

APPENDIX D: REPORT TEMPLATES

Delisting Report Template

Project Plan Template

Report Tracking Sheet

TMDL Report Template

**Justification for Delisting
[WATERBODY] for [POLLUTANT],
[COUNTY] County, California**

[DRAFT OR FINAL]

[DATE]

**[REGIONAL BOARD]
[ADDRESS]**

CONTENTS

1. Project Definition.....	1
2. Watershed Description.....	2
3. Water Quality Objectives.....	3
4. Data Analysis	4
4.1. Water Quality Data	4
4.2. Flow Data	4
4.3. Habitat Quality Data	5
4.4. Data Analysis Summary.....	5
5. Rationale for Delisting	7
References	8

Report Template for Delisting Documents in California

This template provides a general outline and structure for preparing reports to provide justification for delisting 303(d)-listed waters. The template provides informative boxes and lists to identify the content of each section. Specifically, each section contains a statement of the goal of the section and identifies questions that should be answered in the section. The level of detail included in the report will be dictated by the unique characteristics of each project. However, the questions are provided to define the focus and content of the section. Additionally, to support completion of each section, the template provides lists of tables or figures that are typically included in each section and provides examples of tables and figures. A general statement of content is also provided for each major subsection.

The blue text boxes throughout the template are considered instructional or informational and should be deleted from the draft and final project report.

1. PROJECT DEFINITION

Goal: To describe the impairment and waterbody being delisted and to provide a determination and justification that the listed waterbody currently supports water quality objectives.

Questions to Answer:

- What is the impaired waterbody proposed for delisting? What are its major characteristics?
- What is the listed impairment? What is the listed pollutant of concern?
- What is the geographic setting of the impaired water?
- What data supported the determination of the listing?
- What is the rationale for delisting?
- What has occurred since the listing to restore the waterbody? Or what indicates that the original listing was in error?

Typical Table:

- Summary of listing information (waterbody name, ID, size, pollutant, cause, listing year, etc.)

2. WATERSHED DESCRIPTION

Goal: To provide an overview of waterbody location and environmental characteristics of the surrounding watershed.

Questions to Answer:

- Where is the impaired water?
- What are the major hydrologic features of the watershed (e.g., tributaries, downstream waterbodies, watershed lakes)?
- What land uses exist in the watershed?
- Are there any new features relevant to the delisting (e.g., changes in sources)?

Typical Table:

- Land use categories and areas in the watershed

Typical Figures:

- Map of study area, including watershed delineations, hydrology, location in state, major municipal boundaries (counties), major cities, major roads, major landmarks, etc.
- Map of listed segments and their watersheds

3. WATER QUALITY OBJECTIVES

Goal: To identify all applicable water quality objectives for the impaired water.

Questions to Answer:

- What are the applicable water quality objectives (WQOs)?
- Are the WQOs narrative or numeric?
- If narrative, how is attainment measured? Has a numeric target been used to represent narrative WQOs? How was this target determined and how is it related to the WQOs (i.e., how is it equivalent to narrative objectives)?

Typical Table:

- Summary of WQOs applicable to each impaired water, pollutant, applicable value, unit of measurement, and information relevant to its application (e.g., instantaneous concentration, geometric mean, minimum samples)

4. DATA ANALYSIS

Goal: To inventory relevant data and provide a summary of the water quality and flow conditions in the impaired water and identify any important trends (e.g., spatial, temporal) or relationships (e.g., flow vs. pollutant, pollutant vs. land use) that confirm current support of water quality objectives and justify delisting.

Questions to Answer:

- What data were analyzed to evaluate the impaired water?
- What are the sources and quality of the data?
- Do the data support the listing and confirm impairment?
- Are there any identifiable trends (e.g., spatial or temporal) or relationships in the data that affect attainment of WQOs?

4.1. Water Quality Data

Include an inventory of water quality data used in the delisting analysis. *[The Water Quality Data and Flow Data sections can be combined for an overall summary of instream data.]*

Typical Table:

- Inventory of water quality monitoring stations in the watershed, including station number, station location, parameters measured, number of samples, frequency, and period of record

Typical Figure:

- Map of water quality monitoring stations in the watershed

4.2. Flow Data

Include an inventory of flow data used in the delisting analysis.

