



# **Developing and Implementing TMDL Implementation Plans**

## **DEQ Internal Management Directive**

**REVIEW DRAFT  
MARCH 15, 2006**

An IMD establishes a presumptive approach that should be used in the routine implementation of a program. However, IMDs are not rule and do not create requirements on DEQ personnel or on members of the regulated community. DEQ may deviate from the IMD in unusual situations that present fact patterns that were not contemplated at the time an IMD was adopted. These excursions from the IMD should generally be done with the knowledge and approval of the other members of the management team.

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## 1. Purpose of this Document

### Purpose

This Internal Management Directive (IMD) describes DEQ's expectations for agency staff relative to the requirements for developing and implementing sector-specific or source-specific Total Maximum Daily Load (TMDL) Implementation Plans as laid out in OAR 340-042-0080(3). "Sector-Specific Implementation Plan" or "Source-Specific Implementation Plan" in the context of a TMDL means a plan for implementing a Water Quality Management Plan for a specific sector or source not subject to permit requirements in ORS 468B.050" (OAR 340-042-0030(11)). As such, this IMD covers plans that address nonpoint sources of pollution not covered under a permit. These plans are required from Designated Management Agencies (DMA). A DMA is a federal, state or local governmental agency that has legal authority over a sector or source contributing pollutants, and is identified as such by the Department of Environmental Quality in a TMDL. The Departments of Forestry and Agriculture are exempted from submitting specific Implementation Plans as activities are regulated under other statutes and rules.

DEQ anticipates revising this document from time to time as our experience with TMDL implementation hones our thinking on the most effective approaches. For questions or comments on this IMD, contact Eric Nigg (503-229-5325).

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**Background**

Total Maximum Daily Loads (TMDLs) get us only part of the way to resolving Oregon's water quality problems. TMDLs describe what needs to happen to correct water quality problems, but water quality improvements won't actually happen unless actions are taken to resolve those problems.

Many different entities share responsibility for implementing TMDLs. These entities are identified in the TMDL and are expected to develop and implement TMDL Implementation Plans. For certain sources and sectors, TMDL Implementation Plans are established through a prescribed approach, such as the following:

- Municipal and industrial point sources implement the TMDL through their NPDES wastewater permits. DEQ will revise permits as necessary to incorporate the Waste Load Allocation set in a TMDL. A process for addressing TMDLs has been identified in MS4 storm water permits.
- TMDLs are implemented on agricultural lands through Agricultural Water Quality Management Area Plans (Senate Bill 1010 plans) under the leadership of the Oregon Department of Agriculture.
- TMDLs are implemented on state and private forest lands through the Oregon Forest Practices Act under the leadership of the Oregon Department of Forestry.

Other entities are required to develop and implement a TMDL Implementation Plan following the issuance of a TMDL. TMDL Implementation Plans address sources of pollution that are not otherwise covered by any of the mechanisms described above. This document explains what a TMDL Implementation Plan should contain.

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## 2. General Considerations

### Building Upon other Water Protection Efforts

TMDL Implementation Plans describe the actions that municipalities, land managers and others will undertake to reduce pollution in order to help restore and protect water quality.

Many of these entities already have plans or strategies in place that help prevent or control water pollution, such as Storm Water Management Plans or road maintenance plans, but these plans may not address all of the TMDL pollutants or cover all relevant sources of pollution. The TMDL Implementation Plan should *build* upon these efforts, not duplicate or repeat them. The Plan should reference those activities and describe any additional strategies that will be undertaken in order to achieve the pollution reductions described in the TMDL.

The questionnaire in Appendix A can be used to identify planning and management activities already underway that might support the TMDL Implementation effort and be incorporated as actions within the TMDL Implementation Plan.

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### Long Term Vision

The centerpiece of a TMDL Implementation Plan is a list of ongoing and planned activities that will be undertaken to achieve the TMDL pollutant reductions. This list is accompanied by a timeline for implementing the actions and methods for assessing effectiveness.

