

Members

Sen. Beverly Gard, Chairperson
Sen. James Buck
Sen. Frank Mrvan
Sen. Karen Tallian
Rep. David Wolkins
Rep. James Baird
Rep. Ryan Dvorak
Rep. Matt Pierce
Doug Meyer
Dave Wyeth
Dwayne Burke
John Hardwick
Calvin Davidson
Thomas Easterly
Heather Hill



ENVIRONMENTAL QUALITY SERVICE COUNCIL

Legislative Services Agency
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Authority: IC 13-13-7

MEETING MINUTES¹

Meeting Date: September 29, 2011
Meeting Time: 9:00 A.M.
Meeting Place: 6100 Southport Rd.
Meeting City: Portage, Indiana
Meeting Number: 3

Members Present: Sen. Beverly Gard, Chairperson; Sen. Karen Tallian; Rep. James Baird; Rep. Ryan Dvorak; Rep. Matt Pierce; Dwayne Burke; John Hardwick; Calvin Davidson; Thomas Easterly; Heather Hill.

Members Absent: Sen. James Buck; Rep. David Wolkins; Dave Wyeth; Sen. Frank Mrvan; Doug Meyer.

Call to Order Senator Beverly Gard, Chair, called the meeting to order at 9:00 a.m. CDT. Senator Gard recognized the Northwest Indiana Forum staff's work in helping organize the Council's events and thanked the Forum for hosting the meeting in that part of the state. The Chair also provided an overview of the day's agenda and introduced guest speakers.

Asian Carp Issues John Goss, Council on Environmental Quality's Asian Carp Director, made a presentation entitled *Asian Carp Regional Coordinating Committee*. (Exhibit 1). The report described the impact of Asian carp on Indiana and the Great Lakes region, including efforts countering the problem. In response to Council members' questions, Mr. Goss made the following remarks:

¹ These minutes, exhibits, and other materials referenced in the minutes can be viewed electronically at <http://www.in.gov/legislative>. Hard copies can be obtained in the Legislative Information Center in Room 230 of the State House in Indianapolis, Indiana. Requests for hard copies may be mailed to the Legislative Information Center, Legislative Services Agency, West Washington Street, Indianapolis, IN 46204-2789. A fee of \$0.15 per page and mailing costs will be charged for hard copies.

- The federal government funds the bulk of Asian carp projects. The Great Lakes Restoration Initiative, administered by the Environmental Protection Agency (EPA), allocates about \$30M a year for carp projects, the Army Corp of Engineers (Corp) funds barriers, and agencies like the Fish and Wildlife Service provide staff. States collectively spend about \$25 million addressing invasive species issues.
- The Asian carp problem began in the 1970s when Silvers and Bigheads were brought to fish farms in the South and later disseminated through flood waters into the Mississippi and Missouri Rivers. Asian carps have been documented in the wild since the 1980s. The largest concentration of Asian carp in the world is probably located in Illinois.
- The Great Lakes Commission and the Great Lakes Mayors' Group hired consultants to provide recommendations pertaining to the effects of closing off hydrologic connections, changing current drainage systems, and technologies to block the transfer of invasive species.
- Canada is involved with the Great Lakes Fisheries Commission leading the risk assessment and science research projects to determine the location of habitat resources most conducive to supporting Asian Carp populations.
- The US Coast Guard and the EPA are working on ship ballast water regulations to create a uniform standard. New York's strict approach to dealing with ballast waters requires immediate decrease of pollutant concentration. Current regulation of the exchange of ballast water for salt water has improved the situation by requiring the flushing of the tank before entering lake waters.
- The Asian carp is a plankton eater at the lower level of the food chain competing with small fish and filter feeders. The Asian carp interferes with native species' food chain causing a 50 to 80 percent decline in the native fish population upon establishing in certain bodies of waters. Over 20,000 carp fish have been pulled out at one time from a 10 mile section of the Illinois River.
- Scarce funds would make a bounty system difficult to implement, while blocking water flows has flooding implications for Ft. Wayne.

Great Lakes Compact Ron McAhron, Indiana Department of Natural Resources (DNR) Deputy Director, after briefly commenting on DNR's studies on the migratory behavior of the Asian carp under flooding conditions given the topography of the state, gave his presentation entitled *Great Lakes-St. Lawrence River Basin Water Resources Compact Update*. (Exhibit 2).

Answering questions posed, Mr. McAhron explained the emergency rule making process and its goal of having temporary rules to timely continue business while permanent rules are adopted, which can take over a year. Mr. McAhron also described his past efforts to informally learn from stakeholders about issues as interim rules were drafted. He clarified that public participation is formally sought only in hearings conducted during the permanent rules adoption process.

