

# Water Resource Protection and Conservation Toolkit

Sarah B. Nerenberg

Consultant, Northwest Indiana  
Regional Planning Commission



# Outline

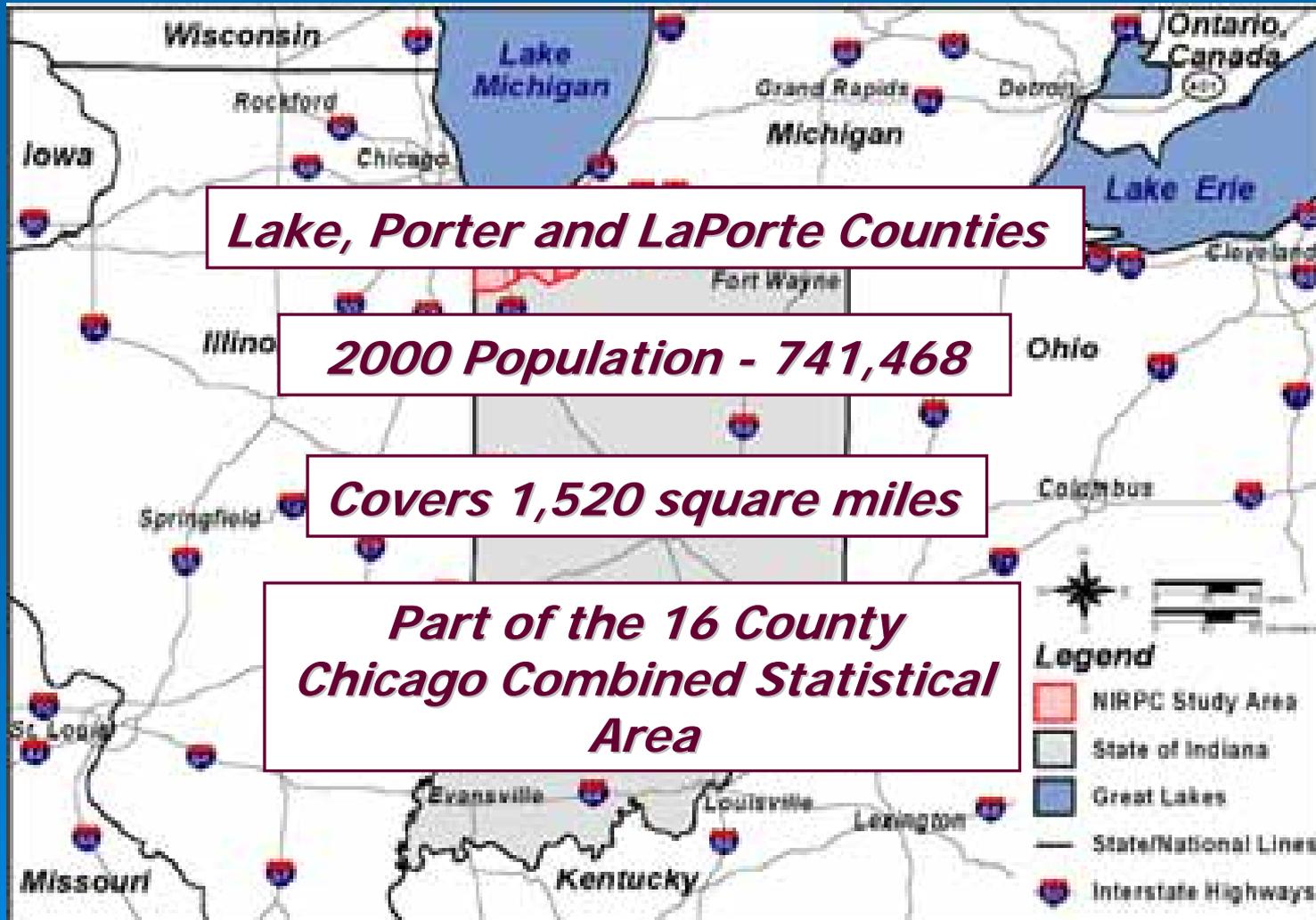
- 💧 Overview of Northwest Indiana
- 💧 Challenges in Northwest Indiana
- 💧 Background on Toolkit
- 💧 Toolkit Components
- 💧 Dissemination Plan
- 💧 Next Steps for Northwest Indiana



# Overview of Northwest Indiana



# The Northwest Indiana Region





# NIRPC Membership

## 51 Members – *Elected Officials*

- 1 Elected Official from each of the 41 Cities & Towns
- 1 County Commissioner from each County
- 1 County Council Member from each County
- County Surveyors
- 1 Governor's Appointment



# Environmental Activities

- **Air Quality**
  - ✓ Reduction of Mobile Source Emissions
  - ✓ Demand Management
  - ✓ Public Outreach & Education
- **Water Quality & Water Quantity**
  - ✓ Wetland Protection
  - ✓ Water Use Outside Lake Michigan
  - ✓ Watershed Planning
- **Biodiversity**
  - ✓ Preservation of Natural Resources
  - ✓ Openlands Protection



# New Regional Efforts

- ◆ **Watershed Management Planning**
- ◆ **Storm Water Management  
Guidance Document**
- ◆ **MS4 Regional Program for Public  
Involvement and Public Education  
and Outreach**