The Implementation Plan must also indicate how the entity will continue efforts over the long term to further reduce pollution contributions (if necessary to fully achieve the TMDL requirements) and ensure the desired levels will be maintained. Long term success is largely dependent upon having adequate pollution prevention mechanisms in place (e.g., erosion control BMPs, riparian protection strategies, storm water management strategies, etc.) and a well-defined process for adaptive management. Through adaptive management, DEQ expects that the adequacy of these activities will be monitored and modified over time as needed.

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**Identifying  
Appropriate  
Strategies**

Depending upon the pollutant source being addressed, the “appropriate” strategy will vary. Some strategies can be implemented immediately (e.g., changing BMPs for maintaining roadside ditches) while others will require more evaluation before an effective strategy can be determined (e.g., determining whether bacteria is coming from urban or agricultural runoff, septic systems or wildlife). Some strategies may require a significant public process (e.g., adopting a new ordinance or including storm water management facilities in a Capital Improvement Plan) while others can be undertaken relatively quickly (e.g., education and outreach efforts).

To the extent possible given staffing levels and the amount of demand, DEQ will provide resource materials and technical assistance to those needing help with identifying management strategies and developing their TMDL Implementation Plan.

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**Progress, Not  
Perfection**

DEQ does not expect everyone to know all the answers when they submit their TMDL Implementation Plan to DEQ. Many of the water pollution problems being addressed through TMDLs will take several years to several decades to be resolved, and it is not always possible to determine exactly what on-the-ground efforts it will take to get there.

For this reason, DEQ does not expect that TMDL Implementation Plans will describe in great detail how the management strategies will achieve the load allocation for each pollutant. However, DEQ does expect TMDL Implementation Plans to (1) identify known or suspected sources of each pollutant under the entity’s jurisdiction, (2) identify the actions they are taking, or plan to take, to address each of those sources, and (3) describe how they are going to gauge effectiveness over time.

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### 3. TMDL Implementation Planning Requirements

**Who is required to develop and submit a Plan?**

The Water Quality Management Plan (WQMP) section of a TMDL identifies the entities that are expected to develop and implement a TMDL Implementation Plan if their TMDL responsibilities are not already addressed through a prescribed approach. This most commonly includes Designated Management Agencies\* such as cities, counties, the U.S. Forest Service and the Bureau of Land Management, but may also apply to other DMAs that manage a significant tract(s) of land within the TMDL boundaries or are otherwise identified as having a significant role in achieving water quality improvements. These could include Irrigation or Drainage Districts, U.S. Fish and Wildlife Service (wildlife refuges), the National Park Service or the Corps of Engineers or Bureau of Reclamation (for federal dams). DEQ may also require TMDL Implementation Plans from non-governmental entities if their actions are found to be a significant contributor to water quality problems.

DEQ recognizes that the level of responsibility for preventing water pollution varies greatly from one entity to the next, as does their capacity to respond to regulatory requirements. As such, DEQ may elect to exempt specific entities from Implementation Plan requirements or delay their due date, or work with smaller entities to develop a customized TMDL Implementation Plan suited to the magnitude of their contribution to the problem. These determinations will be made as part of the TMDL development process and specified in the WQMP. However, an exemption from the plan requirement does not negate the responsibility to take appropriate steps to reduce or prevent pollutants from entering the waterways.

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### 4. Plan Submittal

**When is the Plan due?**

The due date for the TMDL Implementation Plans is described in the WQMP section of each TMDL. Typically, the due date for submitting completed Plans is between 12 and 18 months following DEQ's approval of a TMDL.

The beginning of this 12-18 month period coincides with the date DEQ sends a letter to affected parties and others following the issuance of a TMDL (required by rule to be sent within 20 days of issuing a TMDL). EPA's timeline for approving a TMDL does *not* affect the TMDL Implementation Plan timeline.

