

## Little Calumet – Galien Watershed

Hydrologic Unit Code: 04040001

For more information, see the USEPA “Surf Your Watershed” website at [cfpub.epa.gov/surf/huc.cfm?huc\\_code=04040001](http://cfpub.epa.gov/surf/huc.cfm?huc_code=04040001) or contact the Michigan Department of Environmental Quality at 517-335-6969 to request a copy of report number MI/DEQ/WD-03/054, “A Biological Survey Sites in the Galien River Watershed, Berrien County, Michigan, July 2002.”

### Watershed Management Plans

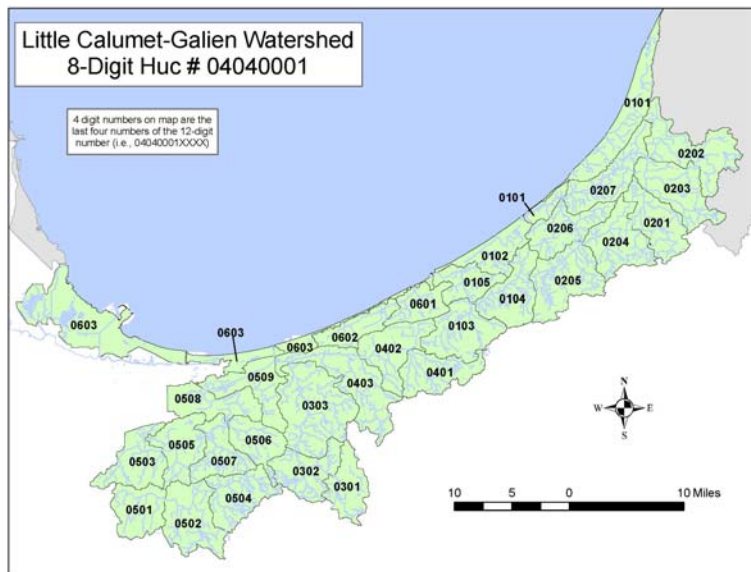
- Galien River — The Conservation Fund  
Chikaming Open Lands — [www.chikamingopenlands.org](http://www.chikamingopenlands.org)
- Berrien County Drain Commissioner — [www.berriencounty.org/?dept=9](http://www.berriencounty.org/?dept=9)
- Trail Creek
- Dunes Creek

### Watershed Groups

- Save the Dunes Council — [www.savedunes.org](http://www.savedunes.org)
- Chicago Wilderness — [www.chicagowilderness.org](http://www.chicagowilderness.org)
- Chikaming Open Lands — [www.chikamingopenlands.org](http://www.chikamingopenlands.org)
- Great Lakes Center for Environmental and Molecular Sciences (GLEAMS) — [quickplace.mtri.org/QuickPlace/gleams/Main.nsf/h\\_E8AA5D1C0E773CF485256D880040A13B/f58b8d600246470b85256f1700630e81/?OpenDocument](http://quickplace.mtri.org/QuickPlace/gleams/Main.nsf/h_E8AA5D1C0E773CF485256D880040A13B/f58b8d600246470b85256f1700630e81/?OpenDocument)
- Northwestern Indiana Regional Planning Commission — [www.nirpc.org](http://www.nirpc.org)
- Northeastern Illinois Planning Commission — [www.nipc.org/environment](http://www.nipc.org/environment)
- Trail Creek Watershed Group

### Watershed Overview

- Urban areas include Chicago, Gary, Michigan City, Hammond, Portage, and Valparaiso.
- Most coastal wetlands and nearshore aquatic habitats have been eliminated or degraded. Presettlement northwest Indiana was continuous wetland. As of 1979, less than 5 percent of the original wetland cover remained. This exists primarily as narrow strips of intact habitat. Industry filled or drained the wetlands and leveled the dunes and used steel slag to fill low areas and the lakefront. The region is one of the most industrialized in the Lake Michigan basin.
- The watershed includes the Grand Calumet Area of Concern The AOC, which is part of three watersheds, including the Chicago River and Chicago-Lake Michigan watersheds.
- Today, 90% of the river's flow originates as municipal and industrial effluent, cooling and process water and storm water overflows. Although discharges have been reduced, a number of contaminants continue to impair the AOC.
- The Indiana Dunes National Lakeshore has more plant species (including exotics) than all but two other national

