

ISSUE—INTEGRATION OF UPDATED SITE 10 LOADING INTO LAKE JESUP BMAP ALLOCATIONS
PREPARED FOR LAKE JESUP BMAP TECHNICAL WORKING GROUP
REVISED FOR JULY 24, 2008

The Issue: In the Lake Jesup TMDL, loading from the City of Sanford Site 10 facility was based on event mean concentrations and land use, similar to the rest of the basin. This calculation accounted for basic surface water stormwater loads from Site 10. However, additional phosphorus loading from wastewater and residual application activities at the facility was not included in the TMDL. The Lake Jesup BMAP Working Group felt it necessary to address this load in the BMAP.

Background: To address this issue, the additional TP load from the wastewater/residual application activity was calculated. These calculations resulted in a revised estimated total surface load of approximately 4000 lbs TP/year from the Site. Further calculations demonstrated that approximately 3400 lbs TP/year of this load was due to the wastewater and residuals application alone, with the remaining 600 lbs due to direct surface runoff associated with the land cover. Thus, these loads were treated separately in the allocation process, as noted below. The calculation steps, including updates to the land use coverage, site boundary, and event mean concentrations, are outlined in: "Lake Jesup BMAP Surface Water Load Model Modification History" (May 2008, J. Walter & R. Kelly).

An additional question regarding Site 10 was the extent to which on-site activities could be increasing TP loads to the lake through shallow groundwater. In cooperation with the City of Sanford, Seminole County, and SJRWMD, DEP conducted an on-site evaluation of groundwater quality and flow on the site. This project is summarized in: "Ground Water Assessment Report, Site 10, Lake Jesup Watershed, Sanford Florida" (March 10, 2008, R. Hicks & E. Wade). Total phosphorus loading via groundwater was estimated to be approximately 90 lbs/year – significantly less than the surface load.

Integration in the BMAP: The TP load from Site 10 will be addressed in the BMAP as follows:

- The stormwater TP load (~600 lbs/year) will be included in the quantitative allocation table as part of the City of Sanford's obligation. This load will be used in calculating the load-weighted allocation responsibilities by entity.
- The wastewater/residuals TP loading from Site 10 (~3400 lbs TP/year) will not be included in the quantitative allocation table. Because this load was not originally considered in the TMDL, it is inappropriate to include it as part of the allocation calculations that affect all entities. However, this load will be acknowledge in the text of the BMAP alongside a description of the actions the City has in progress and planned to address these loads (e.g. biosolids facility).
- It is expected that activities conducted by the City to address surface loads from Site 10 will also decrease the elevated groundwater loading. Thus, the groundwater load calculation project will be discussed in the BMAP text, but will not be included in the quantitative allocation table.
- The City will conduct monitoring on-site to evaluate the benefits of their activities and provide better data on site pollutant loading for future iterations of the TMDL. These monitoring commitments will be included with those of other entities in the BMAP monitoring strategy.

Implications:

- Because the additional load is not included in the allocation table, pollutant load reductions achieved through the City's efforts to better manage wastewater and residual applications at Site 10 will not be eligible for any type of credit trading in the BMAP. The City will have the same opportunities as other jurisdictions to address their load reduction requirements.
- The City will not be obligated by the BMAP to achieve a quantitative percent reduction for their wastewater/residuals management efforts at Site 10.
- Project implementation (e.g. elimination of sludge disposal) and monitoring commitments are being integrated into the facility's revised NPDES permit (Sanford North WRF, Permit #FL0020141).