



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Bureau of Waterways Engineering and Wetlands

Pennsylvania Chapter 105 Riverine Compensation Overview

ASWM Webinar
April 17, 2014

Aquatic Resources

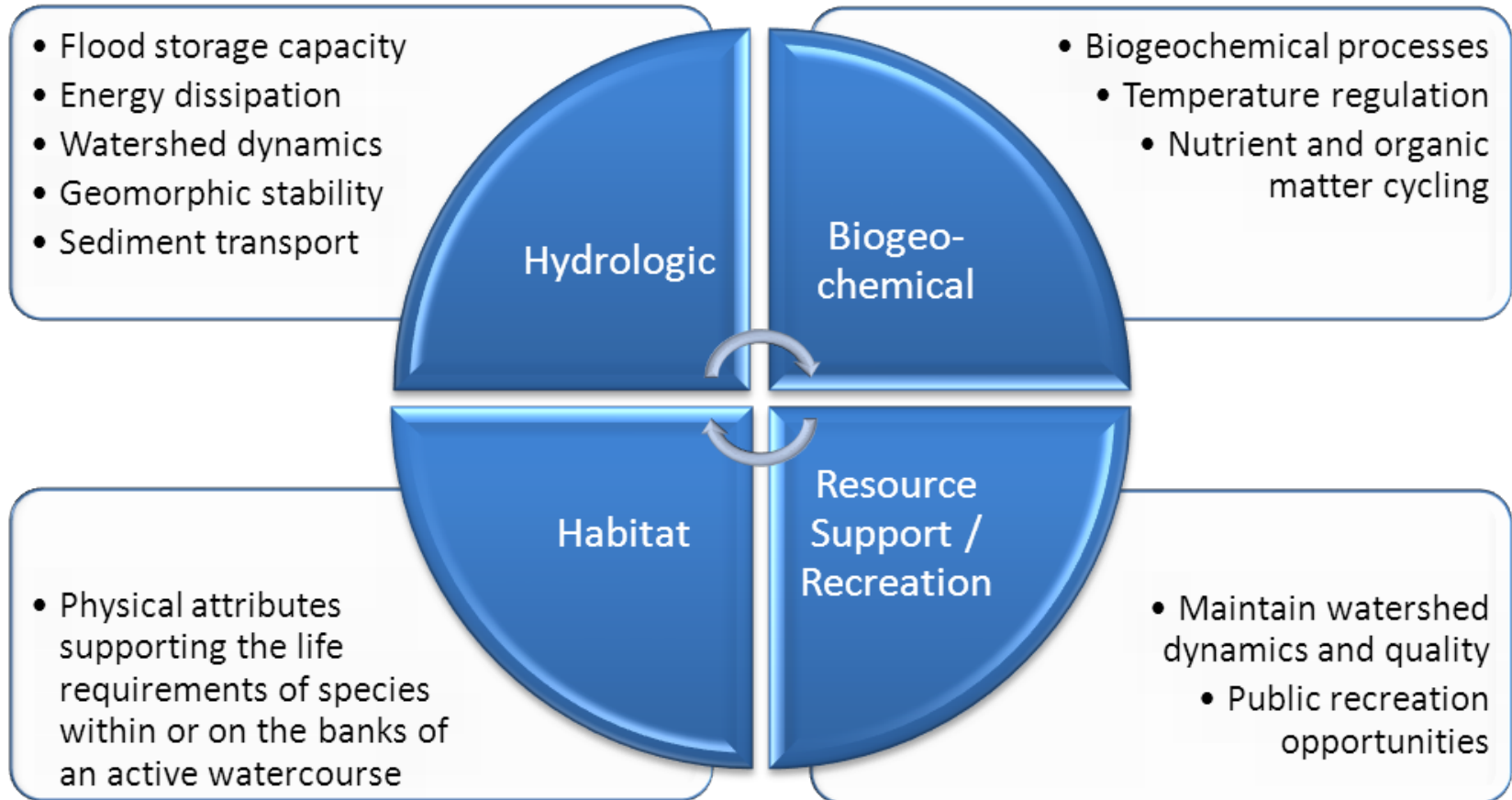
- * Riverine
 - * Intermittent and perennial wadeable watercourses and their floodways/floodplains
- * Utilize resource condition assessment or intensive evaluation methods (i.e. IBI)
 - * Proposed Level 2 Procedures (5 Indices)
 - * Channel Condition
 - * **Riparian Vegetation (floodplain)**
 - * **Riparian ZOI Vegetation**
 - * Instream Habitat
 - * Channel Alteration