Lake Michigan Coastal Program Mike Molnar, Lake Michigan Coastal Program Director, presented an overview entitled *Lake Michigan Coastal Program*. Jenny Orsburn, Lake Michigan Coastal Program Specialist, discussed the coastal program's support of local government projects and research through a presentation entitled *Coastal Grants Program*. Colin Highlands, Lake Michigan Coastal Program Nonpoint/LaMP/GLRI Coordinator, described additional components of the coastal program during presentations entitled *Nonpoint Source Management Program* and *Clean Marina Program*. (Exhibit 3, all included).

Great Lakes Issues Tom Easterly, Commissioner of the Indiana Department of Environmental Management (IDEM), made a presentation entitled *Environmental Quality*

Service Council IDEM- Great Lakes Issues. (Exhibit 4). Responding to EQSC members, Mr. Easterly reported the following:

- Efforts with certain federal government enforcement agencies to address concerns related to combined sewer overflow plumes affecting the Great Lakes have failed. IDEM has considered state enforcement action but most of the communities, Hammond and Gary for example, are already involved in federal consent decrees that preclude IDEM from taking certain steps. IDEM is committed to continue finding solutions.
- There is cooperation among states whose water pollution affect each other. Indiana must meet Michigan water standards. IDEM is seeking to obtain data from other states related to beach water quality.

Michael McCabe, Director of the Council of State Governments Midwestern Office, discussed recent activities of the Great Lakes Legislative Caucus. Mr. McCabe provided the following information:

- An overview of the Council of State Governments (CSG). CSG- Midwest Office focuses on representation of the three government branches of an 11 state region. The Great Lakes Legislative Caucus is an informal network of elected state and legislative officials interested in the subject area. The presentation was based on issues followed by CSG on behalf of this Caucus.
- Asian carp initiatives of states other than Indiana:
 - ▶ Illinois is attempting to integrate fishing of Asian carp into its containment and eradication strategy without developing a commercial market. The goal is invasive species elimination and not to foster demand incentives. Last year, Illinois removed more than 100K pounds of Asian carp from a 130 miles stretch of the Illinois River. Illinois also entered into an agreement with a Chinese meat processing company and an instate fishing facility to harvest 30M pounds of Asian carp for resale in international markets. Illinois also uses Asian carp as a food source for certain organizations distributing to a system of food banks.
 - ▶ Minnesota contracted a Granger, Indiana company to conduct extensive DNA testing in Mississippi, Minnesota, and the St. Croix River. The state also commissioned a study for alternative technologies to be used as barriers because electric barriers cannot be used in large open water systems like the Great Lakes.
- Asian carp projects are only a part of keeping all invasive species out of the Great Lakes. There are two main strategies to keep invasive species out of the Great Lakes:
 - 1) regulation of ballast water:
 - ▶ EPA is to issue a vessel general permit that regulates invasive species as pollutants under the NPDES.
 - ▶ The Coast Guard is finalizing rules on uniform ballast water discharge standards that initially incorporate International Maritime Organization (IMO) standards, which many consider inadequate.
 - ▶ Michigan, Wisconsin, and Minnesota established ballast water standards, none of which exceed IMO standards; New York approved the most stringent regulations, up to 100 times more stringent than IMO's for existing ships and 1000 times for ships built after 2012, scheduled to take effect in August 2013. Highlighting the debate, several governors of affected states requested New York to halt implementation on the grounds that technology to achieve new

standards does not currently exist and that shipping on all of the Great Lakes system will be affected by potential closure of the St. Lawrence River shipway, while other elected state officials have also written in support of the new rules; and,

2) separation of the watersheds:

