

**St. Johns River Water Management District
Staff Comments on Harris Council draft Annual Report (Ver. October 17, 2014)
For consideration at the Council's October 30, 2014 meeting, Tavares City Hall**

St. Johns River Water Management (SJRWMD) staff respectively submit comments for Council consideration.

Overarching points for Council consideration with regard to the Lake Apopka Restoration section of the Harris Council's draft annual report:

- Following bird deaths, SJRWMD conducted scientific work to understand mortality and the potential cause and to understand how to continue restoration in an ecologically safe manner.
- SJRWMD staff implemented research to fill in data gaps recommended by the Exponent report.
- Prior to additional flooding, SJRWMD conducted toxicological investigations, used mesocosms to measure bioaccumulation of pesticides, remediation work to reduce pesticide concentrations in soils, biological assessments, and consultations with the U.S. Fish and Wildlife Service.
- SJRWMD staff are committed to sound restoration of the Lake Apopka North Shore and believe that due to human health safety, reconnection to Lake Apopka should not be considered until fish on the North Shore are safe for consumption. Human health requires much lower concentration targets than those appropriate for ecological restoration.

Note: Blue text indicates language added to the annual report by Chairman Skip Goerner, Red text indicates language added to the annual report by Vice Chairman Johnson, and green text indicates comments from SJRWMD staff.

SJRWMD staff comment on the language in the paragraph below is that District staff provided updates on the MFL and lake level management work throughout the Council's reporting year and provided the Council with a notice related to opportunities to provide input on the peer review panel members. Entities such as Orange County and Orange County utilities have participated by providing recommendations on peer review panel members. Peer review work will begin in December 2014 and conclude in second quarter of 2015.

Bottom of page 9 and top of page 10, draft annual report transmitted to the Council on 10/17/14)
When establishing minimum flows and levels (MFLs) and lake level management objectives, consideration should be given to the complete breadth of information. The Council believes District staff must be unbiased regarding development of the MFLs and lake level objectives given their focus on hydrating wetlands. The Council recommends to the District's Governing Board and the Florida Legislature that experts not associated with District staff select the peer review organization to eliminate concerns about bias. The Council will then provide the Governing Board a detailed recommendation in 2015.

SJRWMD staff recommend the language in the paragraph below be changed to reflect that Exponent could not reach a conclusion on the cause of the bird mortality.

(from bottom of page 11, draft annual report transmitted to the Council on 10/17/14)

~~The Council discussed a study that linked the deaths of the pelicans to New Castle disease. The Council discussed a report by Exponent (i.e., Special Publication SJ2004-SP1 prepared for SJWMD) and a paper by Natalie Steckler, a University of Florida Veterinarian student (i.e., Analysis of the 1998-1999 Lake Apopka Avian Mortality Event), which linked the deaths of the pelicans to New Castle disease and Botulism.~~ Mr. Layne noted that there were inconsistent findings regarding toxaphene poisoning, ~~and~~ that fish are more sensitive to toxaphene than pelicans, ~~and that few, if any fish were killed.~~ Mr. Layne indicated that if he could change anything in the investigation, it would be the attitude of USFWS and the lack of cooperation. The Council discussed farmland flooding and restoration, and expressed concern about how people may blame any future bird deaths on pesticides when it is very probable that the cause is New Castle disease or botulism. Mr. Layne recommended sampling prior to future flooding and review of USFWS's migratory bird act.

SJRWMD staff recommend the language in the paragraph below be changed to reflect that Exponent could not reach a conclusion on the cause of mortality and that SJRWMD subsequently determined that pesticides caused the majority of the deaths.

(from bottom of page 12, draft annual report transmitted to the Council on 10/17/14)

~~The Council believes that SJRWMD should have focused on the forensic study of the dead birds and placed the blame for the bird kill on diseases. In addition, the Council is concerned that bird deaths due to diseases in the future may reoccur, even though the levels of chlorinated hydrocarbons continue to decrease.~~

SJRWMD staff comment on the paragraph below is that almost the entire North Shore of Lake Apopka subsequently has been flooded and monitored after inversion of the soil reduced pesticides to safe concentrations for wildlife.

(from top of page 13, draft annual report transmitted to the Council on 10/17/14)

~~The Council believes that the placement of blame on toxaphene by the U.S. Fish and Wildlife Service resulted in needless expenses and time delays associated with the flooding of the north shore of Lake Apopka.~~

SJRWMD staff comment on the paragraph below is that the overarching points stated at the beginning of this document reflect that District work and consultations with the U.S. Fish and Wildlife Service will address the stated concern.

(from the middle of page 15, draft annual report transmitted to the Council on 10/17/14)

~~The Council also believes that FWC should reopen the investigation of the bird kill at Zellwood and convene a conclave of aquatic disease experts to evaluate future disease risks at the lake to~~

determine impacts to the establishment of future fisheries. The Council further supports FWC's aquatic plant planting program, but needs information on how FWC will inhibit wind uprooting of the plants as a similar effort in the 1970s failed.

SJRWMD staff comment on the three paragraphs below is that we appreciate feedback on the ongoing dredging work and the consultants and District will be developing scopes of work that may include items listed below. As this work proceeds, District staff will report to the Council.

(three paragraphs from the bottom of page 17, draft annual report transmitted to the Council on 10/17/14)

The Council supports additional limited testing of the vertical dewatering tower and the parabolic screen during the next Lake Apopka dredging project to determine if this equipment can truly permit rapid dewatering of sediment.

The Council recommends a test of the "dry hydrant" concept with the vertical dewatering tower for the removal of sediment from the bottom of a dredged sump as such an approach could provide a maintenance approach to keep boat ramp access in Lake Apopka and other lakes where fluid mud is a problem.

The Council recommends additional testing of the iron treatment system used at Magnolia Park to determine if iron could replace the use of alum and operate at a lower cost than LCWA's NuRF.

SJRWMD staff comment on the paragraph below is that improvements to the shad area will remain accessible. It is also early to discuss the full extent of Lake Apopka north shore hydration, due to the overarching points stated at the beginning of this document.

(from the top of page 24, draft annual report transmitted to the Council on 10/17/14)

The Council supports efforts to improve public access to Lake Apopka, but the Council is especially concerned that the efforts by SJRWMD at LANS will ultimately impede reconnection of the marsh to Lake Apopka. Reconnection would eliminate the dike at the northshore pump house and place the shad area underwater. The Florida Legislature and the SJRWMD Governing Board need to make a determination if the marsh will ever be reconnected and if so when, especially because the land was purchased to restore the "kidney" of Lake Apopka.

SJRWMD staff comment on the paragraph below is that the last discharge from the Harris Bayou water control structure was in 2010. The District does not have scheduled or planned discharges, as this facility is for emergency flood control.

(from the top of page 27, draft annual report transmitted to the Council on 10/17/14)

Discharges from the Harris Bayou should be ended until the nutrient impairment issue is resolved or SJRWMD determines how the phosphorus content of the discharged water will be reduced.