Galena River Draft TMDL

Draft TMDL

Stakeholder Meeting

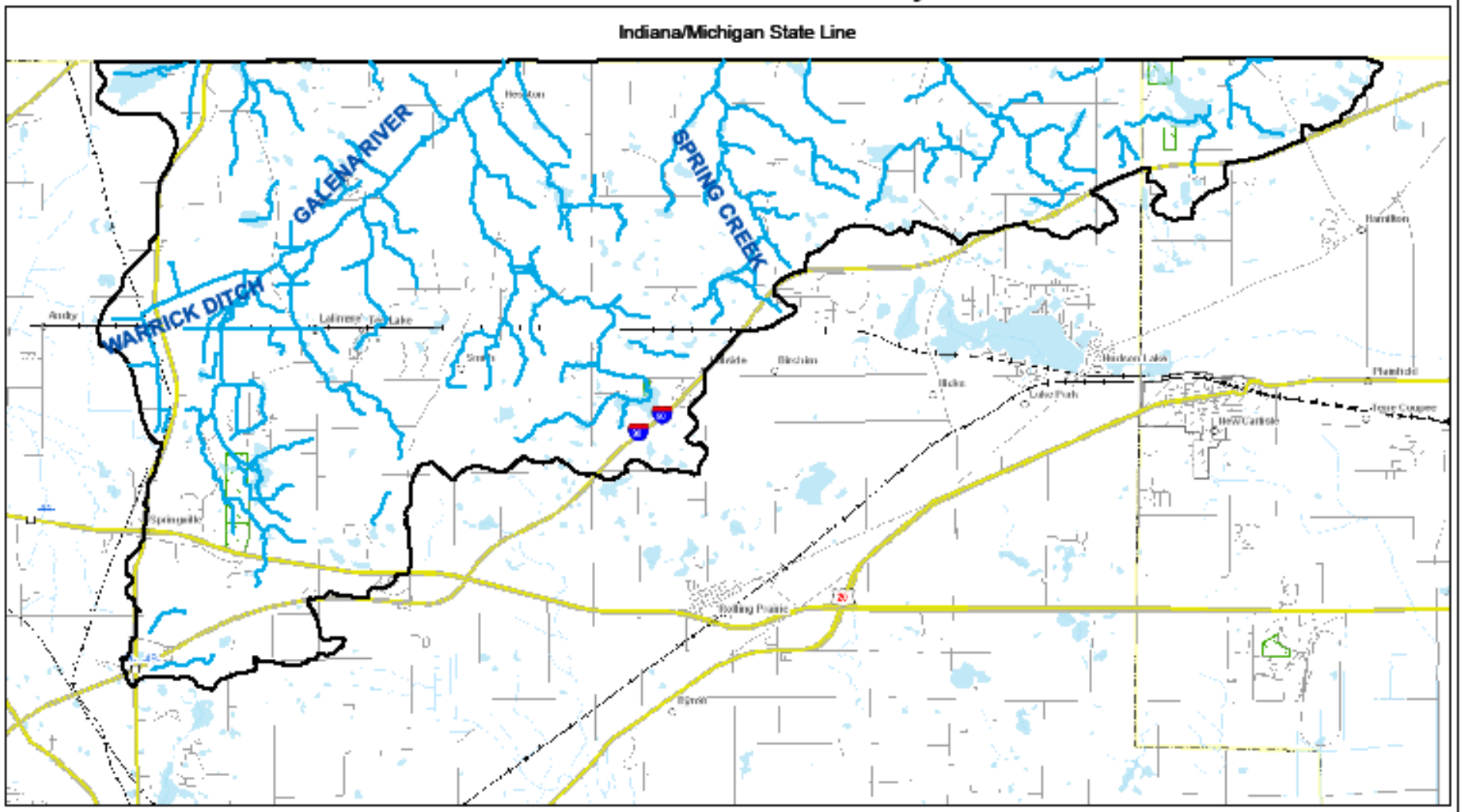
July 14, 2009

Agenda

- Listing Information
- Load Duration Analysis
- Allowable Loads
- TMDL Allocations
- Implementation
- Schedule

