APPENDIX A. TMDL PROGRAM OVERVIEW

TMDLs are developed, allocated, and implemented through a **watershed management approach** (managing water resources within their natural boundaries) that addresses the state's 52 major hydrologic basins in five groups, on a rotating schedule. **Table A-1** shows the hydrologic basins within each of the five groups, with the DEP District office of jurisdiction. **Table A-2** illustrates the repeating five-year basin rotation schedule.

TABLE A-1. MAJOR HYDROLOGIC BASINS BY GROUP AND DEP DISTRICT OFFICE

DEP District	*Group 1 Basins*	*Group 2 Basins*	*Group 3 Basins*	*Group 4 Basins*	*Group 5 Basins*
NW	Ochlockonee-St. Marks	Apalachicola-Chipola	Choctawhatchee-St. Andrews Bay	Pensacola Bay	Perdido Bay
NE	Suwannee	Lower St. Johns		Nassau-St. Marys	Upper East Coast
Central	Ocklawaha	Middle St. Johns	Upper St. Johns	Kissimmee	Indian River Lagoon
SW	Tampa Bay	Tampa Bay Tributaries	Sarasota Bay-Peace-Myakka	Withlacoochee	Springs Coast
S	Everglades West Coast	Charlotte Harbor	Caloosahatchee	Fisheating Creek	Florida Keys
SE	Lake Okeechobee	St.Lucie-Loxahatchee	Lake Worth Lagoon-Palm Beach Coast	Southeast Coast Biscayne Bay	Everglades

Each group will undergo a cycle of five phases on a rotating schedule:

Phase 1*:* Preliminary evaluation *of water quality*
Phase 2*:* Strategic monitoring and assessment *to verify water quality impairments*
Phase 3*:* Development and adoption of TMDLs *for waters verified as impaired*
Phase 4*:* Development of basin management action plan *(BMAP) to achieve the TMDL*
Phase 5*:* Implementation *of the BMAP and monitoring of results*

TABLE A-2. BASIN ROTATION SCHEDULE FOR TMDL DEVELOPMENT AND IMPLEMENTATION

YEAR	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10
	PHASES OF THE CYCLE					PHASES OF THE CYCLE				
GROUP 1	1	2	3	4	5	1	2	3	4	5
GROUP 2		1	2	3	4	5	1	2	3	4
GROUP 3			1	2	3	4	5	1	2	3
GROUP 4				1	2	3	4	5	1	2
GROUP 5					1	2	3	4	5	1
	1st Five-year Cycle – High-priority Waters					2nd Five-year Cycle – Medium-Priority Waters				

**** Projected years for phases 3, 4, and 5 may change due to accelerated local activities, length of plan development, legal challenges, etc*.**

TMDL development and implementation are ongoing, cyclical processes, as illustrated in **Table A-2**. DEP will re-evaluate impaired waters every five years to determine whether improvements are being achieved, and to refine loading estimates and TMDL allocations using new data. If any changes in a TMDL are required, the applicable TMDL rule will be revised, thereby providing a point of legal entry for interested parties. Changes to a TMDL would prompt revisions to the applicable BMAP, which will be revisited at least every five years and modified as necessary.

APPENDIX . TARGET POLLUTANTS ACROSS FLORIDA

Table __ -1 summarizes the waters impaired by various causes for each waterbody type in the Group 1 - 4 basins *(see **Appendix A**)*; the **principal causes of impairment** are as follows:

- Out of 825 river/stream segments assessed: Dissolved oxygen (DO), fecal coliform, chlorophyll, fish advisories for mercury, and total coliform.
- Out of 286 lake segments assessed: Trophic State Index (TSI), fish advisories for mercury, DO, historical TSI, and total coliform.
- Out of 354 estuarine segments assessed: fish advisories for mercury, chlorophyll, DO, and fecal coliform.
- Out of 115 coastal segments assessed: fish advisories for mercury and dioxin.