- ▶ A Great Lakes and Mississippi River inter-basin study is being conducted by the Corps, to be completed by 2015. There are concerns that results may be too late for managing the Asian carp invasion. The Corps released a report in July 2011 identifying 40 invasive species at risk of migrating between the watershed and the Great Lakes, of which 30 are expected to move *from* the lakes to the Mississippi River basin.
 - ▶ The 7th Circuit Court of Appeals denied an injunction sought by 5 Great Lakes states' Attorney Generals to compel the Corps to close the Chicago area waterway system. This coalition expanded to 17 Attorney Generals, including states as far from the lakes as Arizona and West Virginia. The new coalition petitioned Congress for the passage of pending federal legislation related to the Stop the Asian Carp Act that would compel the Corps to complete the inter-basin study by 2012, use information from independent studies instead of duplicating efforts, and prevent the spread, instead of reducing the risk, of invasive species.
 - ▶ "Envisioning a Chicago Area Waterway System for the 21st Century" is a study from the Great Lakes Commission and Great Lakes City Initiative intended to develop options for the separation of the two watersheds. It is due in December 2011.
- The renegotiation of the Great Lakes Quality Agreement between Canada and the US, originally signed in 1972 and last revised in 1987, is underway. The agreement provides for the joint protection of the Great Lakes. Concerns from the Great Lakes Legislative Caucus with the renegotiation process, particularly the lack of access to details, prompted 30 legislators to sign a letter expressing their objections. See Exhibit 5.
 - Efforts are underway to fully implement the Great Lakes Compact given that states are at different stages of adopting legislative provisions in support of the compact's requirements. New York and Ohio have recently adopted laws, with New York's legislation being perceived as an effective approach to implementing the compact. Ohio's legislation was the region's weakest permitting program in violation of the compact but was vetoed by its governor. The National Wildlife Federation issued a progress report in July 2011 assessing the implementation of the compact by relevant states.
 - The issue of wind energy and the potential development of offshore wind energy in the Great Lakes basin is well explained in the Great Lakes Commission's report "Best Practices for Sustainable Wind Energy Development in the Great Lakes Region."

Mr. McCabe distributed three handouts in support of his presentation: 1) *Resolution on Combating Aquatic Invasive Species*, 2) *Letter dated September 20, 2011 to Dr. Susan Hedman, US EPA Administrator Reg 5 and Mr. James Vollmershausen, Regional Director General Environment Canada*, and 3) *State Great Lakes and Water Legislation, 2011*. (Exhibit 5).

Adjournment Sen. Gard adjourned the meeting at 11:47 a.m. CDT.

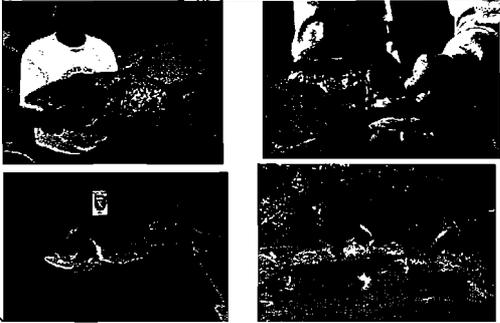
EQSC
09/29/2011
Exhibit #1

 **Asian Carp
Regional Coordinating
Committee**

September 29, 2011

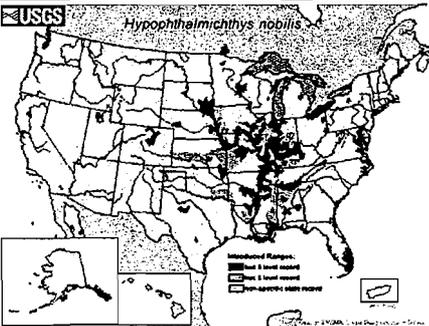
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 **The Threat**



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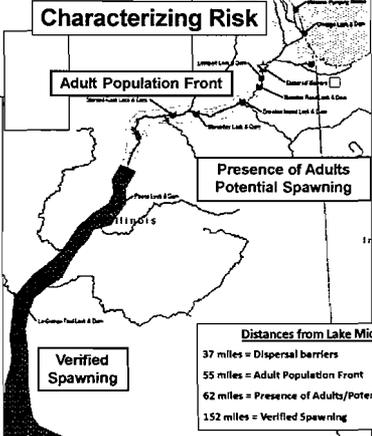
 **Where are the carp?**