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**What does DEQ do once it receives a Plan?** DEQ will acknowledge receipt of the plan and will strive to review it within 60 days. If the plan cannot be reviewed within 60 days, DEQ will let the entity know when the review will be undertaken.

The plan will be reviewed to ensure that it includes all required components and adequately addresses known or suspected sources of pollution under the entity's jurisdiction. If the plan is found to be unsatisfactory, DEQ will identify which portions of the plan are considered inadequate, return the plan and identify a timeframe for resubmitting the plan. To the extent possible, DEQ will provide resource materials and technical assistance to those needing help to complete the plan.

After receiving a satisfactory plan, DEQ will send the entity a letter of approval. The approval letter may also include recommendations for additional actions the entity should consider or undertake, or DEQ's expectations of things to be addressed in a future update of the plan.

## 5. Components of an Implementation Plan

**What must a Plan cover?** The required components of a TMDL Implementation Plan are described in the TMDL rule. The language from the rules is excerpted below, and DEQ's expectations relative to these requirements follow.

In addition, a sample outline for a TMDL Implementation Plan is provided in Appendix B.

### **OAR 340-042-0080(3)**

*(3) Persons, including DMAs other than the Oregon Department of Forestry or the Oregon Department of Agriculture, identified in a WQMP as responsible for developing and revising sector-specific or source-specific implementation plans must:*

*(a) prepare an implementation plan and submit the plan to the Department for review and approval according to the schedule specified in the WQMP.*

*The implementation plan must:*

- (A) Identify the management strategies the DMA or other responsible person will use to achieve load allocations and reduce pollutant loading;*
- (B) Provide a timeline for implementing management strategies and a schedule for completing measurable milestones;*
- (C) Provide for performance monitoring with a plan for periodic review and revision of the implementation plan;*
- (D) To the extent required by ORS 197.180 and OAR chapter 340, division 18, provide evidence of compliance with applicable statewide land use requirements; and*
- (E) Provide any other analyses or information specified in the WQMP.*

*(b) Implement and revise the plan as needed*

**Component #1**  
**Management**  
**Strategies**  
**(OAR 340-042-**  
**0080(3)(a)(A) &**  
**(B))**

A TMDL Implementation Plan must indicate how the entity will reduce pollution in order to address load allocations. Entities required to submit a TMDL Implementation Plan are not responsible for pollution arising from land management activities that occur outside of their jurisdictional authority.

The matrix in Appendix C is intended to guide an entity through the process of identifying strategies and establishing timelines (including expected completion dates for major milestones), benchmarks, etc. DEQ encourages the use of this matrix for organizing this element of the Implementation Plan. Additional details on each strategy can be included in a narrative portion of the Plan.

In some instances, it may be helpful (or necessary if resources are limited) to prioritize among the strategies. This might mean addressing some pollution sources before others or focusing implementation efforts in a particular geographic area. To the extent possible, the selection of priorities should be driven by the greatest opportunities for achieving pollutant reductions.

**Component #2**  
**Performance**  
**Monitoring**  
**Plan (OAR 340-**  
**042-0080(3)(a)(C))**

Performance Monitoring is defined in the TMDL rule:

*“Performance Monitoring” means monitoring implementation of management strategies, including sector-specific and source-specific implementation plans, and resulting water quality changes. OAR 340-042-0030 (7)*

Thus, two types of monitoring are expected to be addressed in Implementation Plans – implementation monitoring (*Were specified management actions implemented?*) and effectiveness monitoring (*Are the selected strategies effectively reducing pollutant loading?*).

***Implementation***  
***Monitoring and***  
***Reporting***

Entities will track implementation activities and report to DEQ annually on progress and accomplishments. The TMDL Implementation Plan should include a statement to this effect to demonstrate the entity’s intent to do so.

If an entity uses the TMDL Implementation tracking matrix shown in Appendix C to describe their TMDL implementation activities, one simple way to satisfy the reporting requirement is to fill in the “status” column for each strategy and submit the spreadsheet to DEQ.

