



STATE OF TENNESSEE  
DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
NASHVILLE, TENNESSEE 37243-0435

**MEMORANDUM**

FROM: Jimmy Smith, Manager, *Natural Resources Unit*

RE: Clarification on Cumulative Impact Assessment and Aquatic Resource Alteration Activities  
Associated with a Common Plan of Development

TDEC has an overarching responsibility to ensure that impacts to waters of the state, as approved via permits issued, do not result in a net loss of water resource value. TDEC achieves this when impacts approved through permits are either de minimis, or compensatory mitigation is required to offset the loss of the resource value when the impacts are greater than de minimis. Persons who wish to conduct an activity that may impact a water of the state must first employ all efforts to avoid and minimize such impacts. If, after all avoidance, minimization, and full alternative analysis impacts to the waters are determined to be necessary, mitigation must be proposed to offset lost resource value.<sup>1</sup> Further, no activity can be authorized by the Commissioner unless the mitigation is sufficient to result in no overall net loss of resources.<sup>2</sup>

In making a decision on any permit application, the Commissioner "shall determine the lost resource value associated with a proposed impact and the resource value of any proposed mitigation"<sup>3</sup> including the following factors:

1. direct loss of stream length, waters, or wetland area due to the proposed activity;
2. direct loss of in-stream, waters, or wetlands habitat due to the proposed activity;
3. impairment of stream channel stability due to the proposed activity;
4. diminishment in species composition in any stream, wetland, or state waters due the proposed activity;
5. direct loss of stream canopy due to the proposed activity;
6. whether the proposed activity is reasonably likely to have cumulative or secondary impacts to the water resource

TDEC regulations require the Division to evaluate... " *whether the proposed activity is reasonably likely to have cumulative or secondary impacts to the water resource*" for linear and non-linear projects. The cumulative level of degradation of proposed impacts on water resources may exceed a de minimis level, even where each discreet impact point might be considered de minimis if only considered individually. Where a single impact of a given scale might only require coverage under a general permit, multiple impacts of the same scale may require coverage under an individual

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<sup>1</sup> Rule 0400-40-03-.04(4)(b), Water Quality Criteria; 0400-40-07-.01(1), Aquatic Resource Alterations

<sup>2</sup> Rule 0400-40-07-.04(6)(c), Aquatic Resource Alterations

<sup>3</sup> Rule 0400-40-07-.04(6)(c), Aquatic Resource Alterations

permit, due to the cumulative effects. Similarly, large linear and non-linear activities often encompass multiple impacts that may, collectively, result in a net loss of water resource value if compensatory mitigation is not utilized to offset or compensate for the impacts. Therefore, TDEC must review applications from larger linear and non-linear activities that propose multiple impacts comprehensively at the outset of permitting to ensure that there is no net loss of resource value from individual or cumulative impacts.<sup>4</sup> These projects are considered Common Plans of Development (CPD).

For activities that are considered CPDs, understanding the totality of the impacts associated with the entire project at the outset of permitting is critical for Division to assess if the de minimis threshold will be exceeded and an individual permit, and potentially mitigation is needed. If the de minimis threshold will be exceeded and an individual permit is required, the applicant must propose adequate mitigation actions so that there is no net loss of state water resource values

To better address the issue of resource loss with cumulative impacts, the Division will:

1. Require applicants with large projects that have the potential for multiple impacts within the project boundaries to submit a comprehensive project plan (including future phases) with their application;
2. Require applicants to identify all aquatic resources, including wetlands, streams, and creeks within the boundaries of the CPD, and the locations, size and scope of all potential aquatic resource alterations to waters of the state; and
3. Require that multiple impacts within the same Stream Catalog Unit (“Waterbody”) for a project are assessed cumulatively prior to permit issuance for any portion of the CPD.

With the comprehensive plan, the Division will be able to address impacts within a CPD and holistically review the site for the potential to exceed the threshold of de minimis degradation to water resources. The process will allow the Division to ensure no net loss to water resources for both linear and non-linear projects. Further, it will benefit the permit applicant by:

- allowing the applicant to receive coverage at once for all impacts requiring 401 certification; therefore, having one public notice process and one application review time;
- providing reasonable certainty concerning the potential compensatory mitigation needs for the entire site over the life of the project; and
- avoid piece-mealing of impacts under multiple general or individual permits that can create controversy and confusion, and potentially lead to uncompensated loss of the State’s water resources.

The Division will assess cumulative impacts for linear and non-linear projects on the Waterbody scale. This is the same scale the Division utilizes in its bi-annual report to EPA evaluating the overall ecological health and use support of our water resources (“305b report”). Years of detailed evaluation of data collected at this scale highlights these systems’ responsiveness to activities within the watershed that are reflected in the overall condition of that Waterbody. This is also the scale at which TDEC reports the impairment status of water resources to the EPA (such as in the 303d-list), and the level at which the availability or unavailability of additional degradation from pollutants or habitat alteration is assessed.

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<sup>4</sup> Rule 0400-40-03-.04(4)(b), Water Quality Criteria; 0400-40-07-.04(4)(b), Aquatic Resource Alterations

All impacts within the CPD project boundaries (linear and non-linear) will be covered under an individual permit if any impact, either singularly, or cumulatively within a single Waterbody, exceeds the threshold of de minimis degradation. The amount of compensatory mitigation needed to offset resource loss will be calculated independently for each affected Waterbody. If impacts exceed de minimis in one Waterbody but do not exceed this threshold in another Waterbody, those that do not exceed the threshold will not require additional mitigation. Mitigation will only be assessed to those activities and impact types that require compensation for resource loss as outlined in the Division's Mitigation Guidelines.

An applicant may seek multiple general permit coverage for a CPD if the comprehensive plan and resource impact evaluation shows the activities cumulatively will stay below the minimum threshold for an individual permit.

On linear projects, the Division will use the logical termini as defined by the Federal Highway Administration (for the purpose of environmental reviews) to determine the extent of the CPD. Logical termini for project development are defined as (1) rational end points for a transportation improvement, and (2) rational end points for a review of the environmental impacts. As with non-linear projects, cumulative impacts for a linear project (from logical termini to logical termini) will be assessed on a Waterbody ID scale. Many large scale linear projects will affect multiple Waterbodies within the project boundaries. Each Waterbody will be identified, assessed, and impacts will be calculated based on the cumulative impacts within that Waterbody.