwise, CEPP is increasingly vulnerable to third-party mercury-related challenges at various points of entry into the regulatory process, including the publication of the PIR/EIS and restoration infrastructure permitting.

Thank you for your immediate attention to this concern.

Sincerely,

Larry E. Fink, M.S.  
Owner and Principal  
Waterwise Consulting, LLC