Typical Table:

- Inventory of flow gauges in the watershed, including station number, location, number of samples, frequency, and period of record

Typical Figure:

- Map of flow gauges in the watershed

4.3. Habitat Quality Data

Include an inventory of habitat quality data used in the delisting analysis.

4.4. Data Analysis Summary

Provide summaries of the major analyses (e.g., impairment confirmation, seasonal trends) conducted on the data and any resulting conclusions (e.g., identification of sources, critical conditions, or seasonal variations) and how they support delisting.

Include justification for selected analyses and explain how they relate to the goals of the data analysis.

Typical Tables:

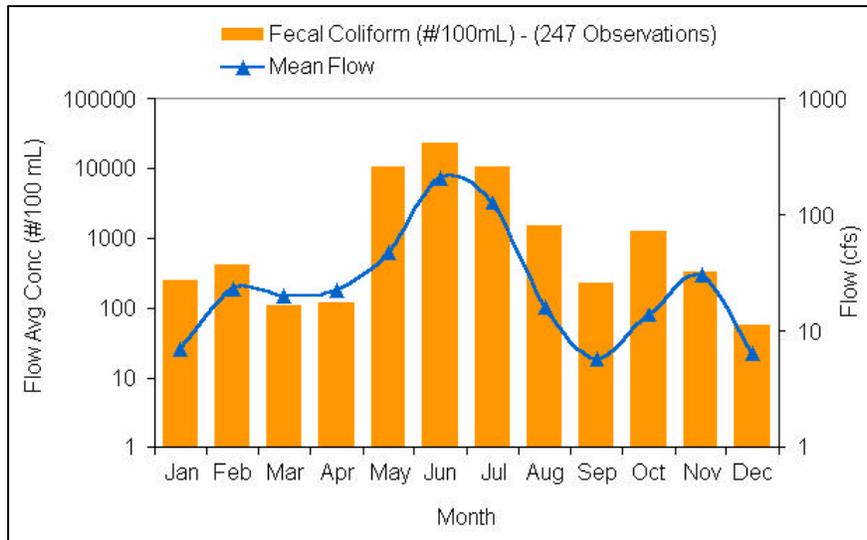
- Summary of water quality (and flow) by station, including number of samples; minimum, average, and maximum values; number of WQO violations
- Summary of seasonal analysis, including minimum, average, and maximum concentrations in spring, summer, fall, and winter (or monthly)

Example of table summarizing available water quality data

Station	No. of Samples	Min.	Average	Max.	Start Date	End Date
Station 1	106	0	394.75	7,720	1/4/89	6/29/90
Station 2	92	0	197.71	3,360	1/4/89	6/29/90
Station 3	87	0	466.67	8,800	1/5/89	6/26/90
Station 4	106	1	1,556.39	47,600	1/5/89	6/7/90

Typical Figures:

- Graphs summarizing observed water quality data (relative to applicable WQOs)
- Graphs or maps representing any spatial patterns in water quality conditions
- Graphs illustrating any relevant trends or relationships in instream conditions (e.g., flow vs. concentration, seasonal variations)



Example of figure of temporal distribution of water quality and

5. RATIONALE FOR DELISTING

Goal: To clearly describe the justification for delisting the waterbody, including any information, evidence, and data analyses available to support the delisting.

Questions to Answer:

- Why should the waterbody be delisted (e.g., faulty data, revised objectives, or attaining WQOs and supporting uses)?

If listing data were faulty:

- Why are they considered faulty (e.g., reporting errors, improper quality assurance/quality control [QA/QC], improper analytical methods)?

If WQOs have been revised since the water was listed:

- What are the current WQOs?
- Do data show that the water meets current WQOs?

If the water now meets WQOs:

- What data are available to evaluate water quality conditions relative to WQOs?
- Are data reflective of current conditions?
- Do data meet requirements for comparison to WQOs (e.g., sufficient frequency, number of samples, QA/QC)?
- Do the data show that the water meets WQOs?

Typical Table:

- Summary of water quality by station, including number of samples; minimum, average, and maximum values; number of WQO violations

Typical Figure:

- Graphs summarizing observed water quality compared to water quality objectives

REFERENCES

Goal: To document all cited references.