TABLE I -1. SUMMARY OF IMPAIRMENTS IN GROUP 1- 4 BASINS

Parameter*	Rivers/Streams		Lakes		Estuaries		Coastal Waters	
	Number of Waterbodies	Miles Impaired	Number of Waterbodies	Miles Impaired	Number of Waterbodies	Miles Impaired	Number of Waterbodies	Miles Impaired
DO	258	2,288	31	119,296	64	461	2	1
Fecal Coliform	153	1,132	5	4,416	54	641	5	1
Chlorophyll	105	1,073	7	29,696	74	647		
Mercury–Fish	46	708	25	92,352	40	772	97	1,170
Total Coliform	78	673	5	24,768	22	110		
Historical Chlorophyll	28	503	5	1,856	23	191		
Iron	30	387	5	26,752	15	168		
Turbidity	16	212	2	704				
Lead	15	97	9	10,048	9	137		
Cadmium	1	15	1	5,248	2	67		
Unionized Ammonia	8	40	11	22,976				
pH	24	311			3	5		
Biology	9	211			2	57		
Alkalinity	9	130						
Total Suspended Solids	10	96						
Conductance	9	93						
Copper	8	50			15	109		
Dioxins-Fish	1	48			20	678	7	162
Dissolved Solids	3	38						
BOD 5-Day	2	32						
TSI			169	729,216				
Historical TSI			7	30,592				
Silver			1	13,760	2	67		
Selenium					2	67		
Thallium					2	67		
Nickel					3	29		

Source: DEP 2006 305(b) Report

* Similar causes of impairments are anticipated for the Group 5 basins.

Note: Minimum State surface water criteria (Chapter 62-302.500, F.A.C.) provide that metals shall be measured as total recoverable metal, with specified exceptions.

APPENDIX __. SUMMARY OF STATUTORY PROVISIONS GUIDING BMAP DEVELOPMENT AND IMPLEMENTATION

SECTIONS 403.067(6) AND (7), FLORIDA STATUTES - *Summary of Excerpts*

ALLOCATIONS

- The TMDL shall include reasonable and equitable allocations of the TMDL between or among point and nonpoint sources that will alone, or in conjunction with other management and restoration activities, provide for the attainment of pollutant reductions established pursuant to paragraph (a) to achieve applicable water quality standards.
- The allocations may establish the maximum amount of the pollutant that may be discharged or released in combination with other discharges or releases.
- Allocations may also be made to individual basins and sources or as a whole to all basins and sources or categories of sources of inflow to the water body or water body segments.
- An initial allocation of allowable pollutant loads may be developed as part of the TMDL; in such cases detailed allocations to specific point sources and categories of nonpoint sources shall be established in the basin management action plan.
- The initial and detailed allocations shall be designed to attain pollutant reductions established pursuant to paragraph (a) and shall be based on consideration of:
    1. Existing treatment levels and management practices;
    2. Best management practices established and implemented pursuant to pargraph (7)(c);
    3. Enforceable treatment levels established pursuant to state or local law or permit;
    4. Differing impacts pollutant sources may have on water quality;
    5. The availability of treatment technologies, management practices, or other pollutant reduction measures;
    6. Environmental, economic, and technological feasibility of achieving the allocation;
    7. The cost benefit associated with achieving the allocation;
    8. Reasonable timeframes for implementation;
    9. Potential applicability of any moderating provisions such as variances, exemptions, and mixing zones; and
    10. The extent to which non-attainment of water quality standards is caused by pollution sources outside of Florida, discharges that have ceased, or alterations to water bodies prior to the date of this act.

GENERAL IMPLEMENTATION

- **DEP is the lead agency** in coordinating TMDL implementation, through existing water quality protection programs.
- **Application of a TMDL by a water management** district does not require WMD adoption of the TMDL.
- **TMDL implementation may include**, but is not limited to:
    - Permitting and other existing regulatory programs
    - Non-regulatory and incentive-based programs
    - Other water quality management and restoration activities, such as Surface Water Improvement and Management (SWIM) plans or **basin management action plans**
    - Pollutant trading or other equitable economically based agreements
    - Public works
    - Land acquisition

BASIN MANAGEMENT ACTION PLAN DEVELOPMENT

- DEP may develop a basin management action plan that addresses some or all of the watersheds and basins tributary to a TMDL waterbody.
- A basin management action plan **shall**:
  - Integrate appropriate management strategies available to the state through existing water quality protection programs.
  - Equitably allocate pollutant reductions to individual basins, all basins, each identified point source, or category of nonpoint sources, as appropriate.
  - Identify the mechanisms by which potential future increases in pollutant loading will be addressed.
  - Specify that for nonpoint sources for which BMPs have been adopted, the initial requirement shall be BMPs developed pursuant to paragraph (c).
  - Establish an implementation schedule.
  - Establish a basis for evaluating plan effectiveness.
  - Identify feasible funding strategies.
  - Identify milestones for implementation and water quality improvement, and an associated water quality monitoring component to evaluate reasonable progress over time.
  - Be adopted in whole or in part by DEP Secretarial Order, subject to chapter 120.
- A basin management action plan **may**:
  - Give load reduction credits to dischargers that have implemented load reduction strategies (including BMPs) prior to the development of the BMAP. (*Note: this assumes the related reductions were not factored into the applicable TMDL*.)
  - Include regional treatment systems or other public works as management strategies.
  - Provide for phased implementation to promote timely, cost-effective actions.
- An assessment of progress in achieving milestones shall be conducted every 5 years and the basin management action plan revised, as appropriate, in cooperation with basin stakeholders, and adopted by secretarial order.
- DEP shall assure that key stakeholders are invited to participate in the basin management action plan development process, holding at least one noticed public meeting in the basin to receive comments, and otherwise encouraging public participation to the greatest practicable extent.
- A basin management action plan shall not supplant or alter any water quality assessment, TMDL calculation, or initial allocation.