USGS *Hypophthalmichthys nobilis*

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 **Characterizing Risk**



Adult Population Front

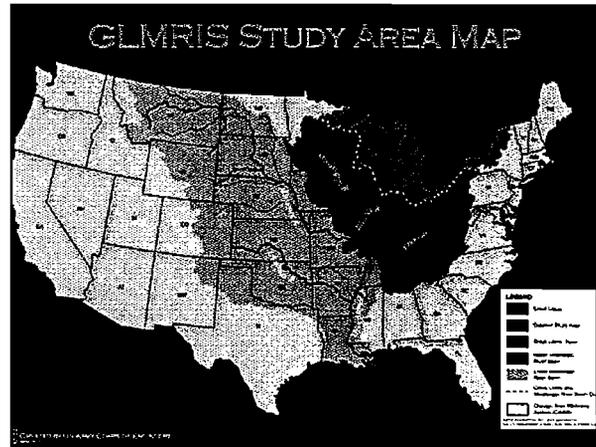
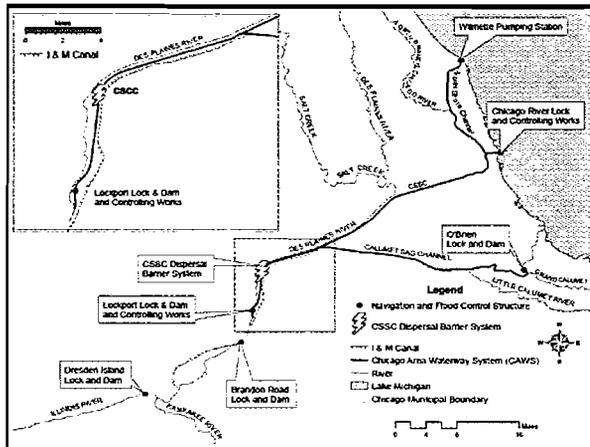
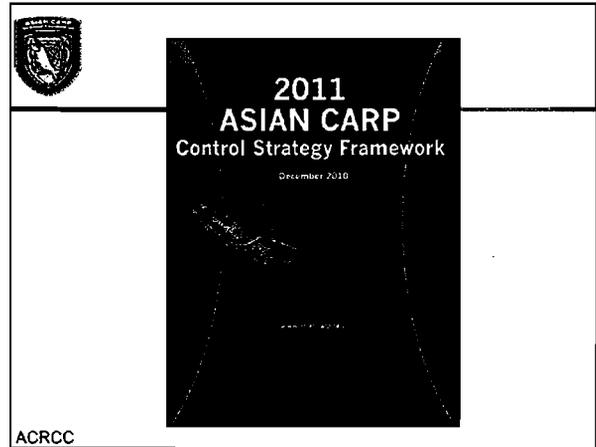
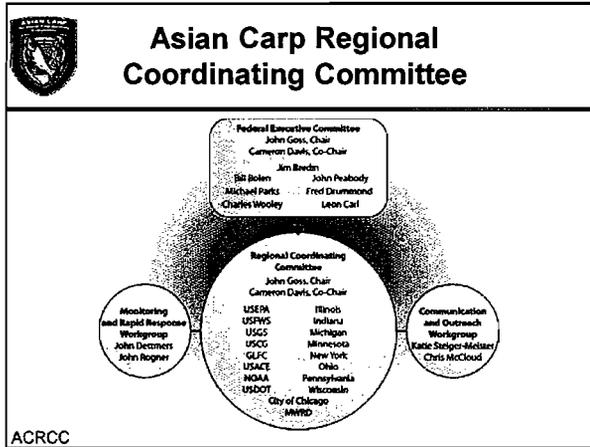
Presence of Adults Potential Spawning

Verified Spawning

Distances from Lake Michigan

- 37 miles = Dispersal barriers
- 55 miles = Adult Population Front
- 62 miles = Presence of Adults/Potential Spawning
- 152 miles = Verified Spawning

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2011 Preliminary Results CAWS Monitoring Plan

Asian Carp Presence and Abundance Monitoring

- No Asian carp captured above the barrier, or in Lockport or Brandon Road Pools during sampling efforts
- 1297 eDNA samples have been run and processed, 15 positive for silver carp, more are pending
- Juvenile and Larval Asian Carp Monitoring is occurring, no eggs or larvae upstream of Starved Rock Dam and no juveniles sampled
- Des Plaines River Monitoring, no Asian carp sampled or observed

Applied Research and Gear Development

- Asian Carp Gear Efficiency Testing, Asian Carp Gear Development, Fish Population Estimation and Modeling and Hydrogun Development, are being progressing. Results should come in later this year.

Electric Barrier Efficacy

- DIDSON data are being collected and are under analysis
- New fish (small and large) are being tagged (telemetry)
- Des Plaines River Monitoring, one overflow event

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Fixed Sites Upstream of Barrier March-August 2011

DC Electrofishing

- 11 sampling trips
- 1,330 person-hours
- 127 hours of electrofishing
- 29,614 fish
- 7,277 shad <6 inches
- 55 species

Contract Netting

- 11 sampling trips
- 1,070 person-hours
- 212 sets
- 36.2 miles of net
- 4,079 fish
- 15 species

No bighead or silver carp

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Barrier Defense AC Removal 12 April – 19 August