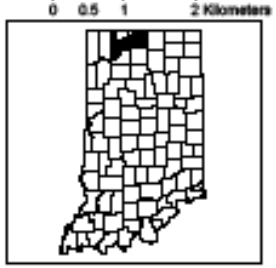
Listing Information

Galena River Watershed Study Area



This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.
Mapped By:
Selena Medrano, Office of Water Quality
Date:03/06/2009

0 0.5 1 2 Miles
0 0.5 1 2 Kilometers



Legend
- Galena Streams
- Galena Watershed Study Area

Sources:
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Map Projection: UTM Zone 16 N Map Datum: NAD83

Galena River Watershed

Drains approximately 46 square miles

County area

- 93.96 % in LaPorte County
- 6.04 % in St. Joseph County

Land use

- 40.45 % agriculture
- 40.18 % forest
- 13.77 % wetlands
- 3.55 % other
- 1.03 % water
- 1.02 % urban

Assessment of Water Quality

2008 listings re-assessed

- Sampling performed by IDEM in 2000
  - 1 site for *E. coli*
- Sampling performed by IDEM in 2008
  - 9 sites

Water Quality Standards

April 1 through October 31, *E. coli* shall not exceed 125 cfu per 100 milliliters as a geometric mean based on not less than 5 samples equally spaced over a 30-day period nor exceed 235 cfu per 100 milliliters in any 1 sample in a 30-day period.

E. Coli Data

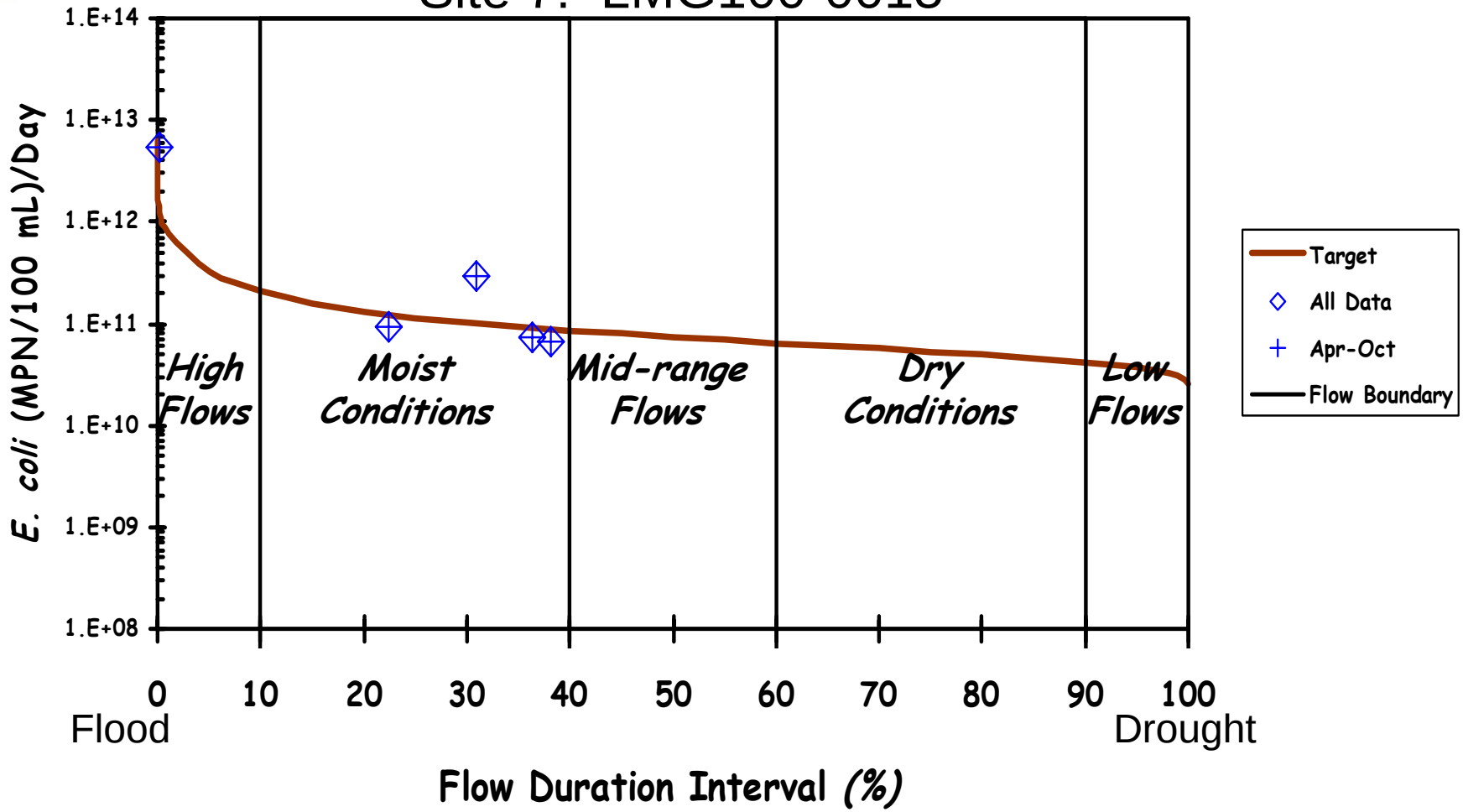
- IDEM sampled in 2000 and 2008
- Geometric mean calculated for each site
  - One site reported meeting the standard
  - Additional sites reported not meeting standard
- Highest Geometric Mean = 613 (Site 1)
- Lowest Geometric Mean = 116 (Site 6)
- Highest Sample = 1203.3 (Site 1)
- Lowest Sample = 42.8 (Site 2)

