



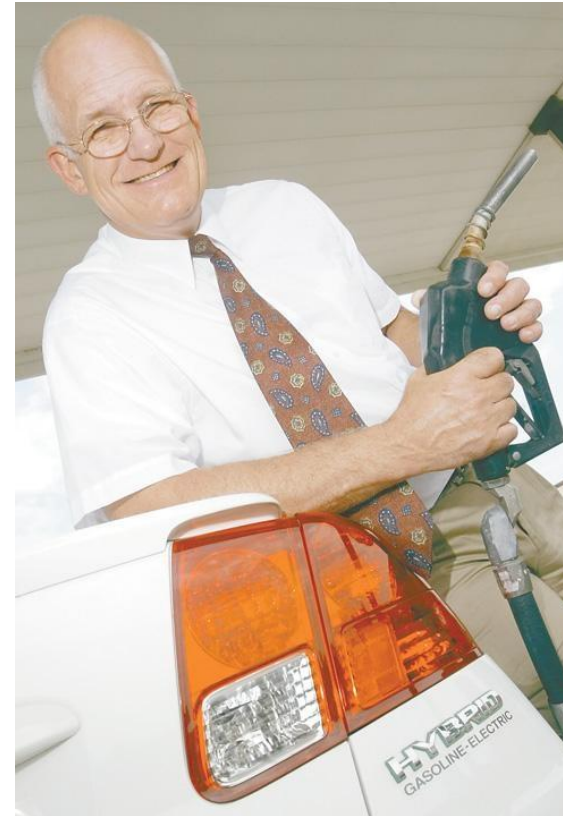
Soil & Water
Conservation District



Water Quality Monitoring in the Duck Creek Watershed

Clare Kerofsky, Partners of Scott County Watersheds &
Scott County Soil and Water Conservation District

Wally Mook



- The trouble with retirement is that you never get a day off!



