From: Axelrad, Don
To: Gilmour, Cindy
Cc: borem@usgs.gov
Subject: RE: NRC Report on Everglades restoration
Date: Tuesday, October 07, 2008 4:06:45 PM

Cindy,

Seems to me Ramesh Reddy could have written more on S in the NAS NRC report.

Re SO4 removal from STAs,
pp. 43-44 of Scheidt and Kalla (R-EMAP 2005) says sulfate removal by the STAs is highly variable (5% to 67%):

"The wetland STAs constructed and managed to remove phosphorus remove varying amounts of sulfate. STA 1W is reported to have exhibited moderate removal of sulfate from 1994 to 1999 (Figure 42)**.(47)** During WY2006, for the STAs the flow-weighted sulfate
inflow concentration, flow-weighted outflow concentration and percent removal were as follows: STA-1W 73 mg/L, 69 mg/L, 5%; STA-2 103 mg/L, 76 mg/L, 26%; STA-3/4 53 mg/L,
43 mg/L, 19%; STA-5 7 mg/L, 4 mg/L, 43% and STA-6 15 mg/L, 5 mg/L and 67%. Sulfate removal by the STAs is highly variable (5% to 67%) and appears to be a function of inflow concentration. The highest STA inflow sulfate concentrations occurred in the S-5A and S-6 basins (73 mg/L and 103 mg/L respectively).**(48)"**

47. Gu, Binhe, Michael J. Chimney, Jana Newman and Martha K. Nungesser. 2006. Limnological characteristics
of a subtropical constructed wetland in south Florida (USA). *Ecological Engineering* (2006):345-360.

48. Pietro, Kathleen, Ron Bearzotti, Michael Chimney, Guy Germain, Nenad Iricanin and Tracey Piccone. 2007.
Chapter 5: STA Performance, Compliance and Optimization. 2007 South Florida Environmental Report. South
Florida Water Management District and Florida Department of Environmental Protection. West Palm Beach,
Florida. < http://www.sfwmd.gov/sfer/>

Don Axelrad

Office: (850) 245-8072
Mobile: (850) 443-4626

From: Gilmour, Cindy [mailto:gilmourc@si.edu]
Sent: Tuesday, October 07, 2008 1:41 PM
To: Axelrad, Don
Cc: borem@usgs.gov
Subject: RE: NRC Report on Everglades restoration

Don –
I downloaded the full report and searched on "Sulf."
The attached versions shows where the report mentions sulfate/sulfur (highlighted in yellow). They do call for construction of a mass balance for S in the ecosystem; and in one of the appendices call for surface water sulfate monitoring (I think).

There is a strange section of SO4 removal by the STAs that says we noted significant reduction of SO4 across the cells…. That's not right.

Do you have a time when you want to talk? My day tomorrow is looking fuller and fuller, so Th and F will be better for me – Cindy

Cynthia Gilmour
Microbial Ecologist
Smithsonian Environmental Research Center
647 Contees Wharf Rd.
Edgewater, MD 21037

Phone: 443-482-2498
FAX: 443-482-2380
gilmourc@si.edu

lab web site: http://www.serc.si.edu/labs/microbial/index.jsp

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From: Axelrad, Don [mailto:Don.Axelrad@dep.state.fl.us]
Sent: Wednesday, October 01, 2008 3:40 PM
To: borem@usgs.gov; Gilmour, Cindy
Subject: NRC Report on Everglades restoration

http://www.nationalacademies.org/morenews/20080929.html

Sept 29, 2008 NRC Report on Everglades restoration; as near as I can tell, sulfur gets no mention.