QUICK SUMMARY:	
Number of Days Fished	35 days
Number of Net Crews	175 crew-days
Miles of Nets Fished	154.5 miles
Number of Bighead Carp	14,468 fish
Number of Silver Carp	6,622 fish
Number of Grass Carp	9 fish
Number of Asian Carp (AC)	21,099 fish
Tons of AC Harvested	210.9 tons
Average number AC per 1,000 yards net	77.6 fish

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Research and Development

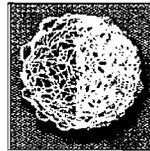
USGS is developing technology that can be applied to control Asian carp and other invasive species

- > Selective toxin development like lampricide;
- > Seismic technology;
- > Risk assessment for habitat and food sources
- > Attraction pheromones and rapid detection methods.



Chemical Controls

Developing an oral delivery formulation (ODF) to selectively deliver biocides to control filter feeding aquatic invasive species



ODF



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Fish Behavior Studies: Is there Food for Carp in the Great Lakes?

- USGS is assessing risk for Asian carp establishment based on available food sources
- Preliminary Findings:
 - Silver carp are feeding on *Cladophora*, a green algae prevalent in GLs
 - Bighead carp eat detritus [bottom muck].
- Bioenergetic model – can they survive?
- Final results expected in late 2011/early 2012

Asian carp/Bluegreen algae dynamics

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Fish Behavior Studies: Tributary Assessment project

- Published USGS Scientific Investigations Report in August on egg and larval Asian carp development (see asiancarp)
- Date being incorporated into model for development of predictive tool

Tubes for examining larval development and behavior

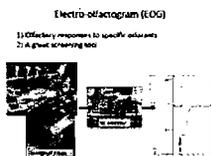


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Pheromones for Carp Control

- ▣ Tools for attracting and herding Asian carp
- ▣ Progress: Bighead and silver carp highly responsive to specific sex pheromones
 - ▣ Will be testing testosterone as stimulus in October
- ▣ Behaviors based on food stimuli being tested in fish ponds



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Water Gun Testing



- ▣ September Plan to conduct structural effects study in CAWS (USGS/USACE/IL DNR and Northern IL University)
- ▣ October– Behavioral studies at Morris, IL (USGS and IL DNR)
 - ▣ Will test different size guns, differing frequencies, and differing peak pressures
 - ▣ Observe fish behavior - Will it keep fish away?
 - ▣ How many guns needed?

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Suitability of the Maumee River for spawning of bigheaded carp

Initial Maumee R. Findings:

- ▣ Maumee River appears to be thermally and hydrographically suitable for spawning of bighead carp
- ▣ Additional research needed to identify potential spawning locations or to determine if entire river length is suitable for development of mitigation options
- ▣ Study methods are being applied to six other major tributaries: Sandusky, Portage, Huron, Vermilion, Black, Grand (OH)

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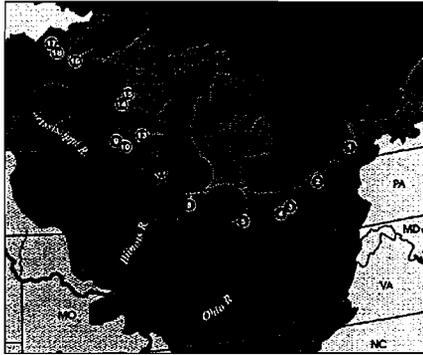
State Partner Activities

- | | |
|--|--|
| <ul style="list-style-type: none"> ▣ Other Pathways <ul style="list-style-type: none"> ▣ Site Evaluation on 18 potential connections completed Summer 2011 ▣ Asian carp control plans <ul style="list-style-type: none"> ▣ Minnesota ▣ Michigan ▣ ACRCC Involvement <ul style="list-style-type: none"> ▣ All Great Lake States | <ul style="list-style-type: none"> ▣ eDNA <ul style="list-style-type: none"> ▣ Wisconsin ▣ Illinois ▣ Michigan ▣ Minnesota ▣ Indiana ▣ Ohio ▣ Pennsylvania ▣ Eagle Marsh |
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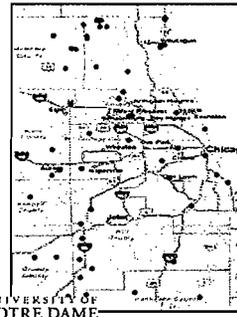
Regional eDNA Sampling



- Weekly monitoring in Chicago waterways
- No positive eDNA hits in Great Lakes' Rivers outside of Chicago
- No Asian carp near Eagle Marsh or in Fort Wayne's waterways
- Increased monitoring of upper Mississippi headwaters



