

# **Guidance on Developing Restoration Plans as Alternatives to TMDLs – Assessment Category 4b and 4e Plans**

**Division of Environmental Assessment and Restoration  
Florida Department of Environmental Protection**

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## Introduction

The Florida Department of Environmental Protection (“Department”) is working statewide to encourage local stakeholders to develop plans at the earliest practical time to restore waters not meeting state water quality standards. Early implementation of restoration activities is more cost effective, and may allow the Department to forgo certain regulatory steps [most notably, the development of total maximum daily loads (“TMDLs”) and Basin Management Action Plans (“BMAPs”)], thereby focusing limited local and state resources directly on measures that will improve water quality. This document describes the type of documentation the Department considers in its evaluation of restoration plans in order to restore impaired waters without the development and implementation of a TMDL.

## Background

The Department’s Impaired Surface Waters Rule [“IWR”, Chapter 62-303, Florida Administrative Code (“F.A.C.”)] establishes a scientific methodology for identifying surface waters in Florida that are impaired by pollutants (i.e., do not meet applicable water quality criteria). The Department assesses available water quality data for each surface waterbody in Florida at least once every five years. Based on these assessments, waterbodies are determined to be meeting water quality criteria or are placed on the Planning List, Study List or Verified List, as appropriate. Waters are placed on the Planning List if insufficient data are available to confirm the impairment. Where impairment has been confirmed but the Department has not identified a pollutant that is the cause of the impairment, the waterbody is placed on the Study List for further analysis to determine the causative pollutant(s) or other factors contributing to the impairment. Waters that are confirmed to be impaired as a result of a pollutant are placed on the state’s Verified List of impaired waters. The Department submits its Study and Verified Lists to the United States Environmental Protection Agency (“EPA”) for review and approval pursuant to Section 303(d) of the federal Clean Water Act.<sup>1</sup> For waters on the Department’s Verified List, a TMDL is

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<sup>1</sup> The Department’s 303(d) list contains a number of assessment categories, including the category 4b and 4e restoration plans that are the subject of this document. The assessment categories are as follows:

- 1 - Attaining all designated uses;
- 2 - Attaining some designated uses and insufficient or no information or data are present to determine if remaining uses are attained;
- 3a - No data and information are present to determine if any designated use is attained;
- 3b - Some data and information are present but not enough to determine if any designated use is attained;

scheduled for development for the pollutant causing the impairment. When a TMDL has been established, the Department is statutorily authorized to formulate a restoration plan, known as a Basin Management Action Plan (“BMAP”), to address the pollutant causing the impairment.

The 4b and 4e restoration plans discussed in this document are established in a streamlined manner compared to the process leading to BMAPs, and are a preferred alternative to the Department’s typical regulatory steps as they more expeditiously focus limited resources on redressing the identified impairment. Under the Florida Watershed Restoration Act (“FWRA”), the Department can forgo placing a waterbody on the Verified List and establishing a TMDL, if the Department can document there is reasonable assurance existing or proposed pollution control mechanisms or programs that will effectively address the impairment. Therefore, the status of pollution control mechanisms for each waterbody [recently completed (existing), ongoing, and/or planned] and the documentation of these programs is critical to placing a waterbody in the proper assessment category and determining whether a TMDL needs to be scheduled or possibly deferred. The Department depends on local stakeholders to gather the necessary documentation to demonstrate reasonable assurance that their proposed control mechanisms will restore the particular waterbody. The gathering of such documentation by local stakeholders is voluntary, but the absence of this documentation will make it highly unlikely that a waterbody will be placed into either the 4b or 4e assessment categories.

## Categories of Restoration Plans

The [IWR](#) authorizes two types of restoration plans that avoid placement of a waterbody on the Verified List; therefore the optimal time to propose or submit one of these is during the assessment cycle and/or prior to TMDL development. Waterbodies with restoration plans meeting the requirements of Rule 62-303.600, F.A.C. [“4b plans” or “Reasonable Assurance Plans (“RAPs”)] are not placed on the Verified

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- 3c - Potentially impaired, exceedances meet the requirements of the Impaired Waters Rule for placement on the Planning List;
  - 4a - TMDL developed, additional sampling would be used to gauge success of TMDL;
  - 4b - Impaired but TMDL not needed (reasonable assurance activities underway);
  - 4c - Fails criteria but due to natural condition;
  - 4d - Fails criteria but causative pollutant has not been determined, therefore, a pollutant cause-effect study is needed, exceedances meet the requirements of the Impaired Waters Rule for placement on the Study List;
  - 4e - Impaired, but restoration ongoing, exceedances meet the requirements of the Impaired Waters Rule for placement on the Study List; and
  - 5 - Impaired. Fails criteria and causative pollutant identified.