*Effectiveness Evaluation* For practical reasons, there is not a one-size-fits-all expectation for evaluating effectiveness.

Many larger jurisdictions are already monitoring water quality and/or taking actions to evaluate the effectiveness of their pollution reduction efforts. These activities may have been undertaken voluntarily or required as part of a NPDES Permit or other regulatory requirement. These jurisdictions will be expected to describe how their monitoring and evaluation strategies will be used to assess the effectiveness of their TMDL implementation efforts.

Entities that are not able to undertake an evaluation of effectiveness on their own will be expected to participate in discussions with DEQ and other entities in the area (e.g., watershed councils, Soil and Water Conservation Districts, other municipalities, etc.) to help identify effectiveness monitoring needs and discuss how resources could be pooled to implement an effectiveness evaluation strategy for their area.

When required as part of a TMDL Implementation Plan, the Effectiveness Evaluation Plan should identify the questions the entity seeks to answer, the methodology for collecting and analyzing data to get to those answers, and who's responsible for collecting, analyzing and reporting monitoring information. If water quality monitoring is a component of the effectiveness assessment, these activities should be conducted in conformance with DEQ's Quality Assurance guidelines and monitoring data should be evaluated relative to Oregon's water quality standards.

All entities are encouraged to consult with DEQ to ensure their monitoring and evaluation strategies do not duplicate other efforts or involve unnecessary data collection.

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**Component #3**  
**Adaptive**  
**Management**  
**(OAR 340-042-**  
**0080(3)(a)(C))**

All entities are expected to evaluate their NPS TMDL Implementation Plan every five years (or some other interval acceptable to DEQ) following submittal. The evaluation does not require additional monitoring or measurements. Rather, the evaluation should use existing data and other information to evaluate the effectiveness of the Plan relative to the pollution reduction goals. The report should describe what information was used in the evaluation, the outcome of the evaluation and the basis for this reasoning. If the evaluation indicates that the Plan is not likely to be adequate to meet the pollution reduction goals, the entity must describe how they will modify their Plan or undertake other efforts to achieve these goals, and the timeline for accomplishing this.

Entities are also expected to review and revise their TMDL Implementation Plan as needed following DEQ's reevaluation of the TMDL.

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**Component #4**  
**Evidence of**  
**Compliance**  
**with Land Use**  
**Requirements**  
**(OAR 340-042-**  
**0080(3)(a)(D))**

In most cases, an TMDL Implementation Plan must identify applicable acknowledged local comprehensive plan provisions and land use regulations and explain how the implementation plan is consistent with these local planning requirements or what steps will be taken to make the local planning requirements consistent with the implementation plan. This will ordinarily require cooperation with the planning officials with jurisdiction over the area if the DMA is not a city or county. In rare cases, the DMA may need to work with DEQ staff to prepare land use planning goal findings.

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**Component #5**  
**Additional**  
**Requirements**  
**(OAR 340-042-**  
**0080(3)(a)(E))**

If DEQ identifies any additional requirements for a certain entity in the WQMP, those must be addressed in the TMDL Implementation Plan.

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## 6. Implementing the Plan

**Implementation**  
**Responsibilities**

All entities required to submit a TMDL Implementation Plan are expected to “implement and revise the plan as needed.” (OAR 340-042-0080(3)(b)). If this does not occur, DEQ has the regulatory authority to take enforcement action to compel the entity to do so. However, DEQ will first make every attempt to work collaboratively with the entity to achieve compliance.

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**Change**  
**Happens**

DEQ expects that each TMDL Implementation Plan, and the commitments and timelines described within it, is believed by its authors to include strategies and timelines that are realistic and implementable, and that the actions will ultimately be successful in meeting the pollution reduction goals. However, pollution prevention is an uncertain science and the pathway to implementing some of these strategies can also be uncertain due to availability of funds, amount of public support, etc.