Standardized Function Approach

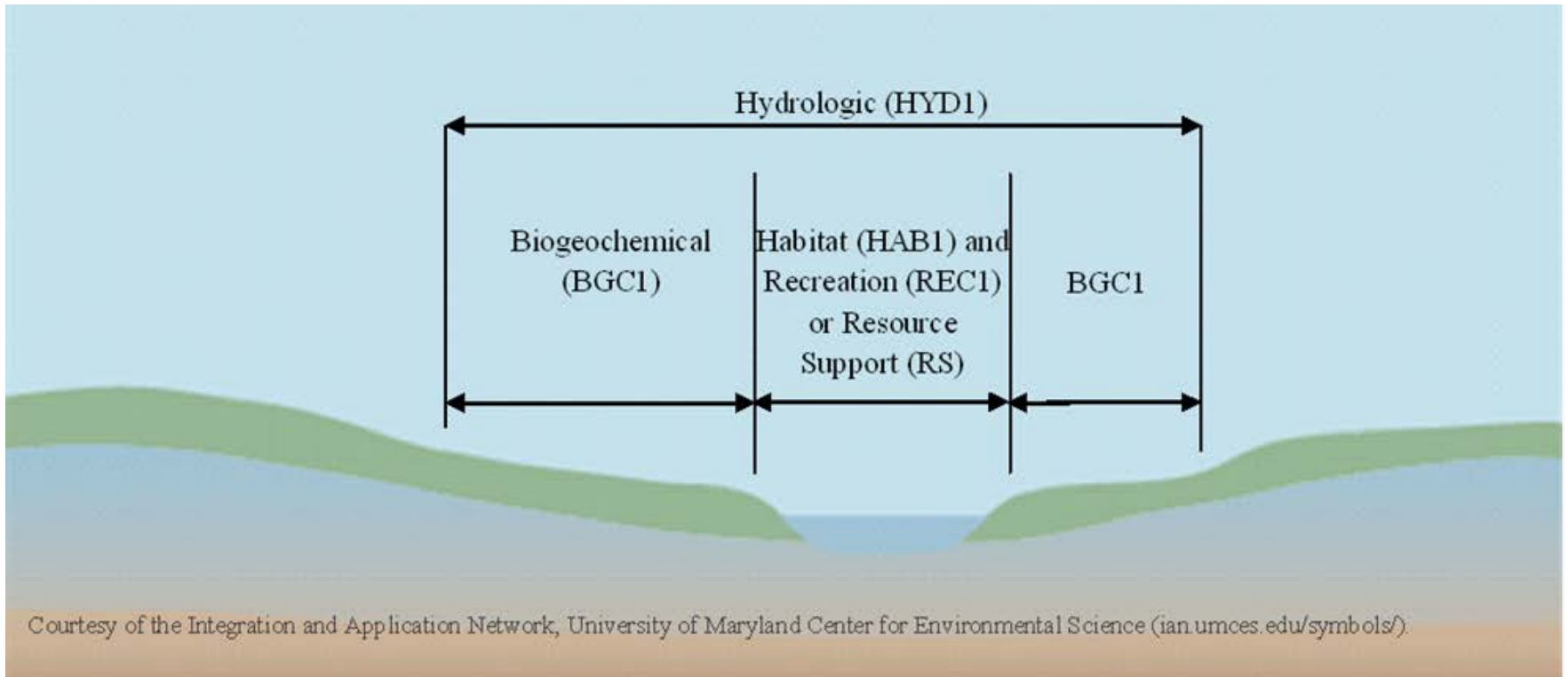
- * Establishes the same framework for all resource types

| Function Group | Wetland | Riverine | Lacustrine | Description |
|-----------------------|---------|----------|------------|-----------------------------------|
| Hydrologic (HYD) | √ | √ | | Hydrodynamics, storage, baseflow |
| Biogeochemical (BGC) | √ | √ | | Vegetation, soils and hydrology |
| Habitat (HAB) | √ | √ | √ | Community and species level |
| Recreation (REC) | | √ | √ | Public recreational opportunities |
| Resource Support (RS) | | √ | | Role in maintaining water quality |

Riverine Function Groups



Standardized Function Approach



Establishing Impacts

- * Impacts categorized as
 - * **Direct** – loss of resource **area** and function
 - * Occurs through filling, draining, impounding
 - * **Indirect** – loss of resource function only
 - * Occurs through alteration of chemical, physical or biological components of the resource

Standard Compensation Equation

- * Pennsylvania Function Based Compensation Protocol (Doc # 310-2137-001)
- * **(CR) = AI x PE x RV x CI**
 - * CR = Compensation Requirement
 - * AI = Area of Impact (in acres, 0.00)
 - * PE = Project Effect Factor
 - * RV = Resource Value
 - * CI = Condition Index Value (0.00) (from applicable resource condition assessment)

Questions?

David Goerman, Jr.

PA DEP

Bureau of Waterways Engineering and Wetlands

dgoerman@pa.gov

717 772 5971