Project at a Glance

Project ID: _____ Project Name: _____
 Regional Board: _____ Beginning FY: _____
 Project Type (e.g., TMDL): _____ Completion Date: _____
 Listing Year: _____ Priority: _____
 Project Manager: _____ Phone Number: _____

Impaired Water(s) Addressed in this Project (attach sheet for more space):

Waterbody Name	Size (miles or acres)	Location (County)	Pollutant(s)

Project Definition

Sample Narrative Description:

This project addresses _____ waters, impaired by _____, likely due to _____. Analyses of _____ will be used to estimate _____. Monitoring is needed to evaluate _____. Management actions are expected to include _____.

Pollutants/Stressors	Pollutant1	Pollutant2	Pollutant3
Potential Sources	Source1	Source2	Source3
Estimated Size Affected (miles or acres)	Waterbody	Calwater Watershed #:	#####

When does the impairment occur?

How does/did the pollutant loading occur?

What additional information might be needed to perform the project analyses and to determine the restoration needs?

What are the expected regulatory actions and associated management techniques that might be used?

What investigations or experiments might be useful as part of planning for short- and long-term implementation?

Phase 1: Project Definition

Date Completed

Authorized Signature

Phase 2: Project Planning

Date Completed

Authorized Signature

Phase 3: Data Collection

Date Completed

Authorized Signature

Phase 4: Project Analyses

Date Completed

Authorized Signature

Phase 5: Regulatory Action Selection

Date Completed

Authorized Signature

Phase 6: Regulatory Process

Date Completed

Authorized Signature

Phase 7: Approval

Date Completed

Authorized Signature

Phase 8: Implementation

Date Completed

Authorized Signature

PROJECT PLAN

Project Schedule and Budget Information:

Note: The planning sheet is structured according to the TMDL Project Tracking Tool. Summaries below are organized by phases and user selected/defined tasks. Task descriptions can be changed or added depending on the individual needs of the project. The TMDL Project Tracking Tool also allows for breakdown of budget by fiscal year.

Once information is entered in the TMDL Project Tracking Tool, updates of actual dates and allocated funding will need to be made monthly by the RWQCB.

Phase/Task	Status	Scheduled		Total Estimated Budget	
		Start Date (mm/yy)	End Date (mm/yy)	PYs	Contract Amount (1,000 \$)
Phase 1 – Project Definition					
Phase 2 – Project Planning					
Phase 3 – Data Collection					
<i>Task 3.1 Design and QAPP</i>					
<i>Task 3.2 Implementation</i>					
<i>Task 3.3 Evaluation</i>					
Phase Fo4ur – Project Analyses					
<i>Task 4.1 Data Analysis</i>					
<i>Task 4.2 Modeling</i>					
<i>Task 4.3 Alternatives Analysis</i>					
<i>Task 4.4 Implementation Plan Development</i>					
<i>Task 4.5 Project Report</i>					
Phase 5 – Regulatory Action Selection					
Phase 6 – Regulatory Process					
Phase 7 – Approval					
Phase 8 – Implementation					
<i>Task 8.1 Monitoring</i>					
<i>Task 8.2 Management Practice Testing</i>					

Comments on the approach or other special assumptions/considerations:

Sample assumptions:

Data for _____ will be provided by _____ (agency or stakeholder).

The estimated budget for Phase 4 assumes that the following methodology will be used for the project: _____.

The method used for the _____ watershed/waterbody is expected to be used here. This assumes that the project analyses for the _____ project will be completed before Phase 4 of this project begins.

Expert support is expected to be provided by _____ in the development (or execution) of the approach.

In Phase 4 we will be testing the assumption that _____. If this test shows _____ the method will need to be revised and the schedule may be affected.

The initial assumption is that the pollutant can be managed by implementing _____ management practices. Testing of this method was incorporated into the first year of the implementation budget.

Project at a Glance

Project ID: _____ **Project Name:** _____
Regional Board: _____ **Beginning FY:** _____
Project Type (e.g., TMDL): _____ **Completion Date:** _____
Listing Year: _____ **Priority:** _____
Project Manager: _____ **Phone Number:** _____

Impaired Water(s) Addressed in this Project (attach sheet for more space):

Waterbody Name	Size	Location	Pollutant(s)

TMDLs at a Glance

Applicable Water Quality Standard(s):

Designated Use	Pollutant	Water Quality Standard

Waste Load Allocations (attach sheet for more space):

Point Source	Existing Load	Allocated Load	Percent Reduction

Load Allocations (attach sheet for more space):