Scott County & Duck Creek Watershed Sampling: Timeline

- ▶ **2002:** First Scott County Snapshot Water Quality Monitoring Event occurred, multiple monitoring parameters
 - ▶ **2004:** Midwest Bacteria Project, weekly sampling for *E. coli* bacteria on Duck Creek
 - ▶ **2008:** Duck Creek was declared impaired or “highly polluted” for *E. coli* bacteria
 - ▶ **2008:** Weekly sampling for *E. coli* bacteria of 9 sites in the Duck Creek Watershed
 - ▶ **2010:** Water Quality Improvement Plan/Total Maximum Daily Load was created by the DNR
 - ▶ **2011:** The Duck Creek Watershed Management Plan is approved by DNR & EPA
 - ▶ **2011:** Watershed Implementation Grant is submitted
 - ▶ **2011:** Verbal confirmation funding is received
 - ▶ **2011:** Increased monitoring plan begins to be implemented as part of the impairment, plan and grant
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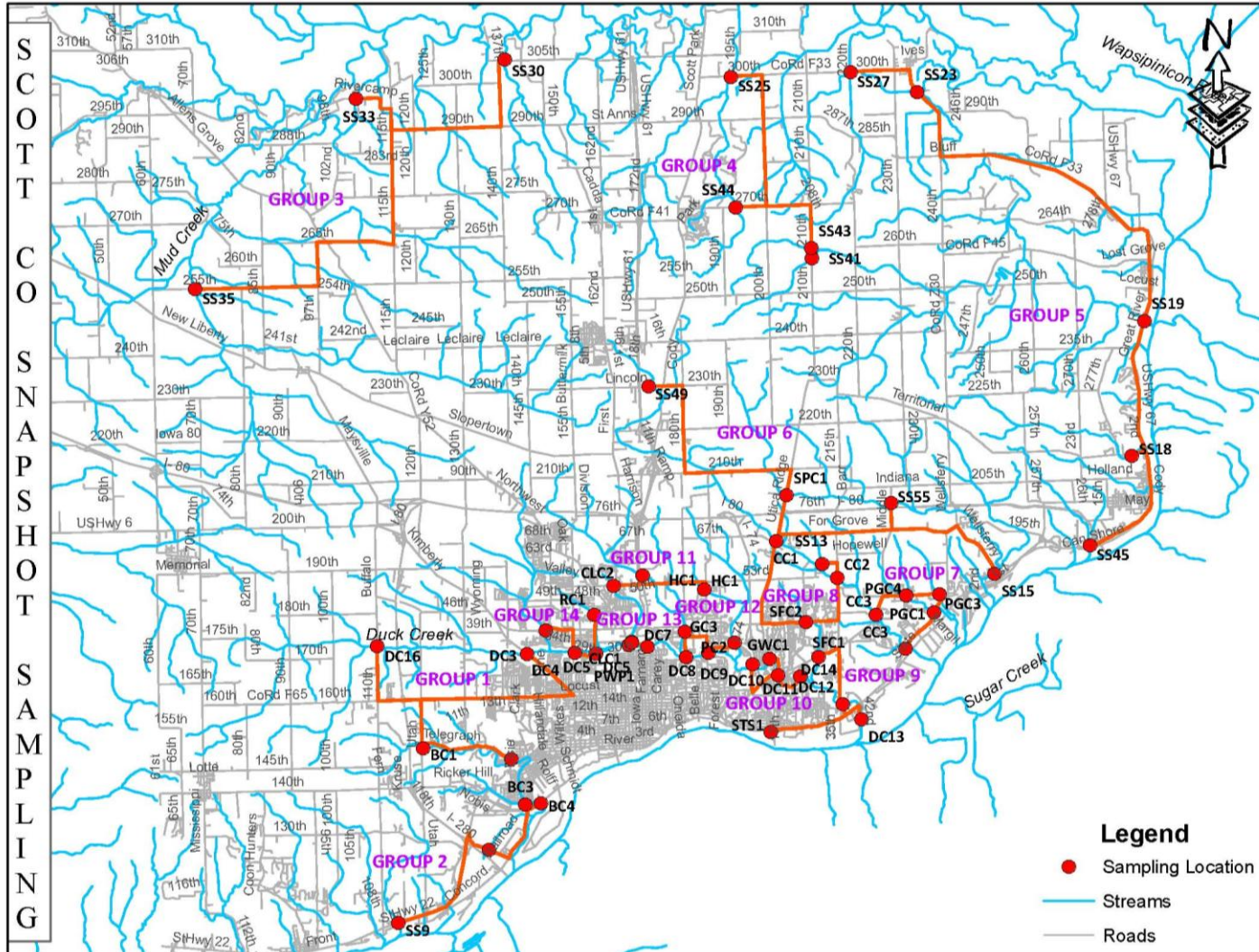


Scott County Snapshot: Biannual Sampling

- ▶ **Where:** 56 sites in Scott County
- ▶ **When:** Twice a year, Spring (May) & Fall (October)
- ▶ **Who:** Scott Co. SWCD/PSCW, Iowa DNR, Cities of Davenport and Bettendorf
- ▶ **What for:**
 - ▶ Transparency
 - ▶ Temperature
 - ▶ pH
 - ▶ Nitrate-nitrite
 - ▶ Dissolved oxygen
 - ▶ Phosphate
 - ▶ Chloride
 - ▶ *E. coli* bacteria