As such, DEQ expects that the entity will implement the plan to the best of its abilities but acknowledges that reasonable and prudent judgment will make adjustments or revisions necessary from time to time. The entity should keep DEQ apprised of the changes. In most instances, it will be adequate to wait for the next 5 year review of the Plan to revise the Plan to reflect the changes.

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## APPENDIX A: Inventory of Water Resource Management Activities

The following questions are intended to help local governments identify things they are already doing that may help address some of the Implementation Plan requirements.

### PLANNING

Identify which part(s) of your Comprehensive Plan address water quality, non-point source pollution, stormwater, riparian zones, or water pollution control?

What steps has your jurisdiction taken to enact and/or comply with Statewide Land Use Planning Goals 5 and 6?

What zoning ordinances and/or overlays has your jurisdiction enacted that relate to water quality? This may include, but is not limited to, ordinances that do any of the following:

- require erosion and/or sediment control at construction sites?
- require retention of vegetation and/or re-planting at construction sites?
- limit impervious surfaces in new development?
- limit development in floodplains?
- require septic system inspection and maintenance?
- protect riparian areas?

Has your jurisdiction participated in any of the following planning efforts?

- Source Water Assessment
- Drinking Water Protection Plan
- Watershed Management Plan (may be in partnership with a local watershed council)
- Other--Please Specify: \_\_\_\_\_

### STORMWATER

Does your jurisdiction have a NPDES Stormwater Management Permit?

Does your jurisdiction have any Underground Injection Control facilities (i.e., sumps)? If so, are they covered under a UIC General Permit or Individual Permit?

Does your jurisdiction have any stormwater treatment facilities? If yes, what kind and how many?

Has your jurisdiction completed a Stormwater Management Plan?

Has your jurisdiction's public works or parks department constructed any swales, detention ponds/basins, or artificial wetlands for managing storm water? If yes, please specify.

Does your jurisdiction encourage or require private developers to construct swales, detention ponds/basins, or artificial wetlands?

### POLLUTION CONTROL

Does your jurisdiction have any voluntary or mandatory inspection or maintenance program for onsite septic systems?

Does your jurisdiction have a program to detect illegal discharges into waterways?

Has your jurisdiction implemented any projects intended to help control nonpoint source pollution?

**OUTREACH AND EDUCATION**

What resources does your jurisdiction provide that encourages pet owners to “pick up” after their pets (waste bags, educational materials, dog parks in environmentally-friendly areas)?

What guidance or training programs exist for municipal employees that address pollution prevention in regards to municipal sources, i.e. maintenance of vehicles, buildings, roads, parks and open space or the storm water system?

Does your jurisdiction offer yard waste collection services and/or recycling programs?

**REGIONAL COORDINATION**

Which watershed councils, SWCDs or other groups do you work with to address watershed restoration needs? Describe the types of cooperative efforts undertaken with them.

**MONITORING**

Does your jurisdiction monitor water quality (surface water, groundwater or storm water)? Has the data been analyzed?

## APPENDIX B: SAMPLE OUTLINE FOR A TMDL IMPLEMENTATION PLAN

### 1. BACKGROUND, GOALS AND OBJECTIVES (NOT REQUIRED)

Although not required, it is helpful to provide this context so that the people who read this plan understand what it is for. This information can be drawn directly from the TMDL and/or customized for your specific community or area.

### 2. CONDITION ASSESSMENT (NOT REQUIRED)

This information can be drawn from the TMDL and/or other assessments of water quality resources for your area.

### 3. MANAGEMENT STRATEGIES (REQUIRED, OAR 340-042-0080(3)(a)(A)&(B))

**Note: DEQ recommends using the matrix in Appendix C as a framework for fulfilling the requirements of this section.**

A TMDL Implementation Plan must describe how the entity will manage the known or suspected sources of pollution resulting from human activities that are contributing or have the potential to contribute to the water quality impairment. Entities are not responsible for pollution arising from activities that occur outside of their jurisdictional authority.