Nonpoint Source	Existing Load	Allocated Load	Percent Reduction

Margin of Safety: _____

Critical Conditions: _____

Seasonal Variation: _____

Implementation Plan	Milestones: Techniques:
Monitoring	Monitoring: expected locations/frequency, measures of progress

Phase 1: Project Definition

Date Completed

Authorized Signature

Phase 2: Project Planning

Date Completed

Authorized Signature

Phase 3: Data Collection

Date Completed

Authorized Signature

Phase 4: Project Analyses

Date Completed

Authorized Signature

Phase 5: Regulatory Action Selection

Date Completed

Authorized Signature

Phase 6: Regulatory Process

Date Completed

Authorized Signature

Phase 7: Approval

Date Completed

Authorized Signature

Phase 8: Implementation

Date Completed

Authorized Signature

**Total Maximum Daily Load for
[POLLUTANT] in [WATERBODY],
[COUNTY] County, California**

[DRAFT OR FINAL]

[DATE]

[REGIONAL BOARD]
[ADDRESS]

CONTENTS

1.	Project Definition.....	1
2.	Watershed Description.....	2
3.	Data Analysis	3
3.1.	Water Quality Data	3
3.2.	Flow Data	4
3.3.	Habitat Quality Data	4
3.4.	Data Analysis Summary.....	4
4.	Source Analysis.....	6
5.	Critical Conditions and Seasonal Variation.....	8
6.	Numeric Target	9
7.	Linkage Analysis	10
8.	TMDL Calculation and Allocations	11
8.1.	Waste Load Allocations	12
8.2.	Load Allocations	12
8.3.	Margin of Safety	12
9.	Public Participation.....	13
10.	Implementation Plan.....	14
11.	Monitoring Plan	15
	References.....	16
	Appendix A: Data Analyses.....	17
	Appendix B: Technical Approach for Linkage Analysis.....	18

Report Template for TMDL Documents in California

This template provides a general outline and structure for preparing TMDL reports. The template defines a recommended document structure that addresses technical and programmatic requirements for TMDLs in California. The template provides informative boxes and lists to identify the content of each section. Specifically, each section contains a statement of the goal of the section and identifies questions that should be answered in the section. Professional judgment and the unique situation of the TMDL will determine much of the content of the TMDL report, including the amount and level of detail. However, the questions are provided to define the focus and content of the section. Additionally, to support completion of each section, the template provides lists of tables or figures that are typically included in each section and provides examples of tables and figures. A general statement of content is also provided for each major subsection.

The blue text boxes throughout the template are considered instructional or informational and should be deleted from the draft and final project report.

1. PROJECT DEFINITION

Goal: To describe the impairment being addressed by the TMDL—to identify the project area, summarize the impairment, provide important information relevant to the 303(d) listing, and generally identify any key information affecting the development of the TMDL (e.g., major sources, management issues, regulatory issues).

Questions to Answer:

- What is the impaired waterbody addressed in the TMDL? What are its major characteristics?
- What is the impairment? What is the pollutant of concern?
- Why was the water listed?
- What is the geographic setting of the impaired water?
- Are there major activities in the watershed that are known to be affected by the impairment (e.g., recreation) or to exacerbate the impairment (e.g., agricultural activities)?
- Are there any major management issues associated with the TMDL?
- Are there any major technical issues associated with the TMDL?

Typical Table:

- Summary of listing information (waterbody name, ID, size, pollutant, cause, listing year, etc.)

2. WATERSHED DESCRIPTION

Goal: To provide a geographic and environmental setting for the TMDL by providing an overview of waterbody location and environmental characteristics of the surrounding watershed.

Questions to Answer:

- Where is the impaired water?
- What are the major hydrologic features of the watershed (e.g., tributaries, downstream waterbodies, watershed lakes)?
- What land uses exist in the watershed?
- What are the characteristics of the watershed soils?
- What is the climate of the watershed?

Typical Tables:

- Land use categories and areas in the watershed
- Climate summaries (e.g., monthly average precipitation and temperature)

Typical Figures:

- Map of study area, including watershed delineations, hydrology, location in state, major municipal boundaries (counties), major cities, major roads, major landmarks, etc.
- Map of listed segments and their watersheds

3. DATA ANALYSIS

Goal: To inventory relevant data and provide a summary of the water quality and flow conditions in the impaired water and identify any important trends (e.g., spatial, temporal) or relationships (e.g., flow vs. pollutant, pollutant vs. land use) in the data.