List or the 303(d) list. Waterbodies with restoration plans only meeting the requirements of Rule 62-303.390(2)(d), F.A.C. (“4e plans”) are placed on the Study List and the 303(d) list. These provisions state:

*62-303.600 Evaluation of Pollution Control Mechanisms.*

*(1) Upon determining that a water body is impaired, the Department shall evaluate whether existing or proposed technology-based effluent limitations and other pollution control programs under local, state, or federal authority are sufficient to result in the attainment of applicable water quality standards.*

*(2) If, as a result of the factors set forth in (1), the water segment is expected to attain water quality standards in the future and is expected to make reasonable progress towards attainment of water quality standards by the time the next 303(d) list is scheduled to be submitted to EPA, the segment shall not be listed on the verified list. The Department shall document the basis for its decision, noting any proposed pollution control mechanisms and expected improvements in water quality that provide reasonable assurance that the water segment will attain applicable water quality standards.*

*62-303.390 The Study List.*

*(2) A Class I, II, or III water shall be placed on the study list if:*

*....*

*(d) A waterbody segment where pollution control mechanisms are in place or planned that meet the requirements of Rule 62-303.600, F.A.C., except that there is uncertainty when water quality standards will be attained and the waterbody segment requires additional study.*

The difference between a 4b plan and a 4e plan relates to the level of certainty when water quality standards will be met in the future. For 4b plans, there is reasonable assurance that pollution control mechanisms will result in attainment of water quality standards in the future and reasonable progress towards attainment of water quality standards will be made by the time the next 303(d) list that includes the basin of the affected waterbodies is scheduled to be submitted to EPA. As such, establishment of a TMDL is unnecessary. For 4e plans, the waterbody is still included on the 303(d) list, but placement on

the Verified List is postponed for one assessment cycle<sup>2</sup>, to allow for implementation of the 4e plan and evaluation of progress towards restoration. If at any time the Department determines that reasonable assurance or reasonable progress is not being met, the Verified List will be amended accordingly. Additional reasonable progress must be made each time a waterbody is considered for 4b or 4e listing under Chapter 62-303, F.A.C.

### ***DOCUMENTATION ASSOCIATED WITH 4b PLANS***

Although it is the Department's responsibility to ensure adequate documentation in the administrative record to support its decision not to place a waterbody on the Verified List, the Department expects local stakeholders (including state and local governments) to prepare the necessary documentation to demonstrate reasonable assurance that their proposed control mechanisms or programs will restore an impaired waterbody.<sup>3</sup> Without all appropriate documentation, the Department is unable to place a waterbody segment into category 4b and thus, avoid placement on the Verified List and TMDL development.

In determining whether the requirements of Rule 62-303.600 are met, the Department recognizes that there are many pollutant-specific and site-specific factors to consider. Accordingly, there is no one-size-fits-all test the Department uses in its evaluation. However, the documentation associated with a 4b plan typically involves a number of elements. These include a summary of the information available about the impaired waterbody; determination of the appropriate water quality target for pollutant reductions; description of completed, ongoing, or planned projects to address pollutant sources; estimation of the project load reductions that will be achieved to attain water quality standards; and development of a monitoring plan to measure progress.

#### ***Time Frame for Developing Documentation***

Each year the Department prepares an updated impaired waters list that covers one-fifth of the basins in the state. As such, over a five-year period the Department updates its impaired waters list for the entire state. To provide the Department with sufficient time to review restoration plan documentation before

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<sup>2</sup> While it is possible that TMDL development could be postponed for an additional assessment cycle pending further implementation of management actions, 4e Plans generally apply for only one 5-year assessment cycle.

<sup>3</sup> It should be noted that the term "reasonable assurance" is used in many Department programs and rules. This document specifically addresses the reasonable assurance provided by proposed pollution control mechanisms or programs for impaired water assessment listing purposes, and should not be used to evaluate the meaning of reasonable assurance in other contexts, particularly in permitting decisions.

the next listing order for a particular basin, local stakeholders should engage the Department at the earliest possible time but no later than one-year before the expected entry of the listing order or before development of a TMDL would begin.