Biannual Sampling Locations in Scott County

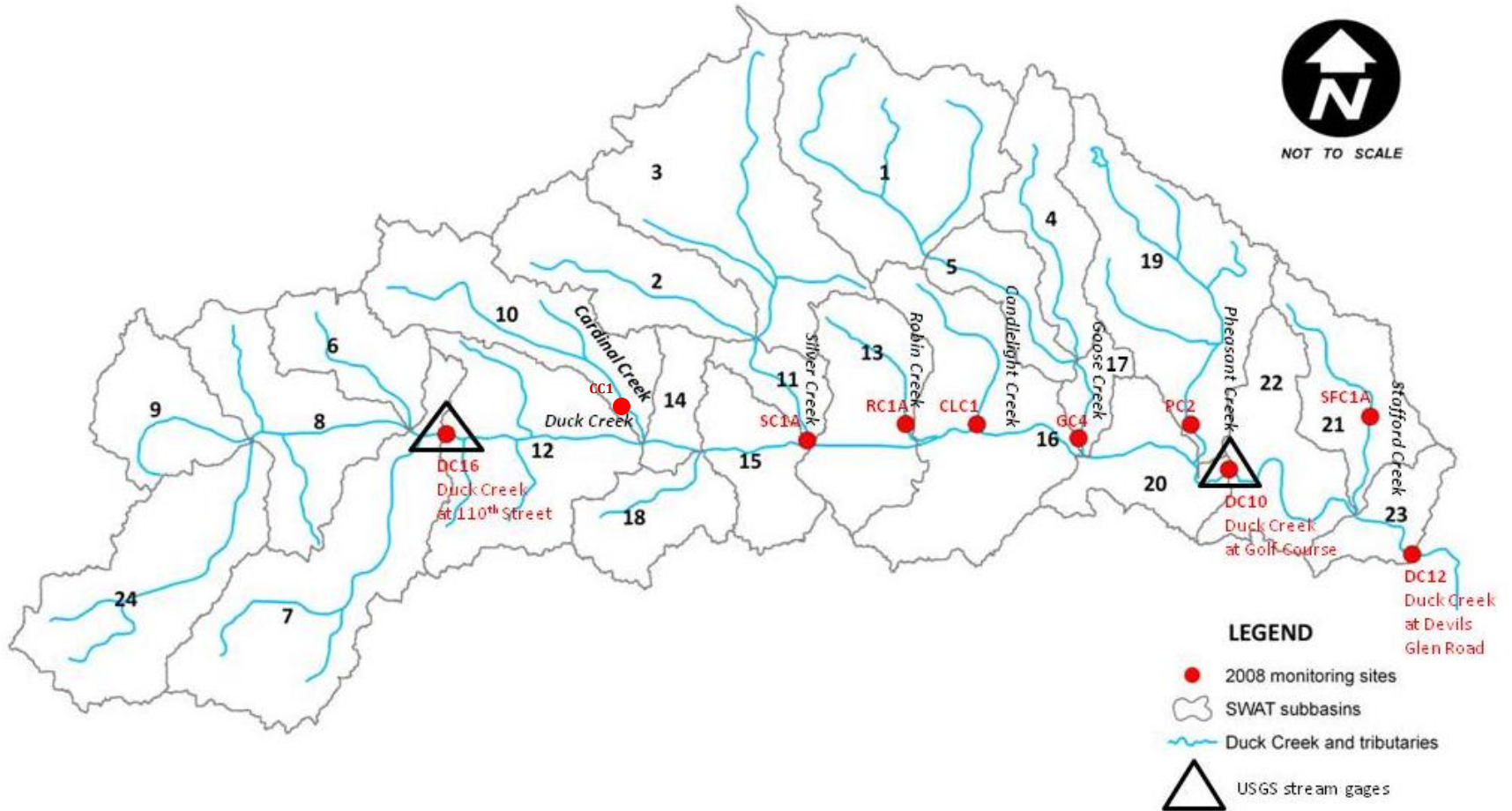


Duck Creek Watershed: Biweekly Sampling

- ▶ **Where:** 10 sites in the Duck Creek Watershed
 - ▶ **When:** Every other week, during the 26 week recreation season (May 15th-November 15th)
13 sampling occurrences/yr
 - ▶ **Who:** Scott Co. SWCD/PSCW & Iowa DNR
 - ▶ **What for:**
 - ▶ Flow (flow meter) **MONTHLY**
 - ▶ Turbidity
 - ▶ *E. coli* bacteria
 - ▶ Chloride
 - ▶ Dissolved Oxygen
 - ▶ pH
 - ▶ Temperature
-



