



Chapter 105 Resource Condition Level 2 Rapid Assessments

**Water Resources Advisory Committee
September 21, 2016**

Tom Wolf, Governor

Patrick McDonnell, Acting Secretary

Aquatic Resources

- Wetlands
- Riverine
 - Watercourses: intermittent and perennial
- Lacustrine
 - Lakes, reservoirs and large rivers

Significant Revisions

- Wetland
 - Removed HGM and Veg. Community Class.
- Riverine
 - Clarified Ephemeral and Intermittent
 - No Instream Habitat Index
 - Watercourses > 100 mi²
 - No Riparian Zone of Influence Index

Revisions Cont.

- Lacustrine
 - Watercourses > 2,000 mi² drainage areas
 - Case by case ≤ 2,000 mi² when flow is dammed or otherwise controlled

Standardization

- Standardized Protocols
 - ***Not*** intended for:
 - Water quality designation purposes
 - Ecological integrity evaluations
 - Multiple uses – EA and Compensation
 - Addresses majority of applications

Standardization

- Standardized Protocols Cont.
 - Qualitative
 - Rapid and low cost
 - Approaches Incorporated
 - Departure from reference standard
 - Resource structure/component
 - Stressor based

Standardization

- Standardized Protocols Cont.
 - Same Scoring Approach
 - Indexed Based Method
 - Common Condition Indices
 - ***Same Condition Category Definitions***
 - Resource Specific Defined Areas (e.g. floodplain, fixed width distances, etc.)

Basic Scoring Approach

- Uses 1-20 condition category scoring as basis for Condition Index (0.05-1)
 - Assessor determines condition category(s) then selects score within category range; or
 - Calculate weighted index by using category score times percent areal cover

Optimal					Suboptimal					Marginal					Poor				
20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

Common Weighted Index

1. Wetland Zone of Influence Condition Index																													
Wetland Zone of Influence (300 foot area around AA perimeter)	Condition Category																												
	Optimal					Suboptimal				Marginal				Poor															
	ZOI area vegetation consists of a tree stratum present (diameter at breast height (dbh) > 3 inches) with greater than or equal to 60% tree canopy cover. Areas comprised of stream channels, wetlands (regardless of classification or condition) and lacustrine resources ≥ 10 acres are scored as optimal.					High Suboptimal: ZOI area vegetation consists of a tree stratum (dbh > 3 inches) present, with greater than or equal to 30% and less than 60% tree canopy cover and containing both herbaceous and shrub layers or a non-maintained understory.				Low Suboptimal: ZOI area vegetation consists of a tree stratum (dbh > 3 inches) present, with greater than or equal to 30% and less than 60% tree canopy cover with a maintained understory.				High Marginal: ZOI area vegetation consists of non-maintained, dense herbaceous vegetation with either a shrub layer or a tree stratum (dbh > 3 inches) present, with less than 30% tree canopy cover.				Low Marginal: ZOI area vegetation consists of non-maintained, dense herbaceous vegetation, riparian areas lacking shrub and tree stratum, areas of hay production, and ponds or open water areas (< 10 acres). If trees are present, tree stratum (dbh > 3 inches) present, with less than 30% tree canopy cover with maintained understory.				High Poor: ZOI area vegetation consists of lawns, mowed, and maintained areas, nurseries; no-till cropland; actively grazed pasture, sparsely vegetated non-maintained area, pervious trails, recently seeded and stabilized, or other comparable condition.				Low Poor: ZOI area vegetation consists of impervious surfaces; mine spoil lands, denuded surfaces, row crops, active feed lots, impervious trails, or other comparable conditions.			
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1									
1. Identify all applicable Condition Category areas within the wetland zone of influence using the descriptors above.												Total Score = SUM(% Areas*Scores)						Total Score:											
2. Estimate the % area within each condition category. Calculators are provided for you below.																													
3. Enter the % ZOI Area in decimal form (0.00) and Score for each category in the blocks below.																													
Scoring:	Condition Category:																												
	% ZOI Area:																												
	Score:																												
	Total Sub-score:																												
CI = Total Score/20																													
CI																													

Weighted Scoring

- Wetland ZOI (300 feet)
- Riparian Vegetation (floodplain)
- Riparian ZOI (100 feet)
- Riparian Shoreline Vegetation (50 feet)
- Riparian Vegetation ZOI (50 feet)

Assessment Areas

- Assessment Areas based on
 - Proposed direct and indirect impacts;
 - Size and type of resource; and
 - Location of impact within resources.
- Assessor has flexibility in defining or adjusting AA boundaries

Level 2 Condition Indices

- Wetland Indices (6)
 - ***Wetland Zone of Influence (ZOI)***
 - Roadbed Presence
 - Vegetation Condition
 - Hydrologic Modification
 - Sediment Stressor
 - Water Quality Stressor

Level 2 Condition Indices

- Riverine Indices (5 or 4)
 - Channel Condition
 - ***Riparian Vegetation (floodplain)***
 - ***Riparian ZOI (aka buffer)***
 - Instream Habitat
 - Channel Alteration

Level 2 Condition Indices

- Lacustrine Indices (4 or 1)
 - ***Riparian Shoreline Vegetation (50 feet)***
 - ***Riparian Vegetation ZOI (50 feet)***
 - Average Depth
 - Shoreline and Near-shore Human Alteration



pennsylvania

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Questions?

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