Questions to Answer:

- What data were analyzed to evaluate the impaired water?
- What are the sources and quality of the data?
- Do the data support the listing and confirm impairment?
- Are there any spatial trends in the water quality or flow?
- Are there any temporal (e.g., seasonal) trends in the water quality or flow?
- Do the data illustrate any other important relationships (e.g., flow vs. pollutant, pollutant vs. land use)?
- What do the data suggest about pollutant sources?
- Does the data analysis indicate critical conditions?

3.1. Water Quality Data

Include an inventory of water quality data used in the TMDL analysis. *[The Water Quality Data and Flow Data sections can be combined for an overall summary of instream data.]*

Typical Table:

- Inventory of water quality monitoring stations in the watershed, including station number, station location, parameters measured, number of samples, frequency, and period of record

Typical Figure:

- Map of water quality monitoring stations in the watershed

3.2. Flow Data

Include an inventory of flow data used in the TMDL analysis.

Typical Table:

- Inventory of flow gauges in the watershed, including station number, location, number of samples, frequency, and period of record

Typical Figure:

- Map of flow gauges in the watershed

3.3. Habitat Quality Data

Include an inventory of habitat quality data used in the TMDL analysis.

3.4. Data Analysis Summary

Provide summaries of the major analyses (e.g., impairment confirmation, seasonal trends) conducted on the data and any resulting conclusions (e.g., identification of sources, critical conditions or seasonal variations).

Include justification for selected analyses and explain how they relate to the goals of the data analysis and the overall TMDL development.

Typical Tables:

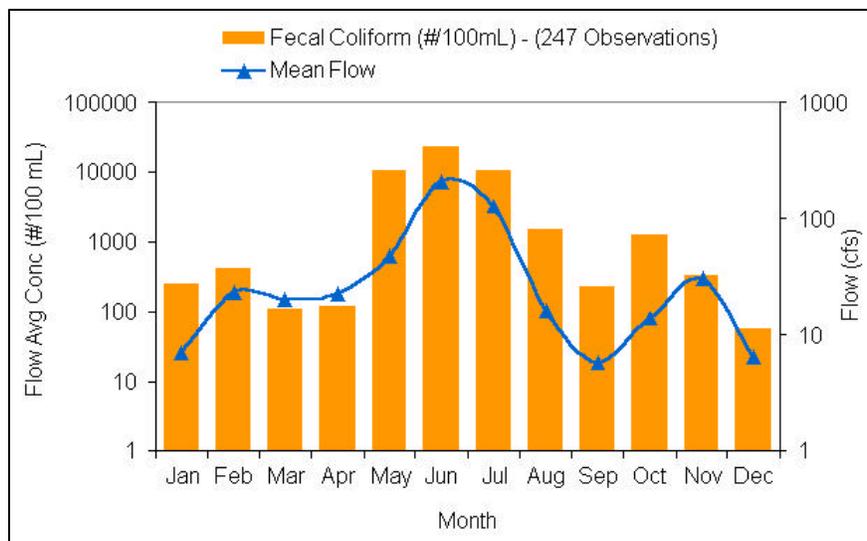
- Summary of water quality (and flow) by station, including number of samples; minimum, average, and maximum value; number of water quality standard violations
- Summary of seasonal analysis, including minimum, average, and maximum concentrations in spring, summer, fall, and winter (or monthly)

Example of table summarizing available water quality data

Station	No. of Samples	Min.	Average	Max.	Start Date	End Date
Station 1	106	0	394.75	7,720	1/4/89	6/29/90
Station 2	92	0	197.71	3,360	1/4/89	6/29/90
Station 3	87	0	466.67	8,800	1/5/89	6/26/90
Station 4	106	1	1,556.39	47,600	1/5/89	6/7/90
Station 5	87	0	155.63	10,600	1/5/89	6/26/90

Typical Figures:

- Graphs illustrating the magnitude and frequency of water quality standards violations
- Graphs or maps representing any spatial patterns in water quality conditions
- Graphs illustrating any relevant trends or relationships in instream conditions (e.g., flow vs. concentration, seasonal variations)



Example of figure of temporal distribution of water quality and

Note: If the data analysis includes a significant amount of data to inventory and/or an extensive number of analyses to summarize, it is recommended that the data analysis be included in a technical appendix. In this case, the Data Analysis section would include a general summary of the water quality conditions and trends in the watershed with a reference to further information in the appendix.

