

## TVA Version of the Ohio Rapid Assessment Method

TVA has developed a version of the *Ohio Rapid Assessment Method* (ORAM v.5.0) specific to the TVA region for use in guiding wetland-related decisions consistent with TVA's independent responsibilities under the *National Environmental Policy Act* and the *Wetlands Executive Order (11990)*\*. [\*Note: nothing in this document should be construed to alter any obligations TVA may have under Clean Water Act Section 404 permits or applicable state permits.] The *Ohio Rapid Assessment Method* was developed to "categorize wetlands based on their functions, sensitivity to disturbance, rarity and irreplaceability, so that the strictness of avoidance, minimization, and mitigation could be scaled to a wetland's category". The *Ohio Rapid Assessment Method* was recognized by the USEPA as a suitable methodology for assessing the ecological condition of wetlands in their 2004 *Review of Rapid Methods for Assessing Wetland Condition* (<http://www.epa.gov/owow/wetlands/monitor/RapidMethodReview.pdf>)\*. The *Ohio Rapid Assessment Method* provides quantitative metrics to measure wetland condition which are "robust under a wide variety of circumstances" and "highly transferable among states or regions", is truly rapid (less than ½ day to apply), is an onsite assessment providing protocols for consistent and repeatable results between users, and the method has been verified and calibrated using more intensive (Level 3) onsite biological assessments (such as the Vegetation Index of Biotic Integrity or VIBI).

\*(Fennessy, M.S., A.D. Jacobs, and M.E. Kentula. 2004. *Review of Rapid Methods for Assessing Wetland Condition*. EPA/620/R-04/009. U.S. Environmental Protection Agency, Washington, D.C.)

The *Ohio Rapid Assessment Method* is designed to distinguish between three categories of wetlands:

- Category 1 includes wetlands with "minimal wetland function and/or integrity";
- Category 2 includes wetlands with "moderate wetland function and/or integrity"; and
- Category 3 includes wetlands with "superior wetland function and/or integrity".

Category 1 wetlands are described as "limited quality waters". They are considered to be a resource that has been degraded, has limited potential for restoration, or is of such low functionality, that lower standards for avoidance, minimization, and mitigation can be applied. "Soft mitigations" such as 1:1 compensatory mitigation ratios, alternate land preservation (conservation easements), in lieu fees, or replacement of individual functions of concern (such as effective shoreline stabilization through another means), may be acceptable.

Category 2 includes wetlands of moderate quality and also wetlands that are degraded but could be restored. It is recommended that the same avoidance, minimization, and mitigation standards apply to both types of wetlands--"Being able to identify degraded but restorable wetlands allows for increased enhancement and restoration possibilities; it should not be used as a tool for authorizing further degradation." Avoidance and minimization are the first lines of mitigation. Establishment of buffer zones of at least 100 feet around wetlands is recommended to minimize impacts. Evidence that the proposed project (impacting the wetlands) will provide social and economic benefits to the general public is necessary to justify going to compensatory mitigation, which must consider replacement of acreage as well as functions. Compensatory mitigation ratios of at least 2:1 or 4:1 are considered based on wetland type, projected restoration or regeneration time (replaceability), and ORAM score.

Category 3 generally includes wetlands of very high quality and wetlands which are of concern regionally and/or statewide, such as wetlands which provide habitat for threatened or endangered species. The highest mitigation standards apply to category 3 wetlands. In general, all practicable attempts are made to avoid any disturbance of category 3 wetlands and their buffer zones (at least 100 feet). Any remaining disturbances are minimized to the extent practicable. Evidence that the proposed project (impacting the wetlands) will provide social and economic benefits to the general public is necessary to justify going to compensatory mitigation, which must consider replacement of acreage as well as functions. Where disturbance of category 3 wetlands or their buffer zones is unavoidable, higher compensatory mitigation ratios (6:1 or greater) will be necessary based on wetland type, projected restoration or regeneration time (replaceability), and ORAM score.

ORAM v.5.0 provides six metrics for the categorization of wetlands.

- *Metric 1. Wetland area (size)* [6 points maximum]
- *Metric 2. Upland buffers and surrounding land use* [14 points maximum]
- *Metric 3. Hydrology* [30 points maximum]
- *Metric 4. Habitat alteration and Development* [20 points maximum]
- *Metric 5. Special wetlands* [10 points maximum]
- *Metric 6. Plant communities, interspersions, microtopography* [20 points maximum]

The scores for the six metrics are leveled to provide a composite “total score” with a maximum of 100 points. The raw or unleveled scores for the individual metrics can also be interpreted as indicators of wetland condition for performing particular functions. In the TVA version, Metric 5 (Special wetlands) has been modified to appropriately weight wetlands which are of concern in the TVA region [Note: Metric 5 represents a maximum of 10 points out of a possible 100 point total, or a possible 10% of the total score.]

Table 23. Interim scoring breakpoints for wetland regulatory categories for ORAM and VIBI scores.

category	VIBI score	ORAM score
1	0 - 21	0 - 29.9
1 or 2 gray zone	---	30 - 34.9
modified 2	22 - 44	35 - 44.9
2	45 - 66	45 - 59.9
2 or 3	---	60 - 64.9
3	67 - 100	65 - 100

SOURCE: <http://www.epa.state.oh.us/dsw/wetlands/FinE657IntG833.pdf>

Final Report to U.S. EPA Grant No. CD985276/Interim Report to U.S. EPA Grant No. CD985875. Volume 1: Vegetation Indices of Biotic Integrity (VIBI) for Wetlands and Calibration of the Ohio Rapid Assessment Method for Wetlands v. 5.0. August 1, 2000

#### **Wetlands that fall within the scoring “gray zone” between categories.**

Assuming the category has not been determined using the Narrative Rating, if the quantitative rating score is *between the scoring ranges* for Categories 1 and 2 or Categories 2 and 3, i.e. is in the "gray zone" between categories, the Rater can do either of the following:

1. Assign the wetland to the *higher* of the two categories, e.g. if the wetland is in the gray zone between Category 1 and 2, the Rater would assign the wetland to Category 2;
2. Assess the quality of the wetland using a nonrapid method, i.e. a detailed functional and/or biological assessment of the wetland and use this information in conjunction with any other wetland indices of biotic integrity to assign the wetland to a category.