

Purpose

This form is designed to help applicants assemble a complete Tier II Review report. This form specifically addresses evaluating alternatives that mitigate or offset unavoidable impacts to Tier II watersheds and streams. This analysis is applicable to all areas of the **whole and complete project** within a Tier II watershed.

The Department will use this information to determine whether the applicant evaluated all reasonable alternatives to mitigate water quality degradation. MDE may provide additional comments, conditions, or requirements, during the review.



Maryland Department of the Environment

Antidegradation Review Report Form Tier II Resource Mitigation



Fill in all that apply:

1. **Project Name:** _____
2. **County ESC Plan Identifier:** _____
3. **Nontidal Wetlands & Waterways Construction Tracking Number:** _____
4. **General Permit Number:** _____
5. **Other Application Type and Number:** _____

Applicant Signature: _____ **Date Complete:** _____

Background

Code of Maryland Regulations (COMAR) 26.08.02.04-2 (G(3)) states that "If the analysis in §G(1) of this regulation shows that the alternatives are not cost effective and feasible, the applicant shall provide the Department with plans to configure or structure the discharge or other regulated activities that may cause a potential water quality impact so as to minimize the use of the assimilative capacity of the water body. The assimilative capacity of the water body is the difference between the water quality at the time the water body was designated as Tier II, the baseline, and the water quality criterion".

To demonstrate that appropriate minimization practices have been considered and implemented, applicants must identify any minimization practices used when developing the project, calculate major Tier II resource impacts, consider alternatives for impacts, and adequately justify unavoidable impacts. Further water quality impact minimization such as mitigation or out-of-kind offsets may be required.

Additionally, applicants are required to coordinate with the County or appropriate approval authority when developing construction plans, and incorporate additional practices as indicated by the guidance provided in the *Construction Stormwater Antidegradation Checklist*. This checklist, as well as the other portions of the Tier II Review Report are required prior to receiving many permits and authorizations from MDE.

Instructions and Notes

1. Review all the information in this document carefully. Prepare a report to address all the analysis required by this document. Submit all Tier II analysis and documentation together.
2. Do not leave any response blank. Please mark "N/A" for any questions or sections that are not applicable until you reach the end of the document.
3. Provide sufficient supporting documentation for narratives.
4. The level of analysis necessary, and amount of documentation that may be needed to determine if impacts have been adequately addressed, is dependent upon project size, scope, and scale of relative impacts to Tier II resources. Please develop responses accordingly.
5. Reports/responses shall be submitted in electronic format, as well as paper. Full plans are not required unless requested over the course of the review.
6. Direct any questions regarding this form to Angel Valdez at angel.valdez@maryland.gov.

Mitigation Alternative Analysis Final Documentation Checklist

- Signature & Date MDE Tier II Alternatives Analysis – Mitigation Alternative form (page 1)
- Resource Impact Summary (**Complete the analysis for each Tier II watershed affected**)
 - Tier II Streams & Buffer Mitigation
 - Impact Mitigation
 - Impact Justification
 - Forest Cover Mitigation
 - Impact Minimization
 - Impact Mitigation
 - Impact Justification
 - Impervious Cover Mitigation
 - Impact Mitigation
 - Impact Justification
 - Mitigation
 - Statement of Unavoidable Impacts to Tier II Waters
 - Mitigation Alternatives Evaluation
 - Site Description
 - Protection Mechanism
 - Conservation
 - Conservation Site Search and Evaluation
 - Protection Mechanism
 - Offsets
 - TBD based on offset

Tier II Resource Impact Mitigation

Sufficient riparian buffers, ample watershed forest cover, and lower levels of impervious cover are essential to maintaining high quality waters. This project permanently reduces riparian buffers and forest cover, or increase impervious cover within Tier II watersheds leading to a decrease in water quality

MDE will use the following information to determine mitigation for permanent impacts to Tier II watershed resources.