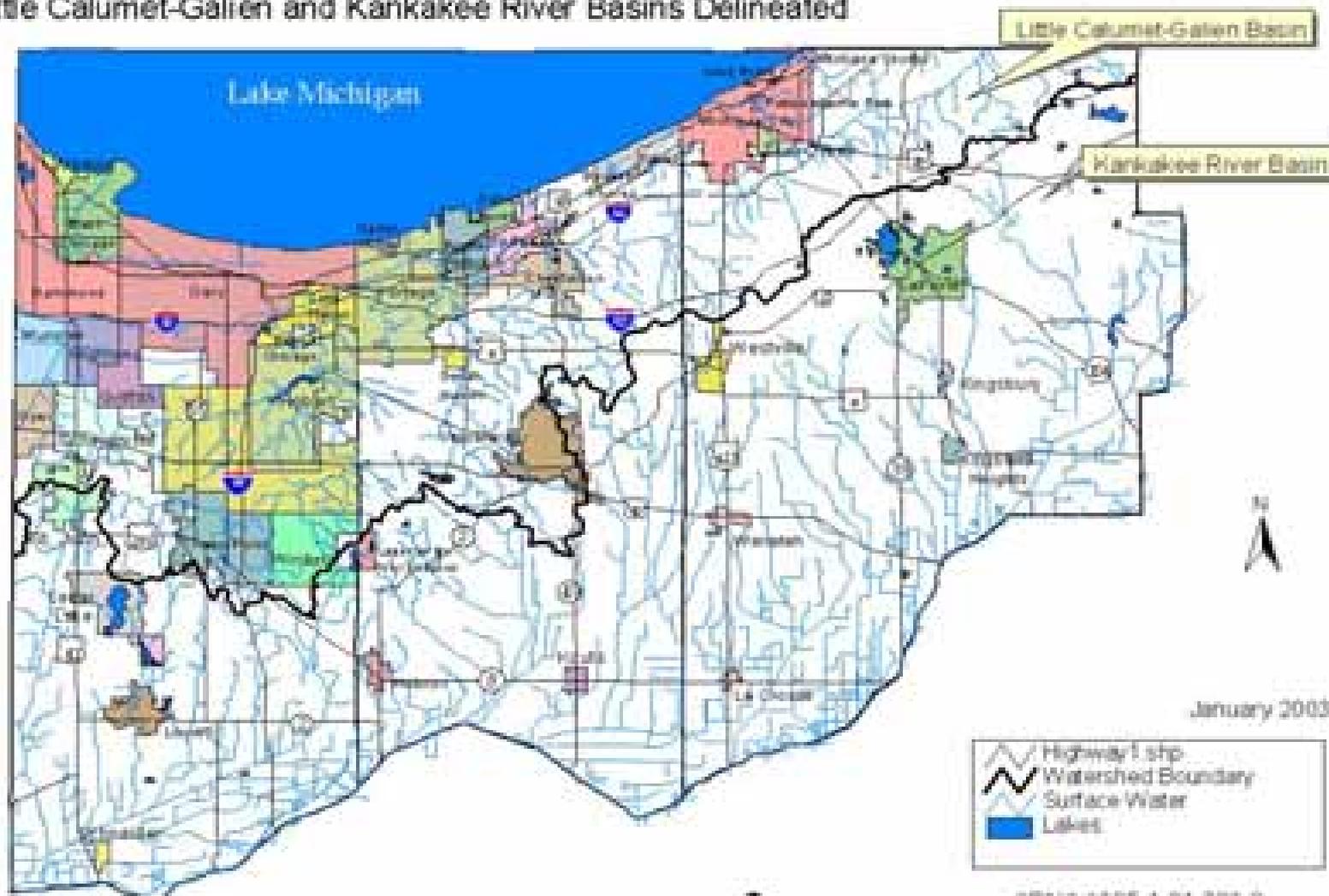


# Key Players

- 🟢 NIRPC Watershed Advisory Group
- 🟢 NIRPC Environmental Management and Policy Committee
  - 💧 Municipalities
  - 💧 Utilities
  - 💧 Environmental Groups
  - 💧 Industry
  - 💧 State and Federal Government
  - 💧 Academics