All entities should refer to the Water Quality Management Plan (WQMP) section of the TMDL when developing their list of management strategies.

- The WQMP will list the specific pollutants that need to be addressed and potential sources of those pollutants. However, the list of sources may not cover all source categories that fall within an entity's jurisdiction so it is important to assess whether other sources are likely to exist.
- The WQMP may also include a listing of management strategies that could be used to control sources of pollution. The list of strategies is not meant to be prescriptive or comprehensive, but to provide some ideas to stimulate thinking about potential management strategies. DEQ will also be available to provide assistance in identifying sources as well as potential management strategies.
- In some instances, the WQMP will direct certain entities to address specific measures (e.g., the Willamette TMDL requires certain entities to include specific storm water control measures in the Implementation Plans to address bacteria and other pollutants).

The Implementation Plan should clearly identify all sources of each pollutant addressed by the TMDL and the management strategies used to address each source. Where appropriate, a strategy should include a break-out of major milestones (e.g., for adoption of an ordinance, this may include convening an advisory committee, public review of the proposed ordinance, and ordinance adoption).

In some instances, it may be helpful (or necessary if resources are limited) to prioritize among the strategies. This might mean addressing some sources of pollution before others or focusing implementation efforts in a particular geographic area. To the extent possible, the selection of priorities should be driven by the greatest opportunities for achieving pollutant reductions.

The TMDL Implementation Plan must also describe the “*timeline for implementing strategies and a schedule for completing measurable milestones*” (OAR 340-042-0080(3)(B)). It should be understood that these timelines are targets based upon best professional judgment, and not intended to be enforceable compliance points.

The matrix in Appendix C is a tool designed to guide an entity through the process of identifying strategies and establishing timelines, benchmarks, etc. DEQ encourages the use of this matrix as a framework for organizing and summarizing management strategies. Additional detail on management strategies can be included in a narrative portion of this section.

#### **4. PERFORMANCE MONITORING (REQUIRED, OAR 340-042-0080(3)(a)(C))**

Performance monitoring should identify the questions the entity seeks to answer, the methodology for collecting and interpreting data to get to those answers, and who's responsible for collecting, analyzing and reporting monitoring information.

Some entities may already be conducting related activities. It may be appropriate to include these activities in the evaluation plan, but the entity needs to describe how this information will be used to answer questions relating to the effectiveness of TMDL implementation efforts.

Entities are encouraged to consult with DEQ to ensure the effectiveness evaluation plan does not duplicate other monitoring efforts or involve data collection that is unnecessary for this purpose.

#### **5. REPORTING AND ADAPTIVE MANAGEMENT (REQUIRED, OAR 340-042-0080(3)(a)(C))**

This section needs to indicate that you agree to the reporting and adaptive management requirements. This could be accomplished by including the following language, which captures DEQ's expectations relative to these elements:

*[Name of entity] will track TMDL implementation activities and report to DEQ annually on progress and accomplishments.*

Note: If an entity uses the matrix in Appendix C to describe their TMDL implementation activities, one simple way to satisfy the reporting requirement is to fill in the "status" column for each strategy and submit the spreadsheet to DEQ.

*[Name of entity] will evaluate this Implementation Plan every five years following submittal. The evaluation will include a review of existing water quality data and other information to evaluate the effectiveness of the Plan relative to the pollution reduction goals. The report will describe what information was used in the evaluation, the findings of the evaluation and the basis for this reasoning. If the evaluation indicates that the Plan is not likely to be adequate to meet the pollution reduction goals, we will describe how we will modify the Plan or undertake other efforts to achieve these goals, and the timeline for accomplishing this.*

*In addition, [name of entity] will review and revise their Implementation Plan as needed following DEQ's reevaluation of the TMDL.*

#### **6. EVIDENCE OF COMPLIANCE WITH LAND USE REQUIREMENTS (REQUIRED, OAR 340-042-0080(3)(a)(D))**

In most cases, an implementation plan must identify applicable acknowledged local comprehensive plan provisions and land use regulations and explain how the implementation plan is consistent with these local planning requirements or what steps will be taken to make the local planning requirements consistent with the implementation plan. This will ordinarily require cooperation with the planning officials with jurisdiction over the area if the DMA is not a city or county. In rare cases,



the DMA may need to work with DEQ staff to prepare goal findings.