A. Tier II Stream Buffers Mitigation
<p>1. Instructions:</p> <p style="margin-left: 20px;">a. If no stream buffer impacts are proposed mark this section N/A and proceed to Section B, Forest Cover.</p> <p style="margin-left: 20px;">b. <u>Complete the analysis for each Tier II watershed affected on a separate sheet</u></p>

A. Tier II Stream Buffers - Tier II Watershed Name: _____		
<p>2. Summary Tier II Stream Buffer Impacts (-Linear Feet, from MDE Tier II Alternatives Analysis – Minimization Alternatives V 1.2, A(2(g))</p>	Left Bank	Right Bank

A. Tier II Stream Buffers - Tier II Watershed: _____
3. Buffer Impact Mitigation:
<p>Mitigation or offsets can occur both on and off-site. Per segment, locate areas where impacts to the 100' buffer are unavoidable.</p> <p style="margin-left: 20px;">a) Evaluate on-site alternatives to identify areas where buffers could be expanded beyond the minimum 100' to offset areas of unavoidable buffer width constraints.</p> <p style="margin-left: 20px;">b) If there are no on-site areas, evaluate off-site areas, within the Tier II watershed, where buffers could be improved, expanded, or established.</p>
4. Buffer Impact Justification:
<p>If there are any remaining unavoidable impacts, provide narrative justification and supporting documentation for impacts. Reasons may include existing infrastructure, clearance necessary to comply with regulation, no alternative location for stormwater management, property boundary, etc.</p>
5. Buffer Exhibit
<p>Prepare a Tier II Buffer Exhibit for on-site stream mitigation. Dependent upon the number of segments, multiple sheets (8 1/2" by 11") may be used. On an overview, label each segment (a, b, c...) and provide a tabular summary, per bank-segment (e.g., left bank of segment a), of average buffer width.</p> <p>In addition to on-site streams, the exhibit shall display the following information:</p> <ul style="list-style-type: none"> • 100- foot riparian buffer. (symbolize with a line) • On-site areas where buffers were expanded to maintain an average 100' buffer (symbolize with shading, hatches, or dots, etc.)

A. Tier II Stream Buffers - Tier II Watershed: _____		
<p>6. Tier II Stream Buffer Mitigation (average of 100' or greater)</p>	Left Bank	Right Bank

B. Tier II Forest Cover Mitigation	
1. Instructions: <ol style="list-style-type: none"> If there is no net forest cover loss within the impacted Tier II watershed(s), mark this section N/A. Insert the Tier II watershed name at the top of each box. Explain in detail alternatives considered, and any actions taken 	
B. Tier II Forest Cover - - Tier II Watershed: _____	
2. Summary of Potential Forest Cover Impacts (- Acres, from MDE Tier II Alternatives Analysis – Minimization Alternatives V 1.2, Sum of B(2(f)) and C(2(c))) *Impervious cover and forest cover are summed together to determine total mitigation acres	Acres
B. Tier II Forest Cover - - Tier II Watershed: _____	
3. Forest Cover Loss Mitigation	
To achieve no net negative impact because of the proposed activity, the applicant shall consider alternatives to mitigate impacts 'in-kind', for forest cover loss, to the maximum extent economically feasible. Once those options are exhausted, applicants shall evaluate out-of-kind alternatives <u>within the Tier II watershed</u> that will help offset water quality impacts. These out-of-kind alternatives include impervious cover disconnection or retrofits, stream restoration, buffer enhancement, etc. If the value in B(2) is positive, note this in the report.	
4. Forest Cover Loss Justification	
If there are any remaining unavoidable impacts to forest cover, provide narrative justification and supporting documentation for impacts. Reasons may include existing infrastructure, clearance necessary to comply with regulation, no alternative location for stormwater management, property boundary, etc.	
5. Forest Cover Exhibit	
Prepare a Tier II Forest Cover Exhibit for forest mitigation sites. <ul style="list-style-type: none"> On an 8 ½" by 11" sheet(s), prepare an on-site Tier II Forest Cover Exhibit. On a separate 8 ½" by 11" sheet(s), prepare an off-site Tier II Forest Cover Exhibit. Using varying symbology, show a basic site layout relative to 2(a), 2(b), and 2(d) above. Prepare a separate exhibit regarding any off-site out-of-kind mitigation opportunities. 	
B. Forest Cover Mitigation – Tier II Watershed: _____	
6. Tier II Forest Cover Mitigation Summary	Acres

C. Impervious Cover Mitigation

- 1. Instructions:**
- a. If ESD is used to treat all new, on-site, post-construction stormwater, mark this section N/A.
 - b. Insert the Tier II watershed name at the top of each box.
 - c. Explain in detail alternatives considered, and any actions taken.

C. Tier II Impervious Cover - Tier II Watershed: _____

2. Summary of Impervious Cover Retrofits (if applicable)	Acres
i.e., if the project proposes treatment of previously untreated impervious surfaces, in addition to treating new impervious cover associated with the project. Otherwise mark this value N/A.	