# Lake, Porter, and LaPorte Counties Little Calumet-Galien and Kankakee River Basins Delineated



Data Source: IDEM, USGS, U.S. Bureau of Census, 2000



Northwestern Indiana Regional Planning Commission

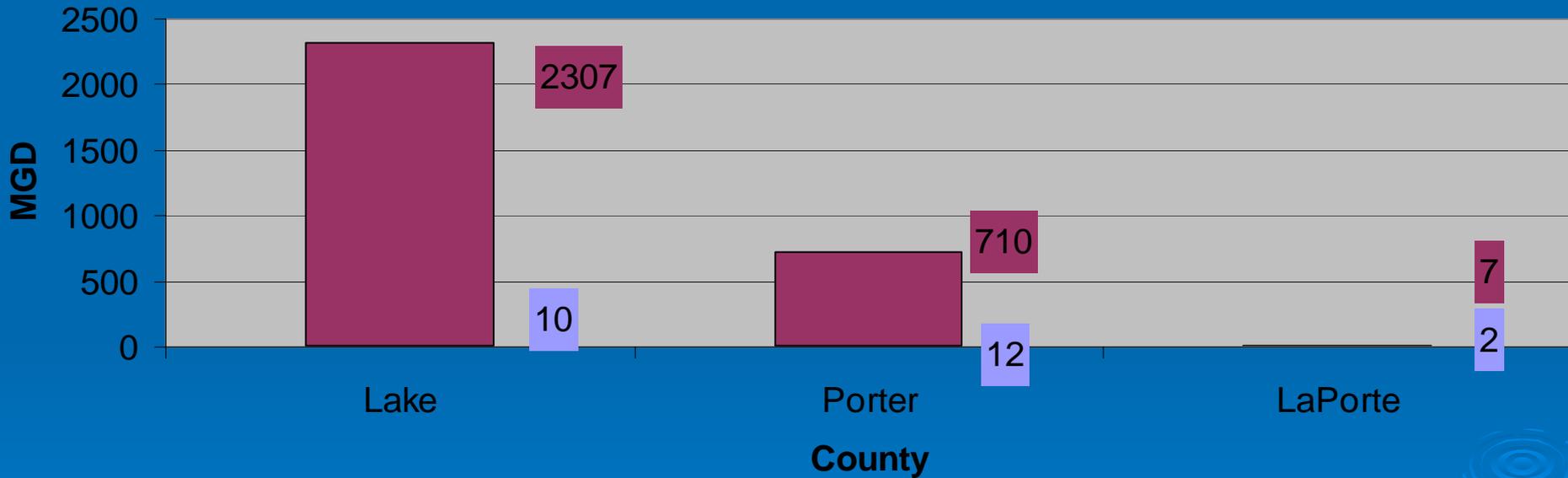
ARN# A305-1-01-283-0



# Total Water Supply

Total = 3,047 MGD

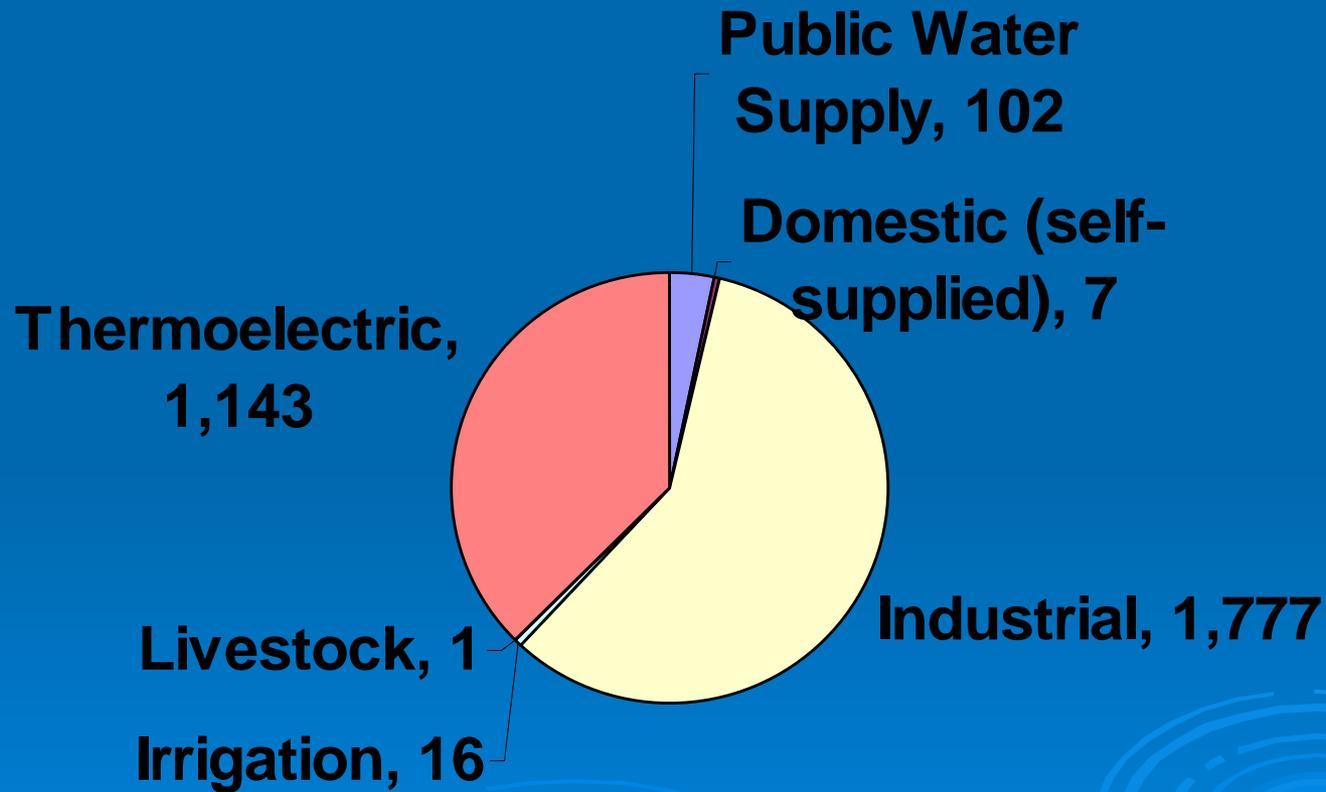
(USGS 2000)