Retail Live Bait Surveys



Bait Shops in Northeast Illinois



- Legend
- Bait shop locations
 - States
 - Great Lakes

UNIVERSITY OF NOTRE DAME



Public Engagement

- GLMRIS Public Meetings
 - 12 Meetings between January 2011 and March 2011 for NEPA Scoping to launch study
 - Developing public engagement plan for continuous dialogue on GLMRIS progress
- AC RCC Public Meetings
 - Chicago, IL – April 28, 2011
 - Port Clinton, OH – July 7, 2011
 - Saginaw, MI – September 23, 2011

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THANK YOU

For more information

Please visit www.asiancarp.org

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Great Lakes_St. Lawrence River Basin Water Resources Compact Update

EQSC September 29, 2011



EQSC
09/29/2011
Exhibit #2

Great Lakes Compact

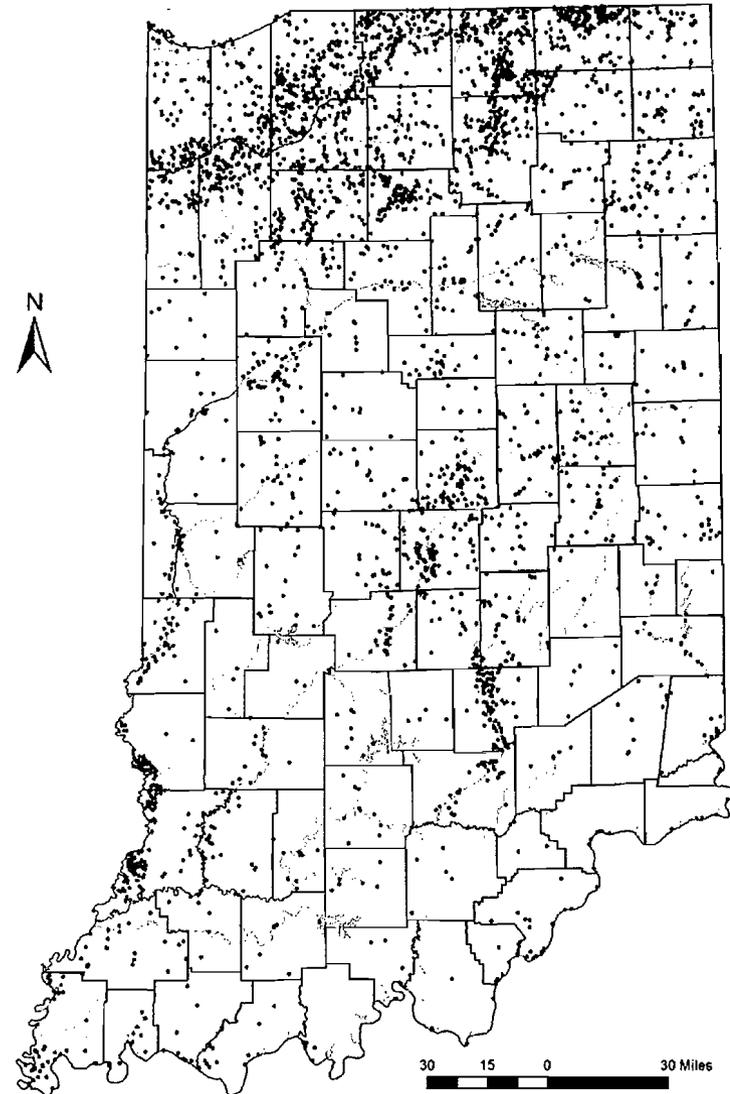
A look back

- **1909 Boundary Waters Treaty IJC**
- **1985 Great Lakes Charter**
- **1986 WRDA**
- **2001 Annex**
- **Agreement among the Parties 12/13/2005**
- **Indiana Approach to passage**
 - Summer/fall 2007 – development of implementing legislation with stakeholder outreach and input
 - Commitment to enact implementing legislation in conjunction with Compact
 - Legislative Study Committee Meetings
 - Legislation drafted Late Fall
 - 2008 session – introduce and pass a bill
- **Compact became effective 12/8/2008**

IC 14-25-7: Water Resources Management Act

- Enacted in 1983
- Requires registration of all SWWF (gw & sw)
- Facility defined as greater than 100,000 gpd capability
- Capability is aggregate of all wells & intakes
- Annual water use reporting