### ***What It Means To Be Under Local, State, or Federal Authority***

Both the FWRA and the IWR require that the pollution control programs under consideration be “under local, state, or federal authority.” A pollution control program is considered to be under local, state, or federal authority if the program is subject to or required by a local ordinance, state statute or rule, or federal statute or regulation. A program is also considered to be under local, state, or federal authority if it is subject to a written agreement, signed by both local stakeholders and at least one governmental entity, that includes measurable goals, performance criteria, benchmarks (e.g., milestone dates), and enforcement mechanisms by the governmental entity. While not every source needs to be under local, state, or federal authority, to meet the requirements of Rule 62-303.600, enough sources must be under such governmental regulatory or contractual control to provide reasonable assurance that water quality standards will be attained in the future.

### ***Time Frame for Attaining Water Quality Standards***

The FWRA and the IWR do not establish a specific period within which 4b waterbodies must attain applicable water quality criteria. However, pollution control mechanisms or watershed restoration plans must provide reasonable assurance that the specific water quality criteria for an impaired waterbody being addressed by the plan will be met at some time in the reasonable future. Thus the documentation submitted to the Department must provide a specific timeframe when the water quality criterion is expected to be fully attained and future growth should be considered. If water quality criteria will not be met for many years, the documentation should also justify why the specified amount of time is needed to attain the criteria.

### ***Parameter-Specific Nature of Documentation***

The impaired listing process is parameter specific. A waterbody can be listed as impaired for some pollutants, but not for others. Restoration plans can be developed to address individual pollutants. In such cases, other parameters will be independently assessed for impairment and TMDL development.

### ***Standard Documentation for 4b Plans***

In evaluating a restoration plan, the following information should be documented:

1. **Description of Impaired Waterbody** – *The name of the waterbody that is impaired; the location of the waterbody and watershed (e.g., basin group and planning unit); the watershed/U.S. Geological Survey eight-digit hydrologic unit code (“HUC”); the Waterbody Identification (“WBID”) number; the waterbody type (lake, stream, or estuary); the designated use classification; the designated use not being attained; the pollutant(s) of concern (identified as causing or contributing to the impairment); the suspected or documented source(s) of the pollutant(s) of concern; and a description of the known and likely point, nonpoint, and background sources causing the impairment, including existing loads (especially point sources) if available.*
2. **Description of Water Quality or Aquatic Ecological Goals** – *The water quality–based targets or aquatic ecological goals (both interim and final) that have been established for the pollutant(s) of concern. These may be site-specific targets or the default water quality criteria. Documentation should include a schedule indicating when interim and final targets are expected to be met, and a description of procedures (with thresholds) to determine whether additional (backup) corrective actions are needed. For site-specific targets, documentation also should include the averaging period for any numeric water quality goals, and how these goals will result in the restoration of the waterbody’s impaired designated uses.*
3. **Description of Proposed Management Actions To Be Undertaken** – *How the planned management activities are appropriate to address the impairment; the names of the responsible participating entities (government, private, and others); a list of point sources with National Pollutant Discharge Elimination System (“NPDES”) wastewater or municipal separate storm sewer system permits in the basin; a list of categories of non-point sources (e.g., agriculture, septic systems, etc.) in the basin; a summary and list of the existing or proposed management activities (both structural and non-structural) designed to restore water quality; the geographic scope of any proposed management activities; documentation of the estimated pollutant load reduction and other benefits anticipated from the implementation of individual management actions; citation to applicable local, state or federal authorities, and / or copies of written agreements, committing participants to the management actions; how future growth and new sources will be*



*addressed; an itemized estimate of project costs (e.g., land, construction, implementation, and operations); confirmed sources of funding; identification of any funding deficiencies; an implementation schedule (including interim milestones and the date by which the water quality criterion will be attained); and any enforcement programs or local ordinances, if the management strategy is not voluntary. Maps, plans, reports, and photos should be submitted as necessary to describe and document the restoration plan and/or actual restoration.*

*Information on projects funded by the EPA through Section 319(h) of the Clean Water Act, the state's Surface Water Improvement and Management ("SWIM") Program, and/or other programs may be used to support a restoration plan. However, the information from these project documents should be summarized in a standalone document for a RAP. Copies of documents such as Section 319(h) grant applications and/or SWIM reports may be included for the Department's reference.*