Groundwater Surface Water

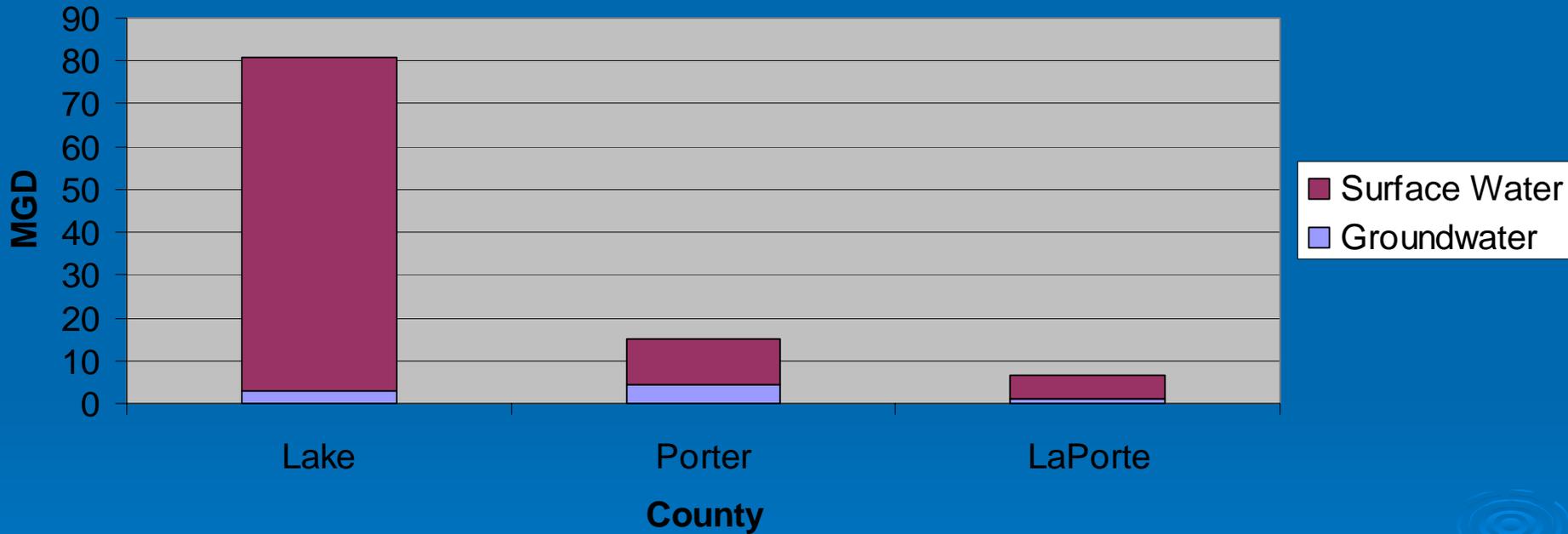


# NW IN Water Use Million Gallons per Day (USGS 2000)



# Public Water Supply

Total = 102.46 MGD  
(USGS 2000)



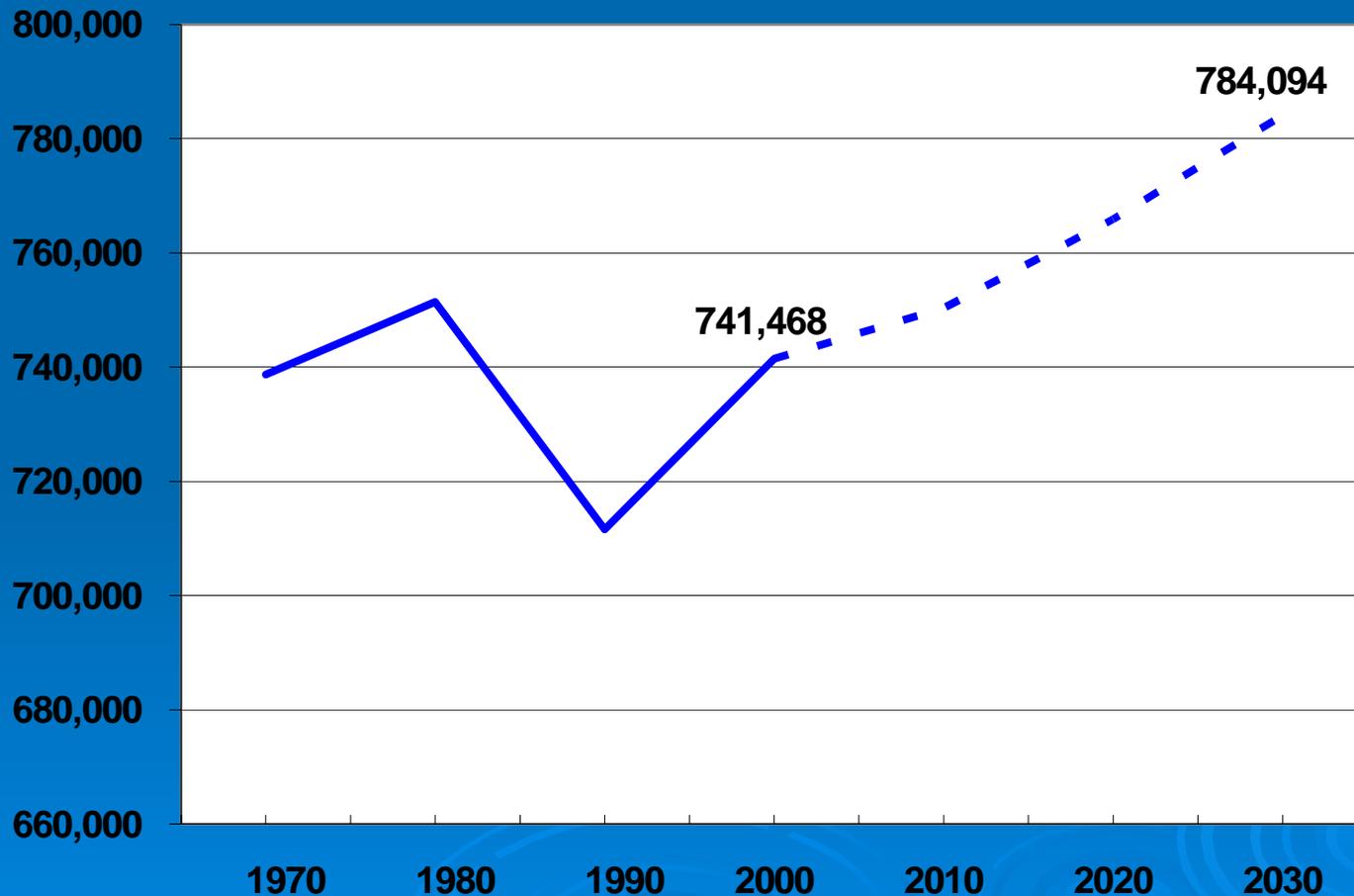
# Challenges in Northwest Indiana



- 💧 Trends have development moving south in NIRPC area – new development across the basin divide
- 💧 As development moves south, need to look at ways to protect groundwater and surface water resources
  - 💧 Groundwater recharge
  - 💧 Prevention of runoff from development