Biweekly Sampling Locations in the Duck Creek Watershed

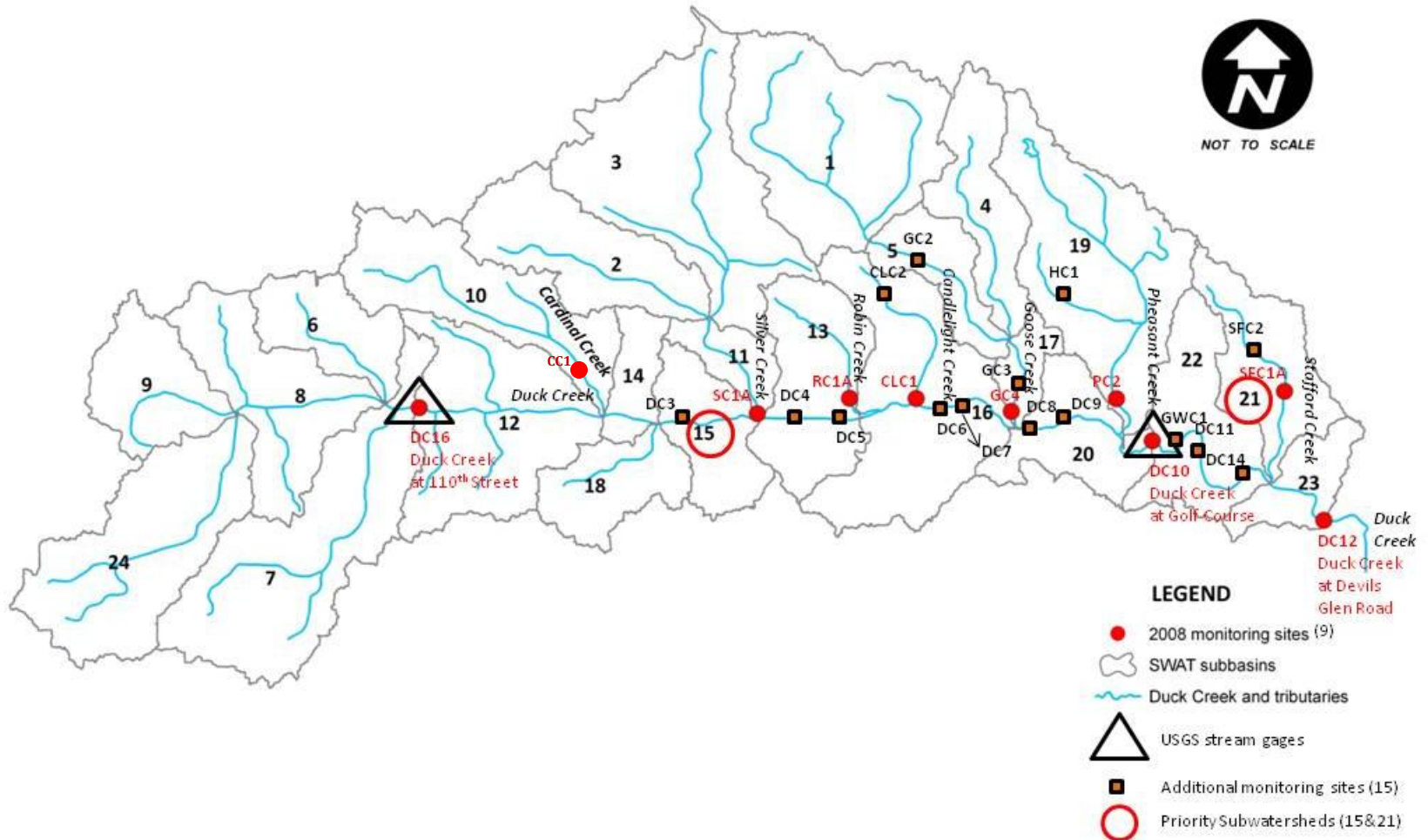


Duck Creek Watershed: Semiannual Low Flow Sampling

- ▶ **Where:** 24 sites in the Duck Creek Watershed
- ▶ **When:** Twice a year, during low flow, 2 sampling occurrences/yr
- ▶ **Who:** Scott Co. SWCD/PSCW & Iowa DNR
- ▶ **What for:**
 - ▶ Flow (flow meter)
 - ▶ Turbidity
 - ▶ *E. coli* bacteria
 - ▶ Optical brighteners
 - ▶ Chloride
 - ▶ Dissolved Oxygen
 - ▶ pH
 - ▶ Temperature



