WORKING ACROSS POLITICAL JURISDICTIONS – POST-CONSTRUCTION IMPLEMENTATION

Eric Schmechel, Urban Conservationist, Dubuque SWCD
Dean Mattoon, Engineering, City of Dubuque
Purpose and History – WHY?

- Catfish Creek (Trout Stream) Watershed Project – (Goals and Objectives)
- WIRB Grant
- Iowa’s Native Hydrology...Why Infiltration?
- Build Support – Educate – Consensus
Dubuque County passed E/S Ordinance and Post-Construction Ordinance in March 2010.

One of the First Counties in Iowa to pass own ordinance

Originally – only to include Headwaters of Catfish
Why the County level?

- Allows County officials to make better decisions regarding development and runoff
- Play a “local” role in protecting Quality of Life for residents
- Lack of Regulation
- Water Quality
- Flash Flooding
- WQ Challenges
City of Dubuque vs. Dubuque county

- City of Dubuque (MS4) Phase II
- Erosion & Sediment Control Ordinance in Place
- Smaller Communities - ↑ Development Rate
- Motivates Sprawl
- Uneven Playing Rules
Stormwater (post-construction)

- New development or redevelopment site with 1 acre or more of land disturbing activities
- Development requiring a subdivision plat
- Commercial or industrial development that requires a certified plat
- Development or redevelopment, regardless of size that falls under the NPDES stormwater program
Performance standards....

- Based off Volume-Based Hydrology
- Post-development runoff shall be infiltrated such that a rainfall depth of 1.25 inches is recharged to the ground \((\text{Recharge Volume, Rev})\). Infiltration shall be limited to the volume infiltrated in 24 hours.

  - Exclusion: If the site is unsuitable for infiltration as determined by the County Engineer, the applicant may submit engineering evidence such as clay soil or karst that may suggest that the site may require alternative infiltration practices such as a treatment train.
Iowa Stormwater Management Manual

- Rain Gardens
- Bio-Retention
- Bioswales (Vegetated Swales)
- Green Roofs
- Permeable Transportation Surfaces (City of Dub – 73 green alleys, Airport Terminal, Subdivisions)
- Detention (Slower Release – Tiered System)
- (Encouraging reduction of Impervious)
Management practices - Modeling

- Iowa stormwater management manual
- Win-Slamm
- P-8
- Other Approved Models May be accepted
Implementation

- 28e agreement – Cities – County – Dubuque SWCD
- Stormwater Permits/Administration
- Feasible BMPs – Planning Stages
- CCWMA – Work across Political Jurisdictional lines
- Work off Watershed Lines
Challenges

- Modeling “unknowns”
- Acceptable Criteria (engineers)
- Maintenance Agreements – Homeowners – City – County
- BMP Specifications – Construction Installation
- Working With Developer/Builder/County/Homeowner
City of Dubuque - Unified development code (UDC) is

- Updated consolidation of zoning, subdivision, site development and historic preservation regulations
- Sustainable design is now what’s expected; traditional development is now the exception.
- **Post-Construction Standards part of UDC**
Questions/comments