Chapter 105
Technical Guidance Update:
Function Based Compensation Protocol

Water Resources Advisory Committee
November 18, 2021

Tom Wolf, Governor

Patrick McDonnell, Secretary

Programmatic Enhancements

- Level 2 Rapid Condition Assessments Previously Finalized and Implemented

  - Palustrine (310-2137-002)

  - Riverine (310-2137-003)

  - Lacustrine (310-2137-004)

- Finalization of Fourth Technical Guidance

  - Function Based Compensation Protocol (310-2137-001)

Aquatic Resources

- Riverine

  - Intermittent and perennial wadeable watercourses and their floodways/floodplains

- Palustrine/Tidal

  - Wetland environments including unvegetated forms (i.e., mudflats)

- Lacustrine

  - Lakes, reservoirs and non-wadeable rivers

Function Based Compensation

- Pennsylvania Function Based Compensation Protocol (310-2137-001)

  - Standardizes the Mitigation Process

  - Provides Predictive Expectations

  - Provides Statewide and Cross Program Consistency

  - Reduces Application Review Times

  - Reduces Applicant/DEP Conflicts

  - Maximizes Use of Application Information

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Function Based Compensation

- Pennsylvania Function Based Compensation Protocol (310-2137-001)

  - Common Resource Language

  - Utilized Across Mitigation Sectors: ILF, Banking and Permittee Responsible Mitigation

  - Provides a Transparent Compensation Process

  - Provides Equitable Compensation System

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Revisions

- Reordered sections to flow better

- Provided additional clarifying language throughout to address public comments

- Removed the Recreation Function Groups (REC1 and REC2)

- Moved the Riverine Resource Support (RS) Function Group to co-occur with the Hydrologic (HYD) Function Group and provided criteria for determining the applicability

Revisions

- Revised Applicable Sections to address the Function Group revisions

- Added an Additional Adjustment Factor to Section 7.0 Compensation Value Adjustment - *Watershed Scale Projects*

Revisions

- Final Revised Function Groups -
  same framework for all resource types

  - More representative of headwater systems

Function Group	Riverine	Wetland	Lacustrine	Description
Resource Support (RS)	√			Role in maintaining watershed quality
Hydrologic (HYD)		√		Hydrodynamics, baseflkow, flood storage
Biogeochemical (BGC)	√	√		Vegtation, soils and hydrology
Habitat (HAB)	√	√	√	Community and species level

Standard Compensation Equation

- **(CR) = CI x RV x AI x PE**

  - CR = Compensation Requirement

  - CI = Condition Index Value (0.00)
    (from applicable resource condition assessment)

  - RV = Resource Value

  - AI = Area of Impact (in acres, 0.00)

  - PE = Project Effect Factor

Compensation Factors

- Resource Condition Index (Scale 0.05-1)

- Resource Value (Scale 1-3)

- Impact Area -
  by Resource Function and Impact Type (acres)

- Project Effect Factor (Scale 0-3)

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Resource Condition

- Use Rapid Condition or Intensive Measures
    - Since index based, other approaches usable
    - Process adaptable to utilize best approaches

- Provides reasonableness to compensation
    - Low quality resources result in reduced amount
    - High quality resources result in increased amount
- Compensation projects uses a Condition Differential instead

Resource Value

Resource Value - Standardized list of values

- Varies by resource type

- Foundation in regulations, science and public interest (e.g., Special Protection, rare wetland communities, special fishery designations)

- Levels are still: Significant (3), Special (2.5), Quality (2), Support (1.5) and Minimal(1)

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Specific Revisions

Resource Value (Scale 1-3)

- Replaced use of the Wetland Level 2 Condition Index in the Resource Value Criteria with the Wetland Rapid Floristic Quality Index (RFQI)

  - RFQI Utilizes data from the wetland delineation

- These same values are used for establishing a Compensation Project's Value

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Specific Revisions

Impact (acreage)

- Area calculated for each type of resource impact proposed (e.g., permanent direct, temporary indirect)

Specific Revisions

Project Effect Factor (Scale 0-3)

- Project Effect Factor tied to the type(s) of impact(s) proposed

  - Direct, Indirect and Temporal

  - Adjustment factors to address extended temporal impacts and use of in-lieu fee credits

  - Levels are still: Severe (3), Moderate (2), Limited (1), and Minimal (0)

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Producing Function Credits

- **(FCG) = AP x CV x RV x CI**

  - FCG = Function Credit Gain

  - CIDIFF = Condition Index Differential Value (0.00) (difference between existing condition and projected/measured condition)

  - RV = Resource Value

  - AP = Area of project gain (in acres, 0.00)

  - CV = Compensation Value Factor

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Producing Function Credits

Condition Differential -
preexisting condition versus post condition

Resource Value - same values used

Area of Project Gain

- Defining discrete areas of gains based upon the 2008 Federal Mitigation rule definitions

  - Reestablishment, rehabilitation or enhancement

  - Size of project, cause/extent of degradation

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Compensation Value (1-3)

- Considers the project type - re-establishment, rehabilitation, etc.

- Considers size of project, cause/extent of degradation

- Allow for Adjustment Factors which increase value

  - Protecting lands around project area (1.0)

  - Watershed Scale Projects (case by case)

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Next Steps

- Final Publication

- ILF Program Approval

- DEP Training completed

- Regulated community training available in late 2021 or early 2022

    - Dates will be announced

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Questions?

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