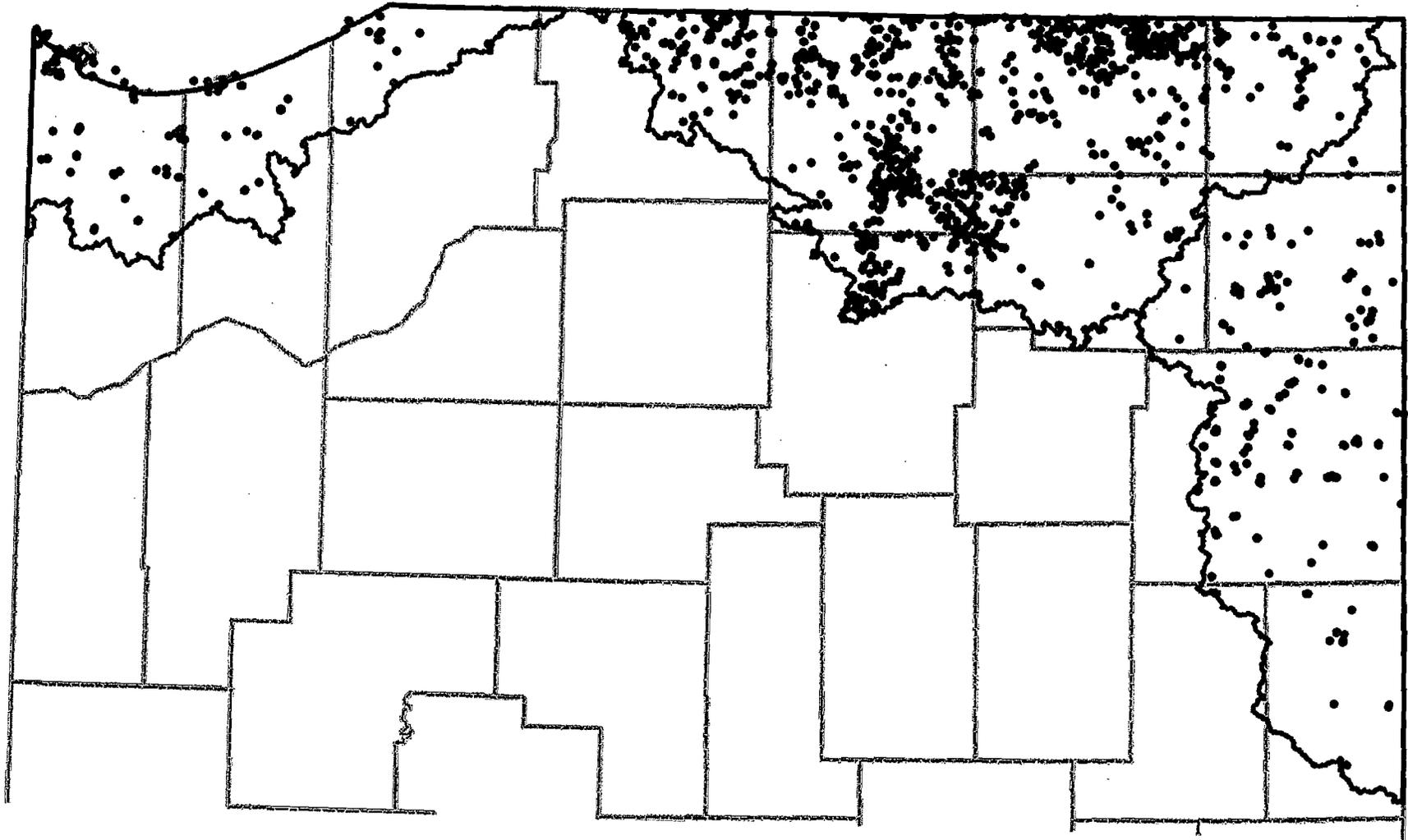
Location of Significant Water Withdrawal Facilities in Indiana



Locations of Registered Wells & Intakes within the Great Lakes Basin

● Registered Irrigation Pumps

● Other Registered Pumps



INDIANA/GREAT LAKES BASIN DATA

Number of Facilities Number of Wells Number of Intakes

Water Use Code

Indiana GL Basin Indiana GL Basin Indiana GL Basin

EP

IN

MI

PS

RU

TOTAL

2245

541

2897

598

847

218

INDIANA/GREAT LAKES BASIN DATA

	GL Basin Withdrawals in 2010 (BG)		GL Basin Current Capacity (MGD)		Current Number	GL Basin
	Total (BG)	As MGD	Total	%		
Surface Intakes	860.15		7,248		1377	
Wells	38.45		1,051		6432	
TOTAL	898.606		8,299		7809	
Facilities					3645	

