

## Summary and information regarding the WCA-1 temporary deviation (TD) implemented 22 April 2005

As discussed at the May 23, 2006 TOC meeting, the following is a summary and information regarding the WCA-1 temporary deviation.

The temporary deviation (TD) for WCA-1 has been in place since 22-April-2005 and expires on 31-July-2006. The SFWMD is working with LNWR, Mark Musaus and the USACE to extend the expiration date.

The EA for this action is available on the USACE planning documents website under Palm Beach County:  
<http://planning.saj.usace.army.mil/envdocs/envdocsb.htm>

The following is a summary of the WCA-1 TD:

The WCA-1 Regulation Schedule that has been in place since 1995 has two conditions under which water supply releases from WCA-1 must be preceded by an equivalent volume of inflow, i.e. replacement water. The conditions are as follows:

A. When the WCA-1 water level elevation (stage) is in Zone A2 or Zone B of the regulation schedule, water supply releases can be made as needed, but must be preceded by an equivalent volume of inflow from Lake Okeechobee (LOK) unless the LOK stage is lower than one foot below the WCA-1 stage.

B. When the WCA-1 water level is in Zone C of the regulation schedule, there can be no water supply releases unless preceded by an equivalent volume of inflow (preceding inflows) from LOK, regardless of LOK level.

The purpose of requiring preceding inflows has been to reduce the frequency of annual dry outs and improve hydrologic conditions for wading birds and aquatic organisms utilizing the LNWR.

Post hurricane Jeanne in 2004 the condition of LKO water was very poor and the requirement for preceding inflows was evaluated by the USACE, LNWR and SFWMD. STA-1E was not up and running and STA-1W suffered damage from the Hurricanes. The staff at the LNWR concluded that it would be better to tolerate some lower water levels in the Refuge rather than force the flow of water through STA-1W during the dry season, further damaging the STA and lengthening its recovery time. It was expected that deviating by not providing make-up water from Lake Okeechobee would reduce the phosphorus load to LNWR and reduce the stress on Storm-water Treatment Area -1 West (STA-1W).

## Summary and information regarding the WCA-1 temporary deviation (TD) implemented 22 April 2005

### Objectives of the temporary deviation:

- A. Minimize the potential increase of phosphorus load.
- B. Maximize recovery of STA-1W by deferring the preceding inflow requirement during water supply operations without increasing environmental stress when in Zones A2 and B of the WCA-1 regulation schedule.
- C. Provide reasonable opportunity for water supply releases without significantly reducing protection of fish and wildlife resources in the Refuge.

Figure 1 is the WCA-1 Regulation Schedule with the language for the interim (TD) regulation schedule. The language was developed as follows:

If Lake Okeechobee stage is above WCA-1 stage or no more than one foot below WCA-1 stage, and the recession rate is greater than 0.2 feet/week, then water supply releases from WCA-1 must be preceded by an equivalent volume of inflow. The recession rate will be based on the average of USGS Site 1-9 and 1-8t.

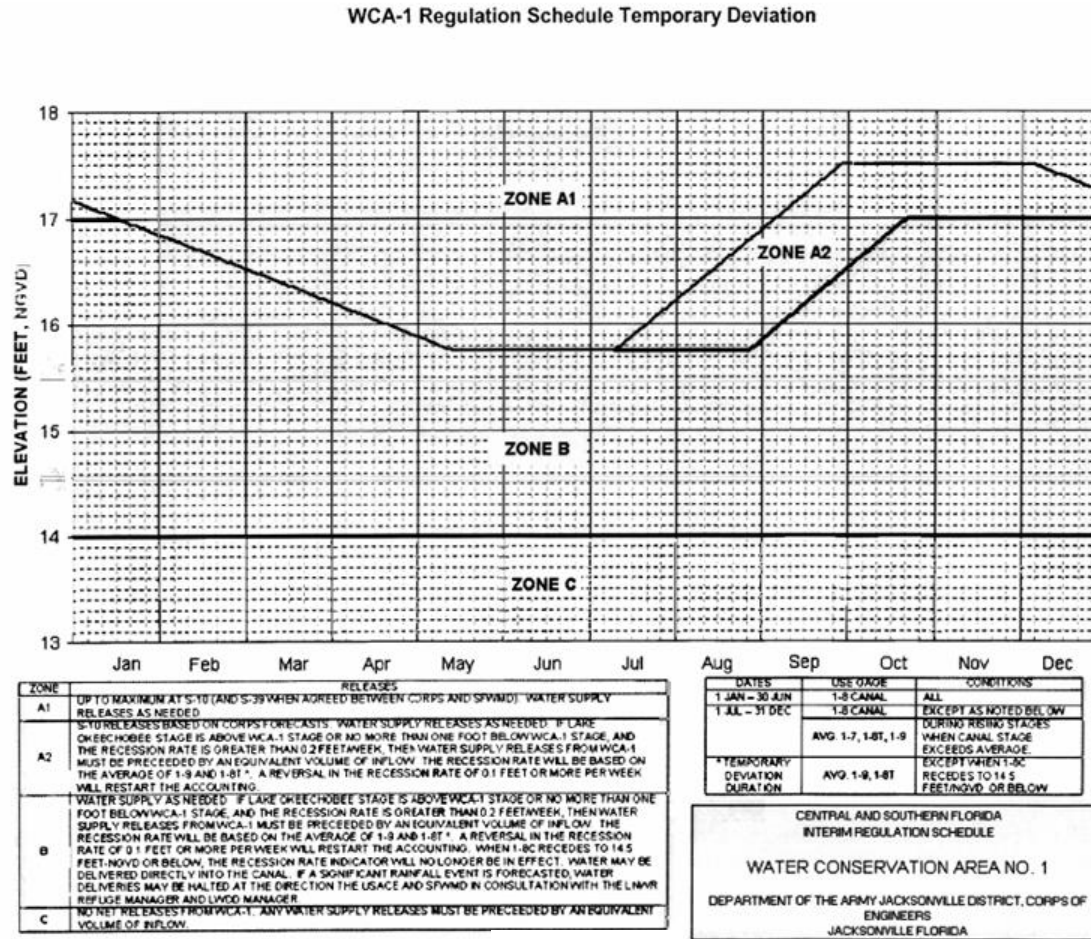
There were a few times when this recession rate was reached (late April – early May of 2006), but the WCA-1 stage was more than a foot above the lake stage and the WCA-1 schedule criteria did not require matching inflows. Thus the recession rate criteria were not relevant in those cases.

Figure 2 is the WCA-1 stage compared with the LOK stage and the USGS Site 1-9 and 1-8t average. The USACE confirmed that since inception of the TD, there have been no events that required preceding inflows. Note that the red hydrograph represents the conditions requiring preceding inflows. This condition occurred prior to the implementation of the TD on 22-April-2005.

In summary, there have been no preceding inflow requirements since the TD was implemented 22 April 2005, because the relationship between the water level in LKO and in WCA-1 has not required preceding inflows.

Summary and information regarding the WCA-1 temporary deviation (TD) implemented 22 April 2005

Figure 1: WCA-1 Regulation Schedule with the language for the interim (TD) regulation schedule.



20Apr2005

Summary and information regarding the WCA-1 temporary deviation (TD) implemented 22 April 2005

Figure 2: WCA-1 stage compared with the LOK stage and the USGS Site 1-9 and 1-8t average.