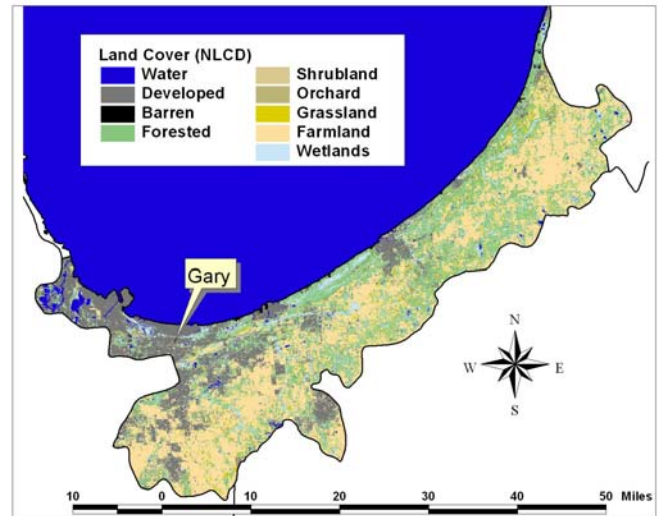


### Subwatersheds of the Little Calumet – Galien Watershed

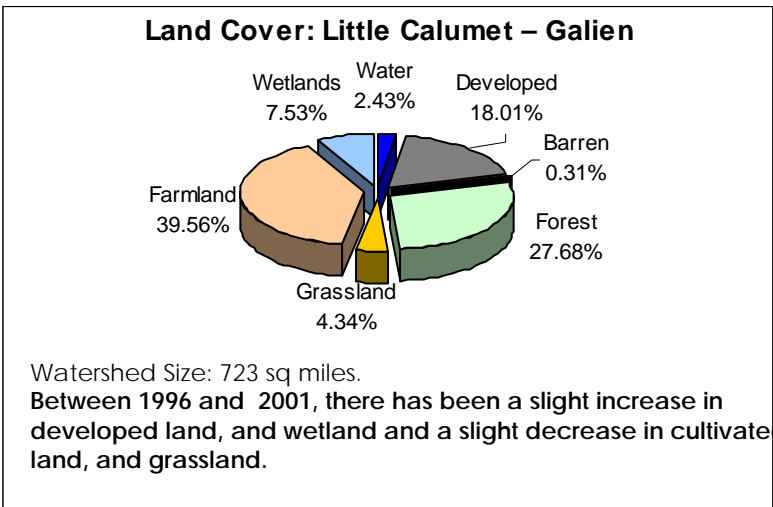
- 0101 Painterville Drain-Frontal Lake Michigan
- 0102 White Ditch-Frontal Lake Michigan
- 0103 West Branch Trail Creek
- 0104 East Branch Trail Creek
- 0105 Trail Creek
- 0201 Dowling Creek
- 0202 East Branch Galien River
- 0203 Blue Jay Creek-Galien River
- 0204 Spring Creek
- 0205 Headwaters South Branch Galien River
- 0206 South Branch Galien River
- 0207 Kirktown Creek-Galien River
- 0208 Galien River
- 0301 Sagers Lake-Salt Creek
- 0302 Clark Ditch-Salt Creek
- 0303 Squirrel Creek-Salt Creek
- 0401 Reynolds Creek-East Arm Little Calumet River
- 0402 Kemper Ditch-East Arm Little Calumet River
- 0403 Coffee Creek-East Arm Little Calumet River
- 0501 Headwaters Main Beaver Dam Ditch
- 0502 Main Beaver Dam Ditch-Deep River
- 0503 Headwaters Turkey Creek
- 0504 Deer Creek-Deep River
- 0505 City of Merrillville-Turkey Creek
- 0506 Duck Creek
- 0507 Lake George-Deep River
- 0508 Little Calumet River-Deep River
- 0509 Willow Creek-Burns Ditch
- 0601 Kintzele Ditch
- 0602 Dunes Creek
- 0603 Calumet River-Frontal Lake Michigan

parks, and at 16,000 acres is much smaller than most other national parks.

- Warren Dunes State Park provides 1,950 acres of recreational opportunities along the beautiful shore of Lake Michigan in southwestern Michigan. The rugged dune formation rises 240 feet above the lake. The park has more than two miles of shoreline, six miles of hiking trails and is open year-round.
- The Indiana Dunes contains Mesic Sand Tallgrass Prairie and Black Oak / Lupine Barrens, sandy beach/dunes with sand and gravel lag over clay nearshore, sandy beach/dunes with sand/gravel nearshore, and sandy coastal dune streams.
- The Indiana Dunes is an important migratory bird stopover site and raptor stopover site.
- The Tolleston Strand Plain in Lake County is home to Pale False Foxglove, Karner Blue Butterfly, Blanding's Turtle, Bysuss Skipper, Great Plains Ladies' Tresses, Hill's Thistle, and Ottoe's Skipper.