# Northwest Indiana Population 1970-2000, with 2030 Projection



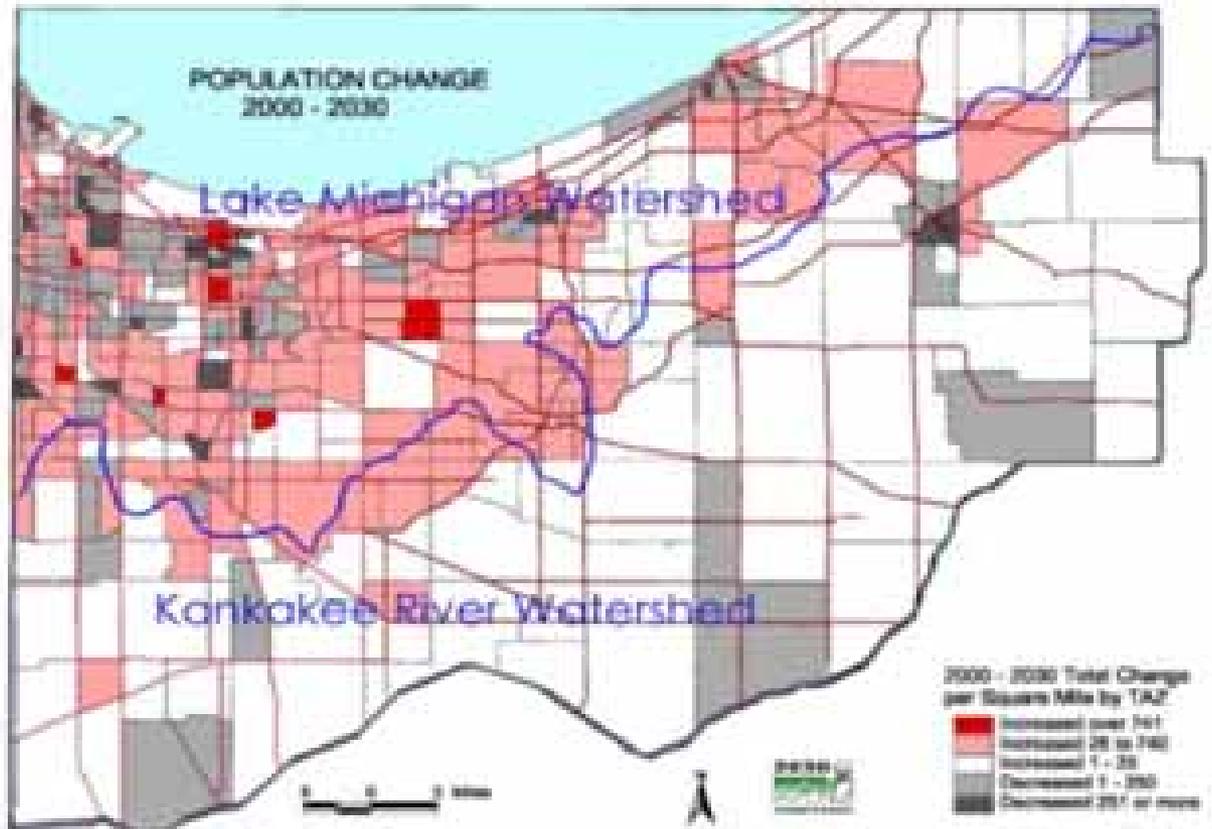
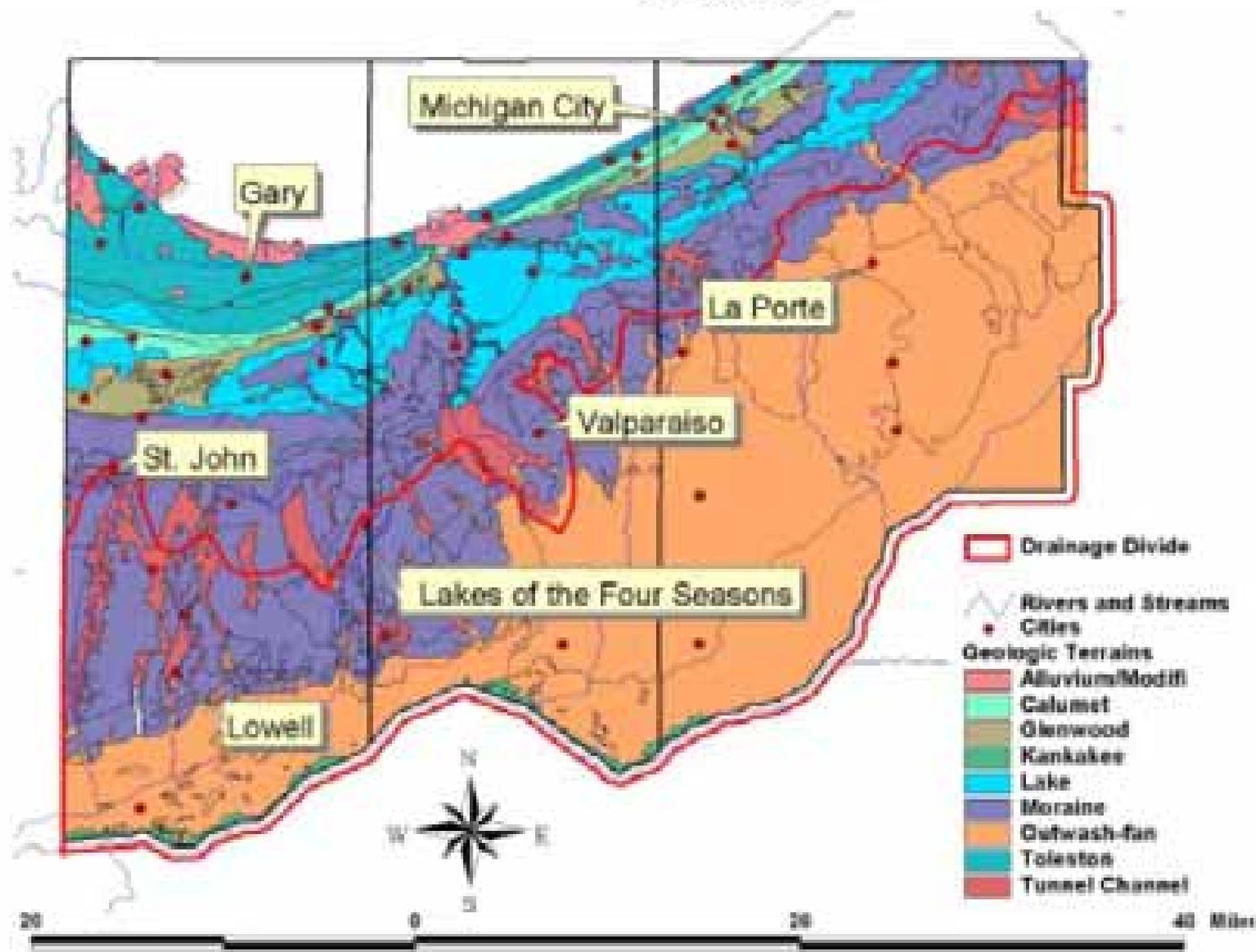