**7. ADDITIONAL REQUIREMENTS AS INDICATED IN THE WQMP (ONLY IF REQUIRED IN WQMP, OAR 340-042-0080(3)(a)(E))**

If DEQ identifies any additional requirements for a certain entity in the WQMP, those must be addressed in the TMDL Implementation Plan.

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## **APPENDIX C: TMDL IMPLEMENTATION TRACKING MATRIX: A Template for Describing and Tracking Management Strategies**

The Matrix is a tool for describing, tracking and reporting on TMDL implementation efforts. Some entities may want to include more detailed information about how each strategy will be implemented elsewhere in their Plan.

Use of the Matrix has a number of advantages. The matrix can:

- 1) guide entities through development of the Management Strategies section of their Implementation Plan by providing a simple framework for organizing the required information
- 2) serve as a framework for reporting on implementation activities; i.e., an entity can fill in a “Status” column for each management strategy and submit that to DEQ to fulfill the annual reporting requirements.
- 3) make it easier for DEQ to review TMDL Implementation Plans and reports by having the information organized in a comprehensive yet concise manner.
- 4) if it becomes common practice for entities to use this matrix, it will enable DEQ to “roll up” the information in order to produce a report on TMDL implementation activities throughout a basin or across the state.

The basic Matrix, including explanations of what each element means, is shown below.

To provide a better idea of how it could be used, the matrix has been filled in with an example of how a municipality might address bacteria.

### TMDL Implementation Tracking Matrix (with an example filled in)

<b>POLLUTANT</b> <i>What pollutants does the TMDL address? (Refer to TMDL)</i>	<b>SOURCE</b> <i>What sources of this pollutant are under your jurisdiction?</i>	<b>STRATEGY</b> <i>What is being done, or what will you do, to reduce and/or control pollution emanating from this source?</i>	<b>HOW</b> <i>Specifically, how will this be done?</i>	<b>MEASURE</b> <i>How will you quantitatively or qualitatively demonstrate successful implementation or completion of this strategy?</i>	<b>TIMELINE</b> <i>When do you expect it to be completed?</i>	<b>MILESTONE</b> <i>What intermediate goals do you expect to achieve, and by when, to know progress is being made?</i>	<b>STATUS</b>
Bacteria	1. Failing septic systems	a. Repair failing systems	i. Respond to reports of failing systems; work with homeowner to set a timeline for repair	Track # of reports, outcome of inspection (failing or not) and date of follow-up that confirmed repairs were made	Ongoing	NA	
		b. Educate homeowners about system maintenance and how to detect failures	i. Distribute info to homeowners	Number of brochures distributed	Summer 2006	NA	
			ii. Provide info at city's booth at Community Festival	Number of contacts	July of each year	NA	
	2. Bacteria carried to waterways in storm runoff	a. Address runoff problems from farms via SB 1010 plans (ODA)	i. Contact ODA when problems are identified	Track # of referrals	Ongoing	NA	
		b. Prevent pet waste from reaching waterways	i. Erect signage and provide poop bags in parks	Check bag supply weekly;	Ongoing thru end of 2006; evaluate effectiveness based upon rate of use	NA	
			ii. Get article in local paper to raise awareness	Article in paper	Summer 2005	NA	
			iii. Adopt ordinance requiring owners to clean up after their pets.	Adopted ordinance.	2008	- Convene Adv. Comm. by 12/06 - Draft rule by 6/07 - Adoption by 2/08	