- Important plant communities at Indiana Tolleston include Black Oak / Lupine Barrens, Bulrush - Cattail - Burreed Shallow Marsh, Central Cordgrass Wet Sand Prairie, Hardhack Shrub Prairie, Interdunal Wetland, Lakeplain Wet Prairie, Lakeplain Wet-Mesic Prairie, Mesic Sand Tallgrass Prairie, and Midwest Cattail Deep Marsh, among others.
- The Hoosier Prairie in Lake County, Indiana is home to the Pale False Foxglove, identified by the Nature Conservancy as a critical species in the Great Lakes basin.
- The Nature Conservancy identified the following critical environmental resources in the watershed.



- ◊ The Galien River has Great Lakes Shoreline Cattail Marsh
- ◊ The Warren Dunes-Grand Mere has a land bird stopover site
- ◊ The Warren Dunes-Grand Mere has Acadian Flycatcher, American Woodcock, Baltimore Oriole, Black-billed Cuckoo, Blue-winged Warbler, Canada Warbler, Cerulean Warbler, Chimney Swift, Eastern Wood-Pewee, Field Sparrow, Hooded Warbler, Least Flycatcher, Louisiana Waterthrush, Marsh Wren, Prairie Warbler, Prothonotary Warbler, Red-headed Woodpecker, Rose-breasted Grosbeak, Veery Warbling Vireo, Willow Flycatcher, Wood Duck, Wood Thrush, Worm-eating Warbler, Yellow-billed Cuckoo, Yellow-throated Warbler, and Pitcher's Thistle.

### Watershed Activities

- The US Army Corp of Engineers (USACE) is in the planning and implementation phase of dredging the sediments from the IHSC in order to continue its use as a navigable waterway.
- The Galien River Watershed Project is focused on decreasing drainage and flooding problems along the river and the streams flowing into it. The focus of a 319 grant is flood prevention and improved water quality in the system. Beneficiaries will be local farmers and those interested in fishing and other recreational activities.
- Save the Dunes Conservation Fund developed a watershed plan for the Dunes Creek watershed. Also included in the project is a study to assess the efficacy of a pilot wetland restoration site along a section of Dunes Creek. study results will be included in the final written summary project report. Public outreach activities will include outreach brochures, news releases about the project, and quarterly newsletters, e-mail, or website articles.
- IDEM is requiring the development of long term CSO control plans.

Data Sources. Land cover map and percentages: National Land Cover database, 1992 (edc.usgs.gov/products/landcover/nlcd.html); Land use change: NOAA Coastal Change Analysis Program, 1996 and 2001 (www.csc.noaa.gov/crs/lca/ccap.html); Total Maximum Daily Load (TMDL) Impaired Waters: Surf Your Watershed (www.epa.gov/surf)