Figure 2: Projected Population Change 2000-2030 (increases in white to red, decreases in gray)  
 Source: Northwest Indiana Regional Planning Commission



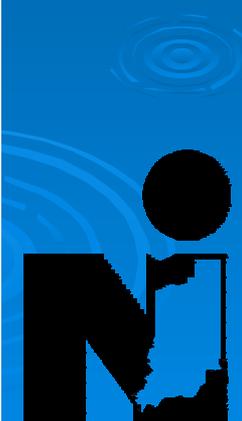
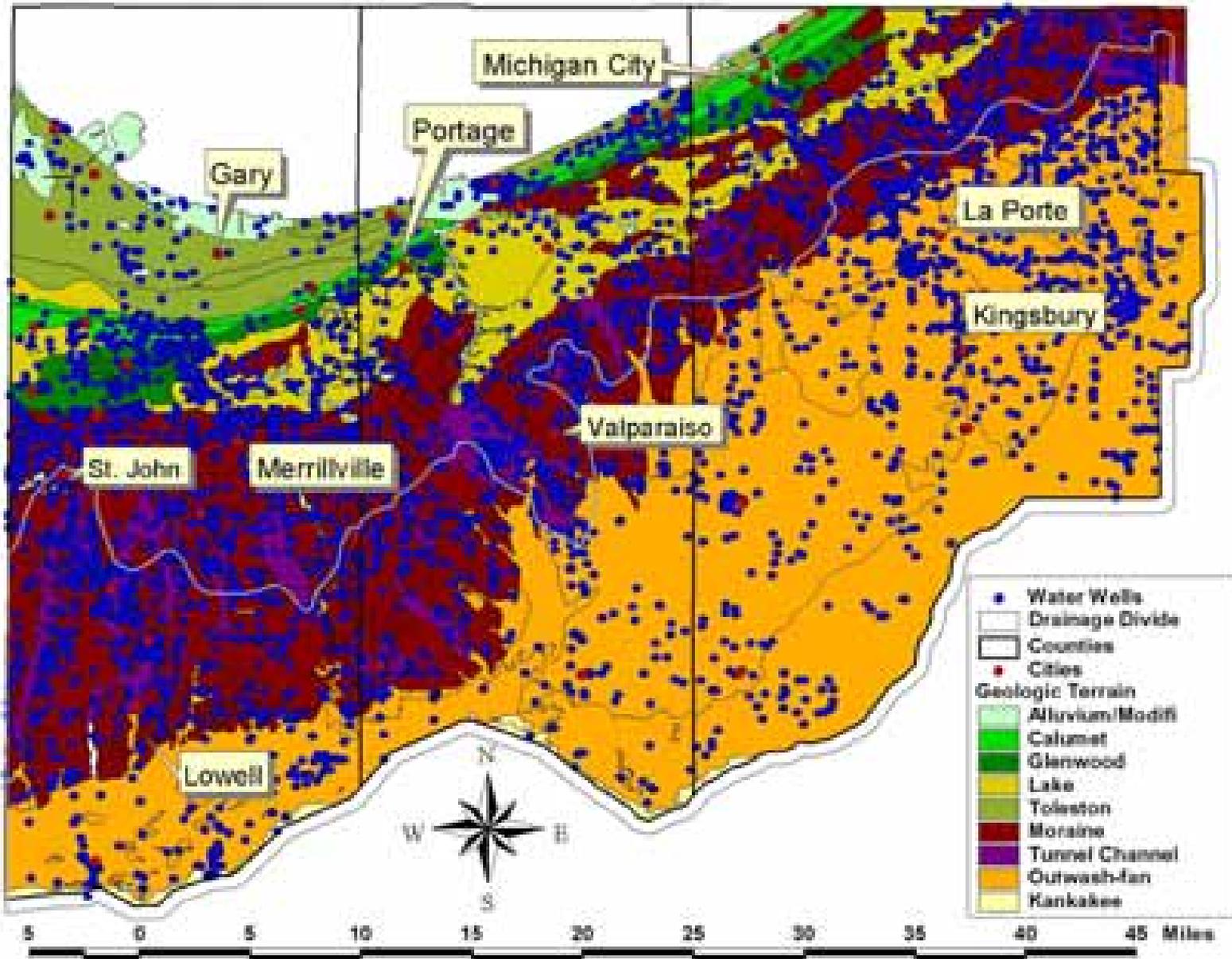