- 4. Description of Procedures for Monitoring and Reporting Results** – *The water quality monitoring program to be implemented (including station locations, parameters sampled, and sampling frequencies) to demonstrate reasonable progress; quality assurance/quality control ("QA/QC") elements demonstrating that the monitoring will comply with Rule 62-160, F.A.C.; procedures for entering all appropriate data into the storage and retrieval ("STORET") database; the responsible monitoring and reporting entity; the frequency and format for reporting results; the frequency and format for reporting on the implementation of all proposed management activities; and methods used for evaluating progress towards goals.*
- 5. Description of and Commitment to Proposed Corrective Actions** —*The proposed corrective actions (and any supporting documentation) that will be undertaken if water quality does not improve after the management actions are implemented or if management actions are not completed on schedule; and a process for notifying the Department that these corrective actions are being implemented.*

### ***Developing Water Quality–Based Targets and Aquatic Ecological Goals***

Appropriate water quality–based targets or aquatic ecological goals are essential to the restoration plan process. In some instances, stakeholders and the Department may want to explore the possibility of

developing a site-specific water quality target for the impaired waterbody. Site-specific water quality-based targets can take many forms and need not be established using a complex hydrodynamic/ water quality model.

In some cases, sufficient historical data (such as paleolimnological data or data from periods predating an impairment) may be available to determine an appropriate water quality target. In other cases, simplified modeling (including regression analysis) may allow for conservative estimates of assimilative capacity that could then be used as the basis for restoration goals. There may be instances where more complex modeling is appropriate, but this will be a case-by-case determination. A scientifically sound water quality target is important in evaluating whether the proposed pollution control mechanisms would sufficiently reduce loadings to meet an impaired waterbody's assimilative capacity and result in the attainment of designated uses.

**Interim Targets.** Because it usually takes many years to fully restore an impaired waterbody, interim water quality targets are often needed to measure whether reasonable progress is being made towards the restoration of designated uses. The section of this document on *Documenting Reasonable Progress* provides examples of such interim targets, but site-specific measures are also encouraged.

**Averaging Periods for Water Quality-Based Targets.** While the averaging period for water quality-based targets should be consistent with how the underlying standard is expressed, it can often be expressed in a variety of ways and need not be stated as "daily loads." Annual averages or medians are often appropriate for some parameters, but shorter term (e.g., seasonal) averages may be necessary if the impairment is limited to specific seasons or parts of the year. Multiyear averages may be appropriate in limited circumstances where there is naturally high variation of the water quality target.

### ***Estimating Pollutant Reductions from Restoration Activities***

Estimating the extent to which pollutant load reductions will restore the impaired water is an important element in documenting reasonable assurance. It is often difficult to precisely estimate the pollutant reductions that will result from specific restoration activities. This is particularly true for the implementation of best management practices ("BMPs") for nonpoint sources. However, to provide reasonable assurance that a BMP or other restoration action will reduce pollutant loadings to a level that will restore a waterbody, documentation should address how the reductions were calculated, including documented values from the scientific literature for reductions attributed to similar management actions. If the expected reductions are expressed as a range, the midpoint of the range should be used as the basis

for estimating reductions, unless documentation is provided supporting the use of different removal efficiencies in this specific application.

### ***Documenting Reasonable Progress***

The determination of whether reasonable progress is being made towards the attainment of water quality standards is very site and pollutant specific. Documentation should be provided supporting specific progress towards the restoration of an impaired waterbody's water quality criteria according to the reporting schedule established in the plan. Examples of reasonable progress and interim targets include, but are not limited to, the following:

1. *A written commitment to implement pollutant controls to reduce loadings within a specified period from stakeholders representing at least 50% of the excess anthropogenic load of the pollutant(s) of concern.*
2. *Evidence of at least a 10% reduction (or alternatively, a percentage reduction consistent with meeting the water quality target by the specified date) in the annual anthropogenic loading of the pollutant(s) of concern.*
3. *Evidence of at least a 10% decrease (or alternatively, a percentage decrease consistent with meeting the water quality target by the specified date) in the annual average concentration of the pollutant(s) of concern.*
4. *Bioassessment results (or other biological improvements, such as increased seagrass coverage) showing improvement in the health of a waterbody's biological community, as measured by bioassessment procedures similar to those used to determine impairment and conducted under similar conditions.*
5. *Adoption of a local ordinance that specifically provides water quality goals, restricts growth or loads tied to the pollutant(s) of concern, and provides an enforcement option if the proposed management measure(s) are not implemented as required.*

### ***Providing RAP Updates***

Reasonable progress must be made by the time the next 303(d) list is due for submittal to the EPA for a waterbody, which is currently every five years. Stakeholders are encouraged to regularly monitor the progress resulting from pollution control mechanisms and programs and provide progress updates every

two years. However, in order to determine that reasonable progress is occurring, the Department expects that a comprehensive progress update be prepared in the year prior to or during the year that a waterbody is scheduled for reassessment in the next basin management cycle.

