

Managing and Understanding Sediments in Your Watershed  
U.S. Army Corps of Engineers, Detroit District  
Great Lakes Hydraulics and Hydrology Office  
23-24 February 2010  
Milwaukee Metropolitan Sewerage District Offices  
260 W. Seeboth Street, Milwaukee, WI

Agenda

**Note:** Advance registration is required. Please contact Michael Schneider, Great Lakes Commission, at (734) 971-9135 or Michaels@glc.org to confirm your participation.

**23 FEBRUARY (Tuesday)**

- 8:00 – 8:30 Introduction (Jim Selegan  
Class overview USACE – Detroit District)  
Great Lakes Tributary Modeling Program
- 8:30 – 10:30 Riparian Zone Mitigation for Sediment (Rich Fischer  
USACE - ERDC)
- Buffer Strip design
  - Riparian Corridors
- 10:30 – 10:45 BREAK
- 10:45 – 11:45 Sediment: The Good and the Bad (Travis Dahl  
USACE – Detroit District)
- The influence of sediment on:
- Fish and benthic invertebrates
  - Flooding, erosion, stream stability
  - Dams and “hungry water”
- The importance of soil
- Rates of production
  - Rates of denudation
- 11:45 – 1:00 LUNCH (provided)
- 1:00 – 2:00 Sources of Sediment (Jim Selegan  
USACE – Detroit District)
- Sediment production
- Raindrops and entrainment
  - Benefits of a closed forest/vegetation
  - Incision and channel evolution
  - Dam removal
- Constructing a sediment budget
- Sources (bank erosion, overland runoff)
  - Sinks
  - Data sets
  - Corps guidance
- Generalizations about urban, agricultural and forested watersheds  
Historical sediment supplies (Pre-European settlement to present)

- 2:00 – 3:00 Monitoring for sediment (USGS, Madison, WI)
- Sampling equipment
  - Sampling methods
  - Accessing historic data
- 3:00 – 3:15 BREAK
- 3:15 – 4:15 Web-based tools for soil erosion assessment/management (Jon Bartholic - MSU)
- High (sediment) Impact Targeting
  - Digital Watershed
  - RUSLE tool for agriculture and construction sites

**24 FEBRUARY (Wednesday)**

- 8:00 – 9:00 Web-based tools for soil erosion assessment/management (Bernie Engel, Purdue Univ.)
- L-THIA (Long-Term Hydrologic Impact Assessment) Model
  - SEDSPEC - A Web-based Tool to Estimate Peak Runoff and Design Runoff and Erosion Control Structures
  - Web-based Environmental Decision Support Tools
- 9:00 – 9:30 Channel Stability Tool (Mark Riedel Baird and Associates)
- 9:30 – 9:45 BREAK
- 9:45 – 10:45 Advanced Tools (Jim Selegan USACE – Detroit District)
- When is a multi-dimensional model needed?
  - 1-D vs. 2-D vs. 3-D models
  - Empirical and deterministic models
  - Importance of model calibration/validation
- 10:45 – 11:30 Sediment Fingerprinting (Mark Riedel Baird and Associates)
- 11:30 – 12:30 LUNCH (provided)
- 12:30 – 2:30 In-Stream Mitigation (Dave Derrick USACE - ERDC)
- Bank stabilization methods
  - Grade control methods
  - Sediment and flow retention basins
- 2:30 – 2:45 BREAK
- 2:45 – 4:45 Local presentations
- NRCS presentation
  - Urban BMPs for sediment
  - Local restoration study
- 4:45 – 5:00 GL Basin Program for Soil Erosion and Sediment Control (Great Lakes Commission)