Geologic Terrains in Northwest Indiana

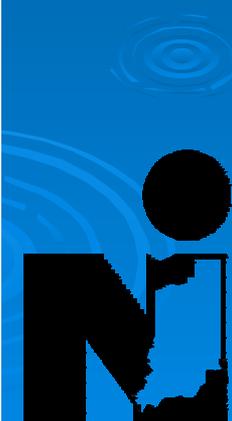
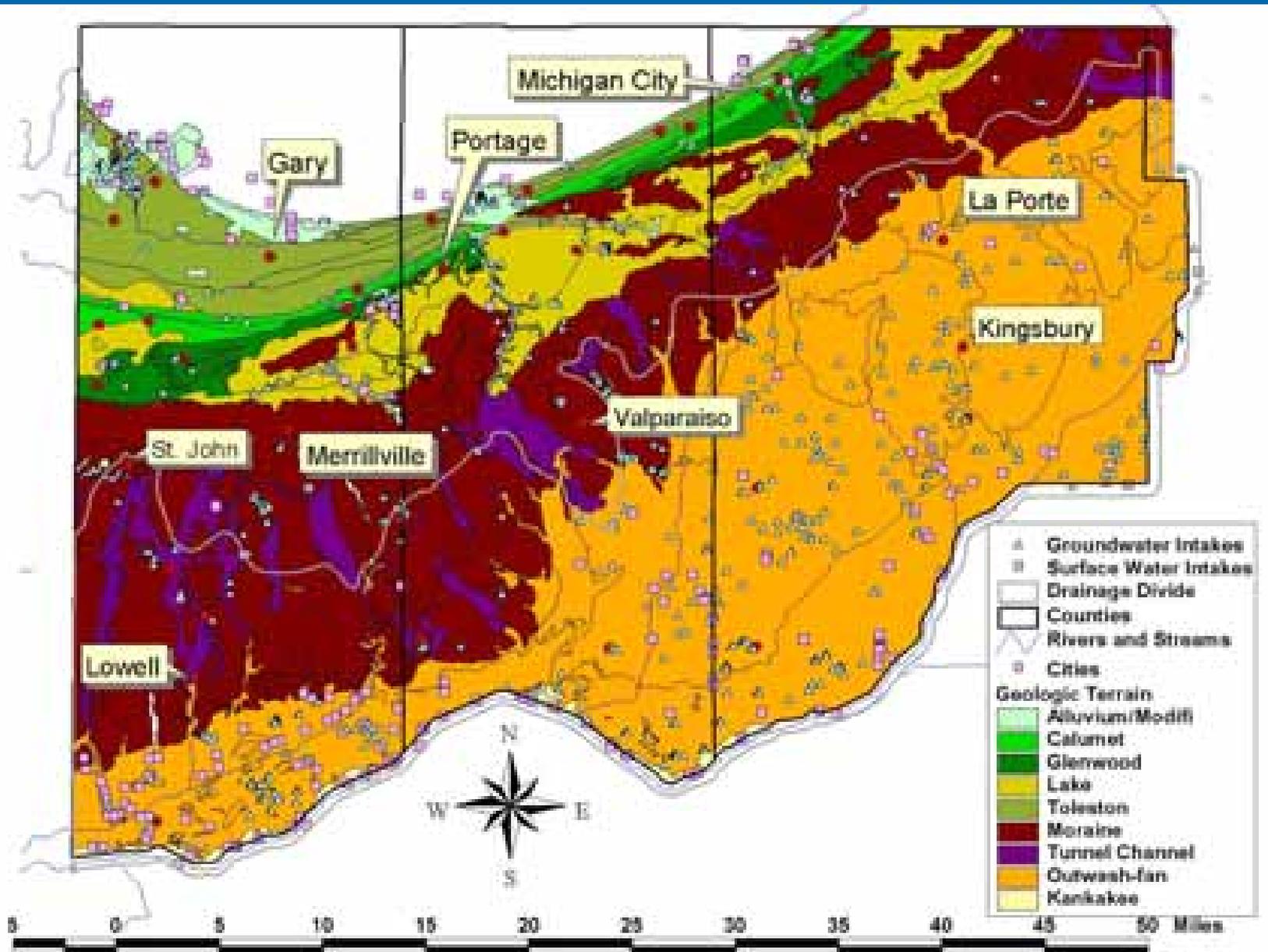
Source: Lake RIVIS GIS, Indiana Geological Survey



