

11 **OLD BUSINESS**

a. Water Quality

- i. Status report regarding Lake Okeechobee freshwater releases

**NATURAL RESOURCES DEPARTMENT
MEMORANDUM**

DATE: April 14, 2010

TO: City Manager Judie Zimomra

FROM: Natural Resources Director Robert K. Loflin Ph.D.

RE: Lake Okeechobee Status – high lake levels, brown algae bloom in estuary

The extraordinarily high El Nino driven rainfall during this winters “dry season” has resulted in extremely high Spring water levels in Lake Okeechobee. The Lake has actually risen more than a foot since the beginning of March and stands at 14.74’ with the summer rainy season approaching in two months time. Recent moderate Lake releases averaging 2200 cubic feet per second (cfs), (2800cfs is the point at which significant estuary damage can occur), together with stormwater runoff from local rainfall within the river basin, have already killed oysters and marine grasses in the Caloosahatchee River near downtown Fort Myers. These releases are to be temporarily reduced in the near future to provide a break for estuaries on both sides of the State but the high Lake levels pose a serious risk of future higher volume and more damaging releases.

There is always the potential for a dry late Spring with high evaporation rates and a late start to the rainy season that could ameliorate the current conditions and provide some protective freeboard in the Lake. However, if that does not occur, destructive Lake releases can be expected this summer as the U.S. Army Corps of Engineers, who manages lake levels, tries to take pressure off the deteriorated Herbert Hoover Dike for fear it will fail and flood lakeside communities. This public safety issue has historically always trumped estuary and algae bloom considerations. The nutrient polluted Lake water is expected to exacerbate an existing overgrowth of brown filamentous algae now present in much of the grassbeds in San Carlos Bay and Pine Island Sound. As this brown drift algae is separated from the grassbeds by wind events and starts to drift, there is the potential for brown algae washing up on area beaches from this inshore source this summer.