## **Documentation Associated with 4e Plans**

Except as noted herein, the documentation for a 4e plan is similar to the documentation associated with a 4b plan discussed above to ensure compliance with Rule 62-303.390(2)(d), F.A.C. Although it is the Department's responsibility to ensure adequate documentation in the administrative record to support its decision to forgo placement of a waterbody on the Verified List, and to, instead, assign it to the Study List, the Department expects local stakeholders to prepare the necessary documentation to demonstrate reasonable progress that their proposed projects or programs will restore an impaired waterbody. Without the necessary documentation, the Department is unable to place a waterbody segment into category 4e and thus, avoid the Verified List and defer TMDL development.

Each year, the Department prepares an updated impaired waters list that covers one-fifth of the basins in the state. As such, over a five-year period the Department updates its impaired waters list for the entire state. To provide the Department with sufficient time to review restoration plan documentation before the next listing order for a particular basin, local stakeholders should engage the Department at the earliest possible time but no later than one-year before the expected entry of the listing order.

Where a 4e plan is approved, the decision to develop a TMDL is deferred until additional information is submitted to complete the pollutant reduction plan, or until additional water quality data are collected documenting that a waterbody is no longer impaired and consideration for Category 2 (not impaired) is warranted.

The goal of a 4e plan is to implement appropriate restoration activities and, if necessary, additional study so that by the next assessment cycle either a 4b plan can be approved or the waterbody attains water quality standards for the parameter causing the impairment. If the waterbody is still identified as impaired by the next assessment cycle and a 4b plan has not been approved, then the waterbody would likely be placed in Category 5 and included on the Verified List, unless there are additional and substantial restoration efforts scheduled that justify keeping the waterbody in Category 4e for another assessment cycle.

### ***Benefits to Developing a 4e Plan***

There are a number of benefits to implementing such a plan. First, plan development is locally controlled. Second, an approved plan postpones the development of a TMDL for the impairment by moving straight to restoration activities. Finally, a Category 4e plan enables stakeholders to focus on implementing projects and fixing problems, not on the TMDL process itself.

Examples of activities eligible for Category 4e include the following:

- 1. A stormwater or wastewater treatment facility is completed or upgraded just prior to the assessment cycle in or upstream of a waterbody. It is likely that these facilities / upgrades will redress the identified impairment; however, water quality results are insufficient to ascertain compliance with water quality standards.*
- 2. A stormwater or wastewater treatment facility is undergoing construction when samples are taken downstream, and the water quality data may not be fully representative of the ambient conditions when construction is complete. It is likely that these facilities / upgrades will redress the identified impairment.*
- 3. Stormwater or wastewater treatment facilities and projects proposed for a waterbody (or watershed) are legally committed; however, the design has not been started or is incomplete. It is likely that these facilities / projects will redress the identified impairment. or*
- 4. A 4b RAP is incomplete but will be complete prior to the next listing cycle.*

### ***Information to Consider and Document When Developing Pollution Reduction 4e Plans***

Although a 4e plan is somewhat more flexible than a 4b RAP, a 4e plan generally should provide all of the same information as a 4b plan as described in pages 5 - 7 above, except that there is no need to 1) determine interim water quality-based targets for the waterbody, 2) provide a date that water quality criteria will be attained, 3) provide a commitment to take additional actions if the planned activities do not completely redress the impairment, or 4) provide assurance of confirmed sources of funding. A 4e plan should describe the goal of the plan (e.g., a 4b RAP will be completed prior to the next assessment cycle and reasonable progress towards restoration will be achieved in the interim, stormwater treatment upgrades

have recently been completed that should redress the identified impairment by the next assessment cycle, etc.).

### ***Interim Reporting***

Interim reporting between assessment cycles may be necessary. The Department will work with restoration plan stakeholders to develop a reporting schedule, as needed. Reports should include items such as status of planned projects, monitoring results, and changes to the restoration project schedule.

### **Contact Information**

If you have any questions about this guidance document, contact Julie Espy of the Department's Water Quality Assessment Program in Tallahassee (phone: 850-245-8416; email: [Julie.Espy@dep.state.fl.us](mailto:Julie.Espy@dep.state.fl.us)).