BASIN MANAGEMENT ACTION PLAN IMPLEMENTATION

- NPDES Permits
  - Management strategies related to a discharger subject to NPDES permitting shall be included in subsequent applicable NPDES permits or permit modifications when the permit expires (is renewed), the discharge is modified (revised), or the permit is reopened pursuant to an adopted BMAP.
  - Absent a detailed allocation, TMDLs shall be implemented through NPDES permit conditions that include a compliance schedule. The permit shall allow for issuance of an order adopting the BMAP within five years. (***Note**: Intended to apply to individual wastewater permits – not MS4s*)
  - Once the BMAP is adopted, the permit shall be reopened, as necessary, and permit conditions consistent with the BMAP shall be established.
  - Upon request by a NPDES permittee, DEP may establish individual allocations prior to the adoption of a BMAP, as part of a permit issuance, renewal, or modification (revision).

- To the maximum extent practicable, MS4s shall implement a TMDL or BMAP through the use of BMPs or other management measures.

SECTION 403.067(7), FLORIDA STATUTES - *Summary of Excerpts (cont.)*

  - A BMAP does not take the place of NPDES permits or permit requirements.
  - Management strategies to be implemented by a DEP permittee shall be completed according to the BMAP schedule, which may extend beyond the 5-year term of an NPDES permit.
  - Management strategies are not subject to challenge under chapter 120 when they are incorporated in identical form into a NPDES permit or permit modification (revision).
- Management strategies assigned to nonagricultural, non-NPDES permittees (state, regional, or local) shall be implemented as part of the applicable permitting programs.
- Nonpoint source dischargers (e.g., agriculture) included in a BMAP shall demonstrate compliance with the applicable TMDLs by either implementing appropriate BMPs established under paragraph 7(c), or conducting water quality monitoring prescribed by **DEP or a WMD**. (***Note**: this is not applicable to MS4s, as they are considered point sources under the federal Clean Water Act and TMDL Program*.)
  - Failure to implement BMPs or prescribed water quality monitoring may be subject to **DEP or WMD** enforcement action.
- Responsible parties who are implementing applicable BMAP strategies shall not be required to implement additional pollutant load reduction strategies, and shall be deemed in compliance with this section. However, this does not limit DEP's authority to amend a BMAP.

BEST MANAGEMENT PRACTICES

- DEP, in cooperation with WMDs and other interested parties, may develop interim measures, BMPs, or other measures for non-agricultural nonpoint sources to achieve their load reduction allocations.
  - These measures may be adopted by **DEP or WMD** rule. If adopted, they shall be implemented by those responsible for non-agricultural nonpoint source pollution.
- DACS may develop and adopt by rule interim measure, BMPs, or other measures necessary for agricultural pollutant sources to achieve their load reduction allocations.
  - These measures may be implemented by those responsible for agricultural pollutant sources. **DEP, the WMDs, and DACS** shall assist with implementation.
  - In developing and adopting these measures, DACS shall consult with DEP, DOH, the WMDs, representatives of affected farming groups, and environmental group representatives.
  - The rules shall provide for a notice of intent to implement the practices and a system to ensure implementation, including recordkeeping.
- Verification of Effectiveness and Presumption of Compliance -
  - DEP shall, at representative sites, verify the effectiveness of BMPs and other measures adopted by rule in achieving load reduction allocations.
  - DEP shall use best professional judgment in making the initial verification of effectiveness, and shall notify **DACS and the appropriate WMD** of the initial verification prior to the adoption of a rule proposed pursuant to this paragraph.
  - Implementation of rule-adopted BMPs or other measures initially verified by DEP to be effective, or verified to be effective by monitoring at representative sites, provides a presumption of compliance with state water quality standards

for those pollutants addressed by the practices.

- Reevaluation –
  - Where water quality problems are demonstrated despite implementation, operation, and maintenance of rule-adopted BMPs and other measures, **DEP, a WMD, or DACS**, in consultation with DEP, shall reevaluate the measures. If the practices require modification, the revised rule shall specify a reasonable time period for implementation.