Allowable Loads

Load Duration Curves

- Need a way to estimate existing and allowable loads
- Load duration curves are a common tool for developing TMDLs

Galena River
Load Duration Curve (2008 Monitoring Data)
Site 7: LMG100-0015



IDEM Data & USGS Gage Duration Interval

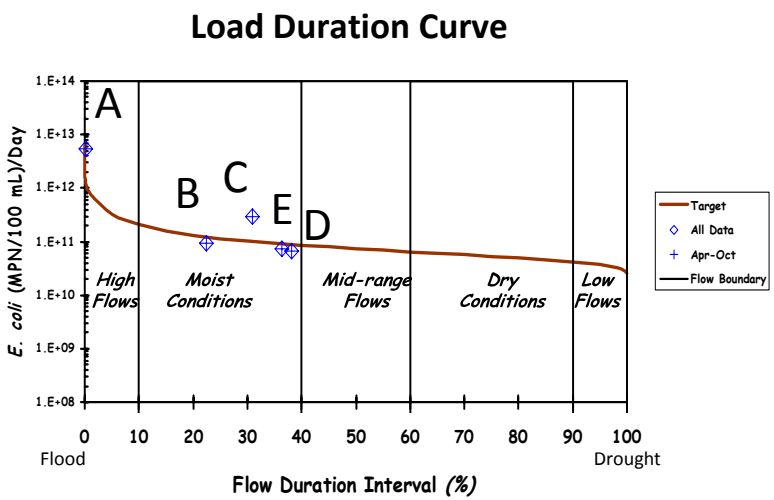
46 square miles

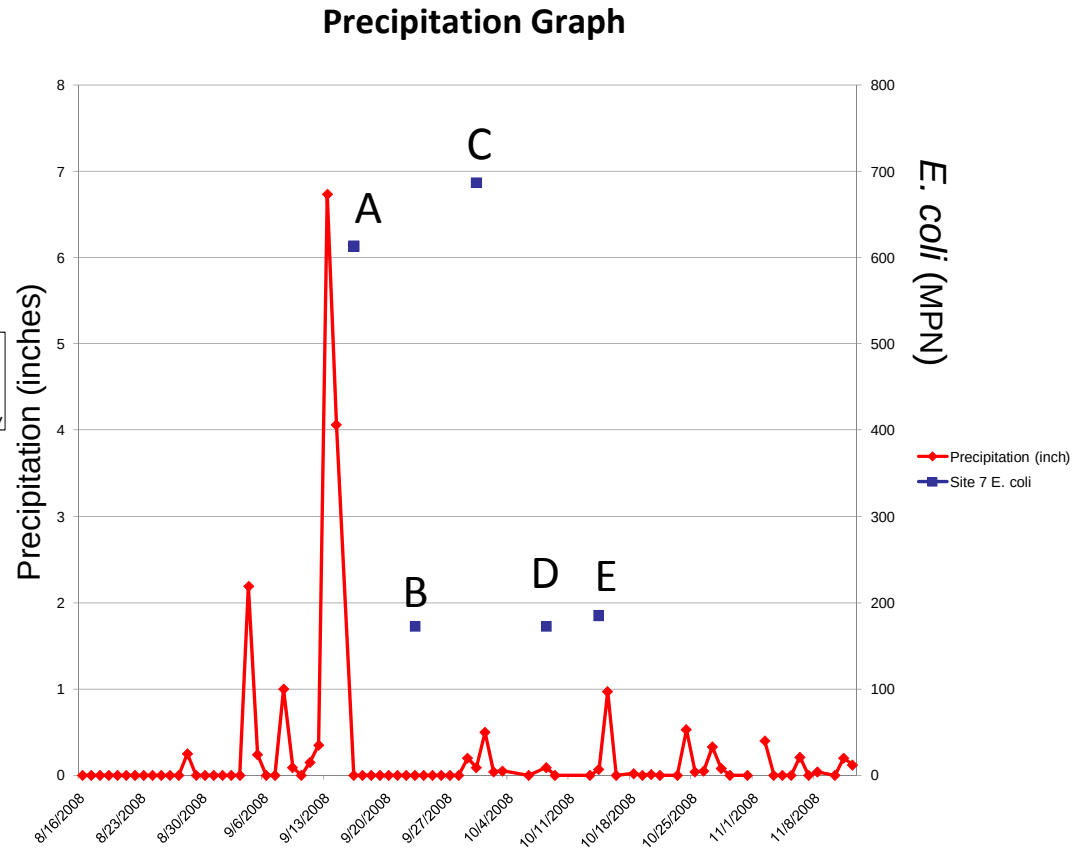
IDEM

We Protect Hoosiers and Our Environment

Water

Galena River CR 1000 N
Site 7: LMG100-0015





Little Calumet River at Porter, IN Flow Gage.
LaPorte County Precipitation Station - State Climate Office

Drainage Area:
46 Square Miles

Reductions Needed

Site #	LSite	Stream Name	Geometric mean	Percent Reduction Needed
1	LMG100-0010	Galena River	613	79.61%
2	LMG100-0008	Galena River East	144	13.19%
3	LMG100-0012	Galena River	379	67.02%
4	LMG100-0013	Galena River	288	56.60%
5	LMG100-0014	Unnamed Tributary East to Galena River	287	56.45%
6	LMG100-0011	Main Tributary East to Galena River	116	N/A
7	LMG100-0015	Galena River	297	57.91%
8	LMG100-0017	Spring Creek	383	67.36%
9	LMG100-0009	Unnamed Tributary to Spring Creek	424	70.52%

TMDL Allocations

TMDL Allocations

- Clean Water Act requires that TMDL be allocated as follows:
  - TMDL = WLA + LA + MOS
  - Wasteload Allocations (WLA) for “point sources” (regulated under NPDES)
  - Load Allocations (LA) for nonpoint sources and natural background
  - MOS for Margin of Safety

Galena River TMDL Allocations

- Wasteload Allocations
  - 3 NPDES Facilities with sanitary component
  - 0 CFO (WLA = 0 per 100 mL)
  - 0 CAFO (WLA = 0 per 100mL)
  - Illicitly connected onsite systems (i.e., straight pipe dischargers) are zero

Galena River TMDL Allocations

Load Allocations

- Agricultural Runoff
- Failing Septic Systems
- Livestock
- Tile Drains
- Urban Runoff
- Wildlife

Implementation

Implementation

- Implementation of TMDL expected to occur via ongoing and new watershed management activities
- Additional best management practices needed for other sources:
  - Vegetated filter strips
  - Erosion control for construction
  - Control of failing septic systems

Schedule

Galena River TMDL Schedule

- Kickoff meeting: March 2009
- Technical Analysis: Spring 2009
- Draft TMDL Report: July 2009
- Final TMDL Report: Fall 2009

TMDL Project Manager

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