## Impaired (303d) Waters

Waterbody Name	Impairment
Burns Ditch, IN	Mercury Fish Consumption Advisory, PCB Fish Consumption Advisory, Pathogens
Calumet, IL	PCBs
Calumet River, IL	Fecal Coliform, PCBS, PH, Silver, Total Phosphorous
Clark Ditch and Other Tribs, IN	E. Coli
Coffee Creek Basin, IN	E. Coli
Damon Run -Swanson Lamporte Ditch, IN	E. Coli
Damon Run and Trib, IN	E. Coli
Deep River, IN	E. Coli
Deep River-Burns Ditch	Impaired Biotic Communities
Deep River Tributary Merrillville	Impaired Biotic Communities, Siltation
Deep River US30, IN	E. Coli
Dunes Creek	E. Coli, Impaired Biotic Communities
Galena River	E. Coli
Galien River, MI	Chlordane Fish Consumption Advisory, PCB Fish Consumption Advisory
Grand Calumet River - Gary to Indiana Harbor Canal	Cyanide, E. Coli, Mercury Fish Consumption Advisory, PCB Fish Consumption Advisory, Impaired Biotic Communities, Oil and Grease
Grand Calumet River - Headwaters	AMMONIA, Cyanide, Mercury Fish Consumption Advisory, PCB Fish Consumption Advisory, Impaired Biotic Communities, Oil and Grease
Gustafson Ditch - Other Tributaries	E. Coli
Indiana Harbor Canal - Lake George Br	E. Coli, Mercury Fish Consumption Advisory, PCB Fish Consumption Advisory, Impaired Biotic Communities, Oil and Grease
Indiana Harbor Canal - Main Channel	E. Coli, Mercury Fish Consumption Advisory, PCB Fish Consumption Advisory
Kinzele Ditch and Tribs	E. Coli
Lake George	PCB Fish Consumption Advisory
Lake Michigan Shoreline East of IHC	Mercury Fish Consumption Advisory, PCB Fish Consumption Advisory, Pathogens
Lake Michigan Shoreline West of IHC	Mercury Fish Consumption Advisory, PCB Fish Consumption Advisory, Pathogens
Little Calumet River	Mercury Fish Consumption Advisory, PCB Fish Consumption Advisory, Pathogens, Cyanide
Little Calumet River - East Arm	Mercury Fish Consumption Advisory, PCB Fish Consumption Advisory, Pathogens
Little Calumet River - Headwaters	Mercury Fish Consumption Advisory, PCB Fish Consumption Advisory, Pathogens
Little Calumet River N.	Aldrin, Dissolved Oxygen, Iron, Mercury, PCBs, Silver, Total Phosphorous
Main Beaver Dam Ditch Above Niles Ditch, IN	Impaired Biotic Communities
Main Beaver Dam Ditch Above Crown Point WWTP, IN	Impaired Biotic Communities
Marquette Park Lagoons (East and West), IN	PCB Fish Consumption Advisory
Munson Ditch, IN	E. Coli, Impaired Biotic Communities
Niles Ditch, IN	Impaired Biotic Communities
Potage Burns Waterway, IN	Mercury Fish Consumption Advisory, PCB Fish Consumption Advisory, Pathogens
Rice Lake Tribs and Outlet, IN	E. Coli
Sawyer Creek, MI	Oil
Trail Creek	Mercury Fish Consumption Advisory, PCB Fish Consumption Advisory
Turkey Creek - Merrillville	E. Coli
Turkey Creek Mainstem, IN	E. Coli, Impaired Biotic Communities
Wolf, IL	PCBs
Wolf Lake, IN	PCB Fish Consumption Advisory

## Grand Calumet River Area of Concern Activities

### Stressors and Primary Contaminants

- PCB and mercury Contaminated Sediments
- Pathogens from Combined Sewer Overflows
- Contaminated groundwater
- Contaminated land sites
- Habitat fragmentation
- Aquatic Nuisance Species
- PAHs
- Cadmium
- Chromium
- Lead
- Biochemical oxygen demand
- Suspended solids
- Oil and grease
- PCB
- Mercury
- Arsenic
- Urban runoff

### Programs

- Superfund
- RCRA
- Clean Water Act
- WRDA
- Navigational Dredging
- Natural Resource Trustee's Damage Assessment
- Great Lakes Legacy Act

### Clean-Up Actions

- West Branch Remediation – a sediment dredging and habitat restoration demonstration project at the East Chicago Sanitary District Canal has been designed by the USACE and ECSD
- U. S. Steel Gary Works dredging of 5 river miles on the East Branch complete including 824,000 cubic yards of sediment removed from the river and placed in the CAMU.
- GSD Sediment Remediation-selected remedial option is currently being considered by EPA
- Navigational dredging
- U.S. Lead - 19,000 cubic yards of sediment have been remediated
- A total of 700,000 cubic yards of sediment have been remediated
- IDEM and EPA are currently working on the amendment to currently existing federal consent decrees to address CSO long term control plan issues.

### Delisting Targets

- Delisting targets for all 14 listed BUIs will be in place by December 31, 2008.

### Key Activity Needed

- Dredging
- CSO Long Term Control Plans
- Issue NPDES Permits
- BUI Indicator Monitoring
- West Branch assessment completed in 2002 – Remedial Alternatives Development Report completed in 2006
- Coordination with RAP program for AOC delisting purposes

### Challenges

- Public concern regarding location of contaminated material disposal
- Local funding and match for federal projects
- Legal concerns
- Permitting
- Monitoring resources
- The draft Water Quality Component of Stage Two includes some provisions being implemented through indirect methods; direct resources for implementation have been limited

### Next Steps

- EPA GLNPO - IDEM is working in partnership with the Great Lakes Legacy Act to remediate the West Branch of the Grand Calumet River.
- Dredging at U. S. Steel complete
- NRDA-Consent decree has been entered and restoration planning is underway
- ACOE- WRDA Diagnostic Feasibility Study
- GSD-Site Characterization
- Monitor BUI Indicators
- CDF construction is currently underway
- The RAP process has developed and obtained funds for a Toxic Pollution Prevention (TPP) Program