



Banana River Lagoon Basin Management Action Plan March 12, 2010

Detailed Allocation Procedure

Introduction

The Florida Department of Environmental Protection (FDEP) has adopted a Total Maximum Daily Load (TMDL) for total nitrogen (TN) and total phosphorus (TP) in the main stem of the Indian River Lagoon (IRL) and Banana River Lagoon (BRL). Due to the large extent of the basin, FDEP has determined the best approach to develop the TMDL implementation plan, the basin management action plan (BMAP), is to split the basin into three subbasins: (1) BRL; (2) North IRL; and (3) Central IRL. A separate BMAP will be developed for each subbasin.

According to Section 403.067, Florida Statutes (F.S.), BMAPs may provide for detailed allocations, phased implementation, and give load reduction credits to responsible parties that have implemented load reductions. In order to implement the TN and TP load reductions identified in the TMDL, the BRL BMAP will include detailed allocations to responsible parties in the BRL basin. Detailed allocations are appropriate in the IRL due to the geographic and political scale of the basin. The IRL main stem TMDL identified TN and TP allocations to point source facilities through existing permits by setting a maximum allowable discharge to each individual facility. The TMDL did not specify detailed allocations to the nonpoint sources; rather the TMDL assigned a percent reduction of TN and TP to achieve the seagrass depth targets. Through the BMAP process, detailed allocations will be made to the appropriate nonpoint sources.

Entities in the BRL basin include one county, five cities, Florida Department of Transportation (FDOT) District 5, three federal facilities, and agriculture. The allocation procedure equitably assigns pollutant load reductions among the entities by considering individual jurisdictional loads.

Methodology for Allocations

The steps to calculate each entity's allocation for the BMAP are a Geographic Information System (GIS) based process, which uses the input data to the TMDL model to account for the loads from each jurisdiction. The Pollutant Load Screening Model (PLSM) shapefile for the BRL will be used as the base map. This shapefile contains the land use/land cover code associated with the 2000 land use, runoff coefficients (ROs), event mean concentration (EMCs), and the 30-year average rainfall.

From the BRL shapefile, the following areas will be clipped sequentially from the base map, saved as its own new shapefile, and then erased from the base map shapefile:

- FDOT roads and right-of-ways (based on information provided by FDOT);
- All areas with land use/land cover codes that have 0 EMCs (i.e., land uses assigned no load generation);
- Areas with agricultural land uses; and
- All areas occupied by cities and federal facilities, each to its own jurisdictional boundary.

Once these areas have been clipped and erased, the remaining base map shapefile will be the county responsibility.

Finally, each entity's (including counties) municipal separate storm sewer system (MS4) boundary will be clipped and erased from their jurisdictional boundary resulting in two files: (1) a load allocation (non-MS4 allocation); and (2) a wasteload allocation (MS4 allocation), where appropriate. This distinction of allocations is to assign the load reductions to the appropriate mechanism. The loads associated within the MS4 area will be linked to the MS4 permit through the self-implementation language within the permit; therefore, enforcement for project implementation to achieve necessary reductions will also occur through the permit. The non-MS4 required reductions and projects to achieve the reductions will be enforced through the Secretarial adopted BMAP. In other basins, stakeholders have requested the split between the MS4 and non-MS4 areas to limit their permit responsibility to the MS4 area. However, each entity is responsible for meeting both their MS4 and non-MS4 required reductions within the BMAP.

Calculations

The shapefiles and associated model data will be used to calculate the BRL basin's 2000 loading and each entity's 2000 loading. Then, using the overall load-generating acres in the basin, a target load per acre will be calculated using the target load for the BRL basin from the TMDL. The allowable load for each entity will be calculated by multiplying its total load-generating acres by the target load per acre. The required reduction for each entity is then the entity's 2000 loading minus its allowable load.

As part of the allocation calculation process, a *de minimus* loading value for TN and TP will be determined. Any entity that has 2000 starting point loads below the *de minimus* values will not receive an allocation in this iteration of the BRL BMAP. However, both the TN and TP starting point loads must be below the *de minimus* values in order to not receive an allocation. FDEP is currently determining the appropriate *de minimus* loading values for the BRL.

Next Steps

After, jurisdictional boundaries and MS4 boundaries (if applicable) are received and/or confirmed by the entities, FDEP will begin the GIS processing steps to create the shapefiles needed for the allocation calculations. Once the GIS files are available, the allocations to each responsible entity will be determined, and any entities that meet the *de minimus* requirements will be noted and removed from the allocations in this iteration of the BRL BMAP.