4. SOURCE ANALYSIS

Goal: To provide a complete inventory and description of all sources of the pollutant of concern, including point, nonpoint, and background sources in the watershed.

Questions to Answer:

- What are the pollutant sources of concern in the watershed?
- What are the characteristics of the sources (e.g., location, discharge activity/behavior, transport pathways)?
- What is the relative magnitude or importance of each source?
- How are sources grouped for analysis in the TMDL (e.g., by land use, subwatershed)?
- For point sources, what are the permit limits and effluent characteristics of the sources?

Typical Tables:

- Inventory of point source dischargers in the watershed, including NPDES number, facility name, discharge location, receiving waterbody, permit limits
- Characterization of point source discharges, including effluent concentrations (minimum, average, maximum), and number and magnitude of permit violations
- Land use areas for watershed and subwatersheds
- Tables presenting distribution of any other nonpoint source categories throughout the watershed and subwatershed (e.g., feedlots, failing septic systems, logging roads)

Typical Figures:

- Location of point sources in watershed (include subwatershed delineations)
- Land use distribution in watershed (include subwatershed delineations)
- Locations of any specific sources of known location (e.g., feedlots, mines)

5. CRITICAL CONDITIONS AND SEASONAL VARIATION

Goal: To identify the critical conditions and seasonal variations considered in the TMDL.

Questions to Answer:

- What factors affect impairment in the waterbody (e.g., location in the waterbody, temperature, flow, season)?
- What are the critical conditions for impairment?
- How are the critical conditions considered in the TMDL development?
- Are there identifiable seasonal variations that affect the TMDL (e.g., in water quality response/conditions, in pollutant loading)?
- How does seasonal variation affect the TMDL?
- How was seasonal variation considered in the TMDL analysis?

6. NUMERIC TARGET

Goal: To identify the appropriate numeric water quality target(s) that represents attainment of applicable water quality objectives and that were used in the calculation of the TMDL.

Questions to Answer:

- What are the applicable water quality objectives (WQOs)?
- Are the WQOs narrative or numeric?
- If narrative, what is the numeric target being used to represent the narrative WQO? How was this target determined and how is it related to the WQO (i.e., how is it equivalent to narrative objectives)?
- If supplemental numeric targets are used (in addition to established numeric WQO), how are they related to the WQO?

Typical Table:

- Summary of numeric targets applicable to each impaired water—pollutant, applicable value, unit of measurement, and information relevant to its application (e.g., instantaneous concentration, geometric mean, minimum samples)

7. LINKAGE ANALYSIS

Goal: To describe the method used to establish the relationship between pollutant loading and instream water quality response and how the relationship was used to identify the loading capacity of the impaired water.

Questions to Answer:

- What method was used to establish the link between source loading and water quality response?
- What is the justification or support for selecting this method?
- What data were used in the analysis?
- What was the process for setting up and applying the method?
- What were the results of the analysis?

Note: Because linkage analyses vary widely across TMDLs, it is difficult to give a general description of the information contained in this section. For example, analyses may include complex watershed and water quality modeling with several steps (e.g., characterization of hydrologic system characteristics; model setup, calibration, and validation; characterization of sources for simulation of loading) or simpler spreadsheet mass-balance analyses using only instream monitoring data. The basic goal of this section is to clearly describe the process for establishing a linkage between pollutant loads and the instream water quality for identifying the loading capacity that results in the instream numeric target. In cases of complex modeling analyses, it is often beneficial to include a brief summary of the approach in this section and a technical appendix with more in-depth and detailed descriptions of the steps and processes used to complete the analysis. Including the highly technical information in the main document often causes confusion for readers who are uninterested in the intricacies of the modeling analysis and “clutters” the TMDL. Providing a user friendly and concise summary of the approach in the main document makes the document flow more smoothly, allows for a complete documentation of the technical procedures in a separate, stand-alone appendix.

8. TMDL CALCULATION AND ALLOCATIONS

Goal: To clearly identify all TMDL allocations for point sources (waste load allocations) and nonpoint and background sources (load allocations) in the watershed.

