ORANGE CREEK BASIN TMDLS
AQUATIC PLANT MANAGEMENT DISCUSSION

DESIRED OUTCOMES OF DISCUSSION, WITH RELATED QUESTIONS:

I. UNDERSTANDING OF AGENCY AQUATIC PLANT MANAGEMENT REQUIREMENTS, RESPONSIBILITIES, GOALS, AND ACTIVITIES FOR ORANGE LAKE

- What are each agency's management responsibilities and legislative directives with regard to aquatic plant management (APM) in the lake?
- What are each agency's current and future aquatic plant and/or water quality management goals in the lake?
    - Are these goals being met?
    - Is there consensus among the management entities about how to keep aquatic plant communities in balance?
- What APM activities did each agency conduct from 1996-2000 and from 2000 to 2005 within Orange Lake?

II. UNDERSTANDING OF HOW AQUATIC PLANT MANAGEMENT WAS TAKEN INTO ACCOUNT IN THE DETERMINATION OF IMPAIRMENTS AND TMDL DEVELOPMENT

- Have/how have APM impacts been taken into account in developing the TMDLs for the lakes?
    - Were loadings attributed to APM? If so, were they classified as internal loadings?
    - Have loadings from APM been allocated to other sources in the TMDL?
- Can the TMDL in Orange Lake be achieved without reducing internal loadings?

III. IDENTIFICATION OF UNRESOLVED CONCERNS RELATED TO AQUATIC PLANT MANAGEMENT, AND OF ANY ADDITIONAL INFORMATION NEEDED

- What are the observed impacts of APM on nutrient loadings in Orange Lake?
    - Is documentation available that historic and current FDEP and FFWC aquatic plant management activities have or have not: 1) signficantly affected actual nutrient levels in Orange Lake; 2) otherwise affected the nutrient level measurements that are the basis for this lake's impairment designation and TMDL?
- Does the fact that tussock control does not involve actual removal of the nuisance plants from the lake system create the potential for re-suspension of nutrients in the water column due to plant decomposition?
- What is the impact of aquatic plant management activities relative to other anthropogenic sources and natural causes?
    - How do APM effects compare with the effects of climate extremes seen in the past 10 years, especially drought?
- Do the positive impacts of APM outweigh any nutrient loading impacts?

IV. CONSENSUS ON WHETHER AQUATIC PLANT MANAGEMENT SHOULD BE ADDRESSED IN THE BMAP AND, IF SO, HOW

- Would changes in APM activities (that still accomplish their purpose) result in any significant load reductions for purposes of TMDLs? Are such changes needed?
    - If 100 percent of the external nutrient loading was eliminated, would this total load reduction be discernable given the internal nutrient loading?
    - Can the internal and external nutrient loads be separated and accounted for?
- Does the APM exemption from regulation preclude AP managers from making changes to help achieve TMDLs?
    - What key programmatic changes would be needed to modify APM activities (e.g., policies, funding, rule revisions, statutory changes)?