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Sent: 9/9/2009 2:32:00 P.M. Eastern Daylight Time  
Subj: FW: Lake Okeechobee TP data and long-term WQ trends

Good Afternoon Everyone,

Eric Hughes, EPA, has asked that I forward his email below concerning long term water quality trends in Lake Okeechobee to you all. Please contact Eric with any questions.

Thank you,  
Katie

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-----Original Message-----

From: Hughes, Eric H SAJ  
Sent: Tuesday, September 08, 2009 5:04 PM  
To: scheidt.dan@epa.gov  
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Subject: FW: Lake Okeechobee TP data and long-term WQ trends

Dan et. al:

FYI the e-mails below and attachment from Tom James (South FL WMD) providing historic to present day Lake Okeechobee Total Phosphorus (TP) data.

The 2001 EPA/FDEP Lake Okeechobee TMDL has an average annual TP load

target of 140 tons/yr, which includes 35 tons TP/yr from atmospheric deposition.

With my work as EPA's Liaison to the Jacksonville COE/SFWMD on the Comprehensive Everglades Restoration Plan (CERP) I am acutely aware of Lake O's role in future Everglades restoration. I have looked at the Lake O monthly TP data and done a very basic analysis, which I'd like to share with you.

The earliest Lake O TP data is from 1972 (42 ppb TP).  
1970s Lake O decadal TP average is 57 ppb TP.  
1975-79 Lake O TP average rose to 62 ppb TP.  
1980s Lake O decadal TP average is 90.5 ppb TP (early 80s = late 80s).  
1990s Lake O decadal TP average is 103 ppb TP.  
1990-94 Lake O TP average is 97 ppb  
1995-99 Lake O TP average rose to 109 ppb TP.  
2000s (2000-08) decadal average is 157 ppb TP.  
2000-04 Lake O TP average rose to 131 ppb TP.  
2005-08 Lake O TP average rose to 197 ppb TP.

The annual South FL Environmental Report (SFER) produced by FDEP/SFWMD/FDACS includes a Chapter 10 each year on Lake O WQ/ecological conditions. Table 10-3 of this year's 2010 draft report provides 5-yr rolling average TP load data to Lake Okeechobee. In the 2009 water yr, total loads to Lake O were 656 tons, and the 5 yr rolling average of TP loads to the Lake is 572 tons.

572 tons/yr is approximately 4 times the annual TMDL TP target (140 tons/yr). The 5 yr rolling average of TP loads to Lake O had dropped considerably after two consecutive "dry" hydrological yrs (2007 & 2008 water yrs), however, with the 2009 water yr being an "average" rainfall year, the 5 yr rolling average figure increased to 572 tons.

Eric H  
EPA - Jacksonville