# Water Wells in Northwest Indiana



# Surface and Groundwater Intakes in Northwest Indiana



# Agencies and Regulations

- 💧 Indiana Department of Natural Resources
  - 💧 Wellhead protection
  - 💧 Surface and groundwater water use
  - 💧 Lake MI withdrawals
  - 💧 Research
- 💧 Indiana Department of Environmental Management
  - 💧 Surface and groundwater quality
  - 💧 Drinking water quality



# Background on Toolkit



# Project Goals

- 💧 To provide tools for different audiences to protect water and water dependent natural resources – **Water quantity AND water quality as it relates to water quantity**
- 💧 To identify water resources uses and availability for future use in Northwest Indiana



# The Project and the Great Lakes Charter Annex

- 🟢 Great Lakes State/Province Agreement on Great Lakes Water Use
- 🟢 Goal of Agreement is to **Protect, Conserve**, Restore, and Improve the Water and Water Dependent Natural Resources of the Great Lakes



# Overview of Project

💧 Funded by The Joyce Foundation

💧 Partners

💧 NIRPC (Lead)

💧 Lake Michigan Federation

- Conservation
- Land Use

💧 The Cadmus Group

- Water Resource Protection



# Toolkit Components

13 Fact Sheets

CD-ROM



# General Fact Sheets

- 💧 Overview - Toolkit for Protecting Water Resources
- 💧 Water Use and Availability in Lake, Porter and LaPorte Counties in Northwest Indiana
- 💧 Annex 2001



# Local Officials Components

- 💧 Protecting and Conserving Water Resources through Land Use Planning and Zoning
- 💧 Protecting and Conserving Water Resources through Source Water Protection
- 💧 Managing Stormwater
- 💧 Watershed Planning and Assessment
- 💧 Water Conservation
- 💧 Septics Systems
- 💧 Low Impact Development Techniques



# Other Audience Components

- 💧 Developers - Protecting and Conserving Water Resources through Better Site Planning
- 💧 General Public - Water Conservation and Pollution Prevention
- 💧 Water Utilities - Water Conservation Techniques and Incentives



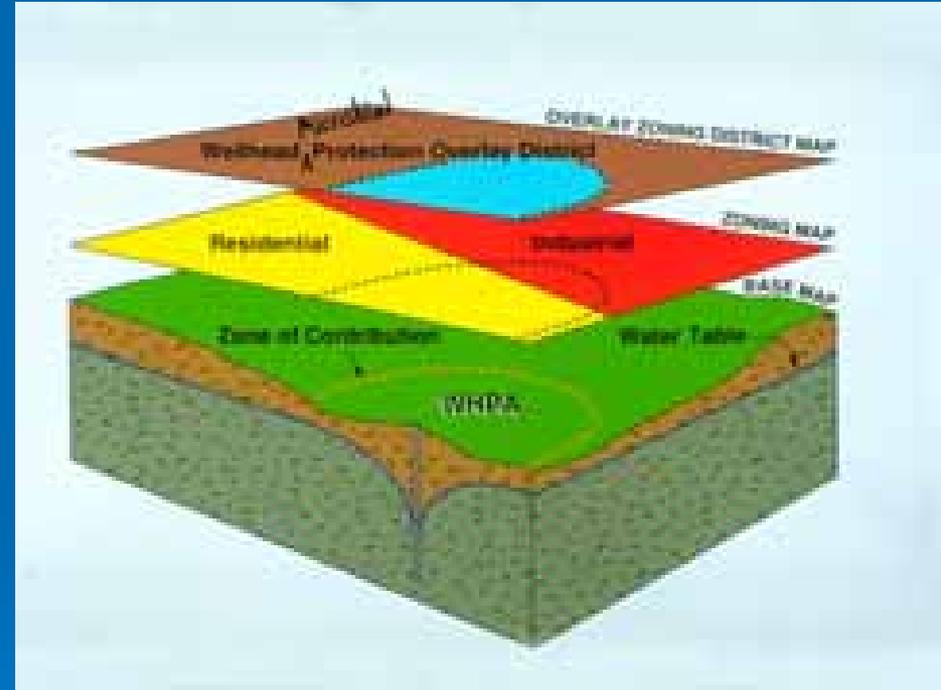
# Local Officials: Land Use

## 💧 Land Use

💧 Overview of Low Impact Development

💧 Zoning

💧 Water protection practices and ordinances



# Developers' Tools

- 🟢 Overview of Low Impact Development (LID)
- 🟢 Benefits of LID
- 🟢 LID Effectiveness
- 🟢 Conservation Design Manuals



# General Public Tools

- 💧 Water Conservation
  - 💧 Conservation tools and practices
- 💧 Pollution Prevention
  - 💧 Household hazardous waste prevention information
  - 💧 Household checklists



# Dissemination Plan



## Three areas of focus:

- 💧 Local/Regional
- 💧 Lake Michigan Basin
- 💧 Great Lakes Basin

## Example target audiences:

- 💧 Homebuilders Associations
- 💧 Municipal Leagues
- 💧 Basin-wide Groups



# Next Steps for Northwest Indiana



- 💧 Developing a better map of existing groundwater resources
- 💧 Locating and protecting groundwater recharge areas
- 💧 Implementing practices that protect water resources in all areas, particularly in developing areas.
- 💧 Encouraging development of areas close to or part of an existing water supply system rather than building new systems.



Closing session – John  
Swanson, Executive  
Director, NIRPC