Semiannual Sampling Locations in the Duck Creek Watershed



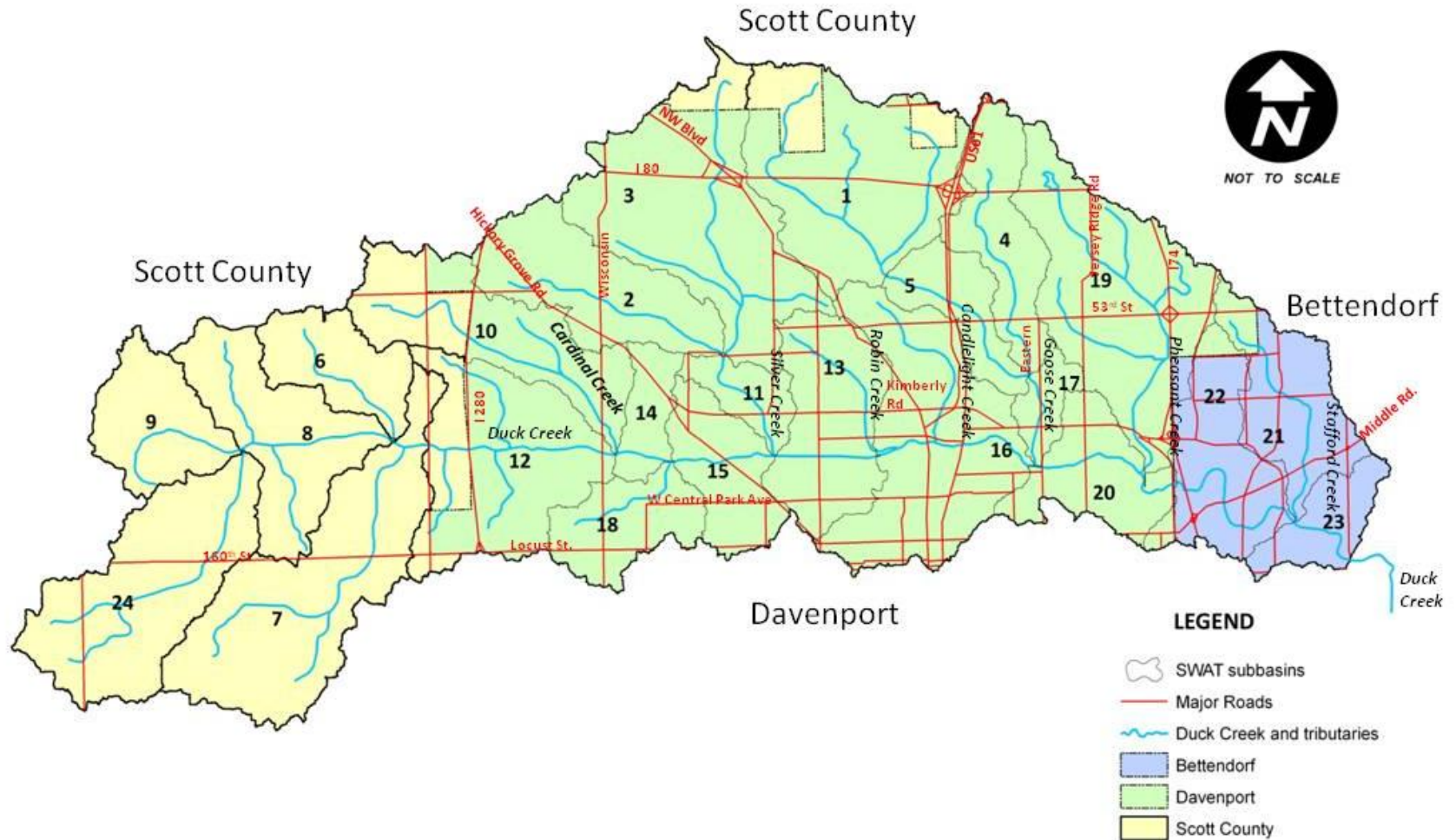
Duck Creek Watershed:

