E-MAIL FROM MARK HAMMOND TO DAN HILLIARD
RE: USGS WITHLACOOCHEE RIVER FLOWS

SUBMITTED BY DAN HILLIARD

From: <Mark.Hammond@swfwmd.state.fl.us>
To: "2buntings" <2buntings@comcast.net>
Cc: <Mike@Seetropical.com>; <Paul.Williams@SWFWMD.STATE.FL.US>; <Marty.Kelly@swfwmd.state.fl.us>
Sent: Wednesday, November 26, 2008 3:56 PM
Attach: L With Flows marty.doc; From PEF SCA - System flows.doc
Subject: Re: USGS Withlacoochee River Flows

Dan,
I had Marty Kelly review your information and take a look at the flows on the lower Withlacoochee River. He summarized his review in the attached memo. Take a look at the information when you have a chance, if you have any questions regarding Marty's review you can check with him. If you would like to get together to further discuss this, we would be happy to.

Thanks.
Mark

Mark A. Hammond, P.E., Director
Resource Projects Department
352-796-7211, extension 4226

(See attached file: L With Flows marty.doc)

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10/11/2008 04:27 PM	SubjectUSGS Withlacoochee River Flows

Dear Mr. Hammond,

A review of the Progress Energy Florida Levy Nuclear SCA to DEP gives rise to information thought pertinent to ongoing discussions regarding the proposal to reconnect the Lower Withlacoochee River and impound the Barge Canal. It would not be suggested to anybody they follow my footsteps in that endeavor as it is an enormous document, prone to inducing spontaneous sleep. With that said, a Word Document (attached) has been assembled which provides extracted flow rate data over the dam and spillway at Lake Rousseau.

Our early discussions on this matter centered on the point of how much water bypassed (leaked) the containment structures of the lake and for lack of additional information it is accepted that 70 cfs would not have substantial positive influence on environmental issues in the Lower River. Conversely, it is a significant fresh water supply as you indicated. We remain convinced there are additional water supplies not fully evaluated by the District, both as spring flows and transmission into the canal from the aquifer south of the Barge Canal. Though such flows are thought equally substantial, we accept it is expensive, difficult and time consuming to quantify such volume.

A recently published document entitled "Wildlife 2060", (Florida FWC) projects a credible population increase of ~36 million in Florida by that year. A substantial, if not majority share will settle in the Water District's jurisdiction. In the long range view it would appear there is substantial benefit to be found in preserving the fresh water

resources we have discussed. On that point, it is necessary to advise you that our calculations regarding the volume of water that might be stored in the proposed impoundment are now thought so conservative as to be invalid. What was not factored into the calculation was the water storage capacity of the upper segment of the Lower Withlacoochee River (between the dam and CFBC). In addition, review of the PEF SCA clearly indicates the cross sectional dimensions of the CFBC are substantially larger than we calculated, primarily in depth. Our calculations were predicated on the length of the proposed impoundment and used the controlling depth for vertical measurement. The PEF SCA indicates that depths in excess of 16-18 feet are common in the CFBC.

The attached document details USGS flows in the Rainbow River and over the Inglis Bypass Spillway and Dam for about 35-40 years. One of the points that surprises was the apparent resiliency of the river flow rates as they do not appear to have significantly diminished over that time span. What is apparent in the tabulated information is a reasonable expectation of flows over the dam and spillway, that when combined, rise to the volume sufficient to satisfy the objective set by this organization at our last meeting, and the benchmark referenced by "Cross Florida Greenway: Watershed Evaluation of Alternative Flow Scenarios Using Hydrodynamic Models" by Janicki Environmental, Inc., 2007, specifically, *an average 1,300 cfs flow rate in the Lower River*.

Your thoughts on this information would be very much appreciated and we thank you for your time in this review.

Sincerely,

Dan Hilliard
President
Withlacoochee Area Residents, Inc.

CC: Paul Williams, SWFWMD
Mike Moberley, Chairman - Citrus Waterways Restoration Council
Directors, Withlacoochee Area Residents, Inc.
Directors, Withlacoochee River Alliance

(See attached file: From PEF SCA - System flows.doc)