Questions to Answer:

- What is the overall loading capacity (i.e., TMDL) of the waterbody?
- What is the expression of the TMDL (e.g., annual load)?
- What is the scale of the TMDL and its allocations (e.g., gross allocations, subwatershed allocations, subwatershed-land use allocations)?
- How is the TMDL distributed among WLAs and LAs?
- How was a margin of safety incorporated?

Typical Table:

- Table summarizing overall TMDL allocations

Example of table summarizing TMDL allocations

Source	Annual existing TDS load	Estimated percent reduction	Annual allocated load
<i>Nonpoint Sources:</i>			
Subwatershed 1	148 ton/yr	36%	94.5 ton/yr
Subwatershed 2	965.3 ton/yr	73%	262.1 ton/yr
<i>Point Sources:</i>			
Point Source 1	11.4 ton/yr	0%	11.4 ton/yr
Total Existing Load	1,124.7 ton/yr	Load Allocation	356.6 ton/yr
Total Annual Load Reduction = 66%		Wasteload Allocation	11.4 ton/yr
		Margin of Safety	18.8 ton/yr
TMDL = Loading Capacity = 386.8 ton/yr			

8.1. Waste Load Allocations

Identify individual WLAs for all point sources.

Typical Table:

- Inventory of WLAs, including existing loading, WLAs, and necessary load reductions

8.2. Load Allocations

Identify individual LAs for all nonpoint and background sources.

Typical Table:

- Inventory of LAs, including existing loading, LAs, and necessary load reductions

8.3. Margin of Safety

Describe the method of incorporating the margin of safety (MOS) in the TMDL analysis. If conservative assumptions were used to include the MOS implicitly, clearly identify the assumptions and explain how they contribute to the MOS.

9. PUBLIC PARTICIPATION

Goal: To describe the public participation element of the TMDL, including public notices, public meetings, public comment period, and how responses to public comments were considered in the final TMDL.

10. IMPLEMENTATION PLAN

Goal: To describe the strategy for implementing the TMDL and restoring water quality standards, including implementation activities, milestones/goals, timeline, funding, and responsible parties.

Questions to Answer:

- What potential activities/control actions could be implemented to achieve the TMDL?
- What sources should be targeted for control?
- Where could control actions be implemented or targeted?
- What is the schedule for implementation activities?
- What are the estimated costs for control actions?
- What agency will be responsible for identifying and implementing the control actions?
- What are the reasonable assurances for implementation?¹

¹ For waters affected by both point and nonpoint sources: Where point sources receive less stringent waste load allocations because nonpoint source reductions are expected and reflected in load allocations, the implementation plan should provide reasonable assurances that nonpoint implementation actions are sufficient to result in attainment of load allocations in a reasonable period of time. Reasonable assurances may be provided through use of regulatory, nonregulatory, or incentive-based implementation mechanisms as appropriate.

Typical Table:

- Summary of implementation activities, including activity, location, date of completion, cost, responsible party

Typical Figure:

- Map of locations of planned control actions

11. MONITORING PLAN

Goal: To describe the plan for follow-up monitoring to track TMDL implementation and resulting water quality improvements.

Questions to Answer:

- What is the goal of the monitoring plan?
- What is the planned monitoring—locations, parameters, frequency?
- When will the monitoring begin?
- What will be done with the monitoring results?
- How will the TMDL be reviewed (and revised, if necessary) based on the monitoring results?
- What will the monitoring cost and where will the funds come from?
- Who will be responsible for conducting monitoring?

Typical Table:

- Summary of monitoring plan, including location sites, parameters monitored, frequency of sampling, number of samples to be collected, responsible agency

Typical Figure:

- Map of monitoring locations

REFERENCES

Goal: To document all cited references.

APPENDIX A: DATA ANALYSES

Goal: To clearly and comprehensively document data analyses and their results. This option is useful when extensive data analyses were conducted for the TMDL or if there is an extensive data set to summarize.

APPENDIX B: TECHNICAL APPROACH FOR LINKAGE ANALYSIS

Goal: To clearly and comprehensively document the technical approach used for the linkage analysis and subsequent identification of the TMDL, including data used, source representation, estimation/simulation of pollutant loading, linkage/simulation of loading, and resulting water quality response. This option limits the technical information contained in the main document of the TMDL.