Dry Weather Storm Sewer Outfall Sampling

- ▶ **Where:** Storm sewer outfalls in the Duck Creek Watershed
- ▶ **When:** During dry weather
- ▶ **Who:** City of Davenport (890) & Bettendorf (158)
- ▶ **What for:**
 - ▶ *E. coli* bacteria
 - ▶ Chloride
 - ▶ Optical brighteners
 - ▶ Up to 50 samples/year



Duck Creek Watershed: Dry Weather Storm Sewer Outfall Sampling

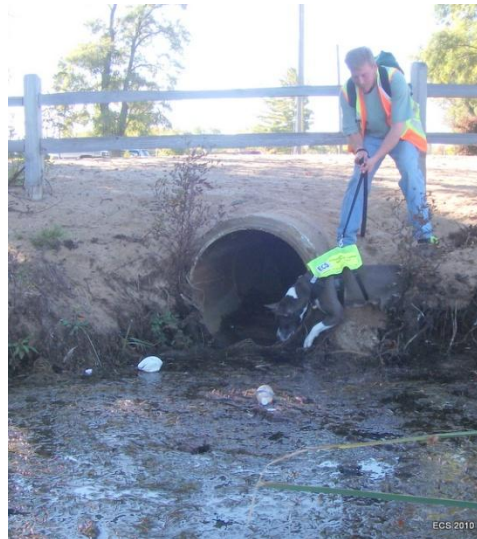


Duck Creek Watershed: Above and beyond bacteria

- ▶ Environmental Canine Services LLC: Leader in illicit discharge detection and source tracking in storm drainage systems.

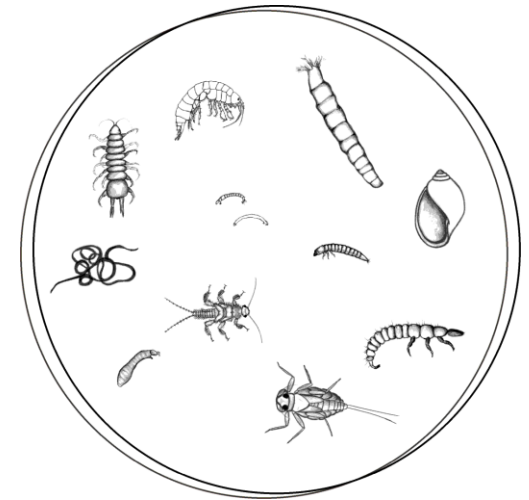


Environmental Canine Services LLC
Protecting Our Precious Resources With Nature's Gift



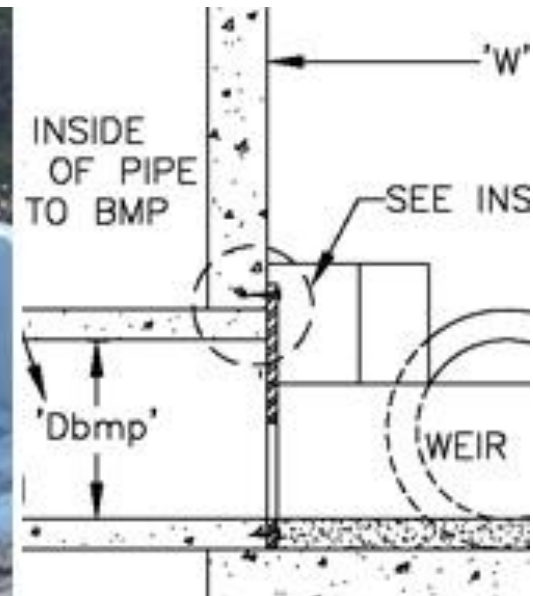
Duck Creek Watershed: Above and beyond bacteria

- ▶ Biological Training & Monitoring: What Benthic Macroinvertebrates are present in stream and amount present can indicate stream quality.



Duck Creek Watershed: Above and beyond bacteria

- ▶ Monitoring Urban Infiltration Practices (rain gardens, bioretention cells, bioswales, permeable paving, soil quality restoration, etc.)



www.partnersofscottcountywatersheds.org