C. Tier II Impervious Cover - Tier II Watershed: _____

3. Impervious Cover Justification

If there is any remaining unavoidable addition of impervious surface acreage (not treated with ESD) which is not offset, provide narrative justification and supporting documentation for impacts. Reasons may include existing infrastructure, clearance necessary to comply with regulation, no alternative location for stormwater management, property boundary, etc.

D. Total Mitigation – Tier II Watershed: _____

1. Forest Cover Mitigation Summary (Sum B(6) and C(2))	Acres

E. Tier II Mitigation

1. If mitigation is necessary:

- a. **In-kind mitigation shall occur at a target ratio of 1:1, acre-for-acre.**
- b. **To satisfy the requirements of the Antidegradation Review, an applicant must demonstrate that they have conducted a robust alternatives analysis.**
- c. **Mitigation is required for unavoidable net forest cover loss, and any impervious cover increase that is not treated with ESD.**

E. Tier II Mitigation and Other Potential Requirements

2. Mitigation Plan Components

- a. Statement of unavoidable impacts to Tier II waters. This is total loss calculated in A(2) and B (2). Identify values specifically associated with stream buffers, forest cover, and impervious cover. Tabular totals shall be broken according to resource type and Tier II watershed impacted. The accompanying narrative shall include a summary of why impacts are considered unavoidable.
- b. Preferred mitigation alternatives analysis within the impacted Tier II watershed. The order of mitigation alternatives is as follows:
 - i. In-kind, on-site
 - ii. In-kind, off-site
 - iii. Out-of-kind, on-site
 - iv. Out-of-kind, off-site
- c. Mitigation site alternative analysis. Establish site search criteria. All locations must be located within the affected Tier II watershed identified for each unavoidable impact. Tabular totals shall include the amount of mitigation/offset selected alternatives achieve. Include maps of each mitigation property.
- d. Site Description. Provide site address, name of property if known, map and parcel number, and centroid coordinates in latitude/longitude. Include maps of each mitigation property. Maps shall include natural resources (i.e. existing forest cover, streams, wetlands, etc.), roads, railways, and any other important identifying features.
- e. Protection Mechanism. Explain the plan proposed to ensure that all areas identified for mitigation shall be protected in perpetuity. Permittees shall be required to provide documentation in the form of covenants, landowner agreements, deed details, etc. as well as financial assurances. This shall be provided no more than 60 days after completion.
- f. Planting plan: Reforestation shall incorporate optimum vegetation selection guidance provided in the *State Forest Conservation Technical Manual, 3rd edition, 1997 by Maryland Department of Natural Resources*.
- g. Monitoring Reports. Properties shall be monitored for a minimum of five years to ensure site success. Reports shall provide visuals of establishment progress, as well as narrative descriptions. Include any issues encountered, overcome, and potential changes that may be necessary to meet objectives.

F. Out-of-Kind Offsets
3. Conservation – 2:1 impact ratio
<p>a. <u>Conservation site alternative analysis</u>. Establish site search criteria. All locations must be located within the affected Tier II watershed identified for each unavoidable impact. Tabular totals shall include the amount of mitigation/offset selected alternatives achieve. Include maps of each mitigation property.</p> <p>b. <u>Site Description</u>. Provide site address, name of property if known, map and parcel number, and centroid coordinates in latitude/longitude. Include maps of each conservation property. Maps shall include natural resources (i.e. existing forest cover, streams, wetlands, etc.), roads, railways, and any other important identifying features.</p> <p>c. <u>Protection Mechanism</u>. Explain the plan proposed to ensure that all areas identified for mitigation shall be protected in perpetuity. Permittees shall be required to provide documentation in the form of covenants, landowner agreements, deed details, etc. as well as financial assurances. This shall be provided no more than 60 days after completion.</p>
4. Other Out-of-Kind Offsets – Requirements TBD based on offset offered, and may include stream restoration, buffer improvements, etc.

Applicant Signature: _____ **Date:** _____

Provide a hardcopy response to:

Maryland Department of the Environment
Environmental Assessment and Standards Program
Antidegradation Implementation Coordinator
ATTN: Angel D. Valdez
1800 Washington Blvd, Suite 530
Baltimore, Maryland 21230

Provide an electronic response via email: to Angel Valdez at angel.valdez@maryland.gov.