Compact Purposes

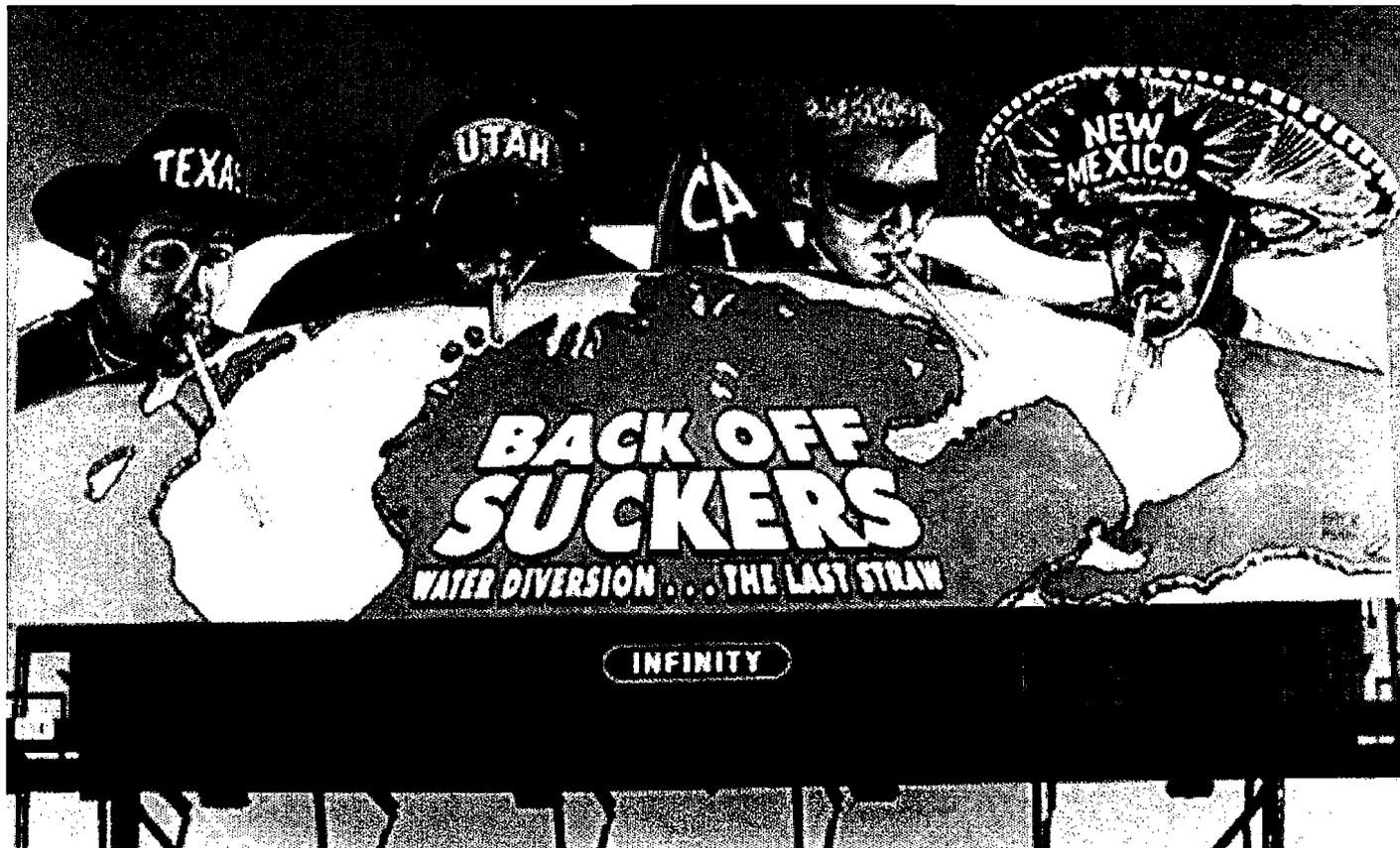
Effective consistent water resource management

- **Remove causes of present and future controversies;**
- **Provide for cooperative planning and action;**
- **Facilitate consistent water management approach;**
- **Facilitate data exchange and scientific information base for decision making;**
- **Prevent significant adverse impacts of water withdrawals and losses;**
- **Promote interstate and state-provincial comity; and**
- **Promote adaptive management approach to conservation and management of basin waters.**

Real Purpose of Great Lakes Compact

Section 4.8. *All new or increased diversions are prohibited except as provided for in the compact.*

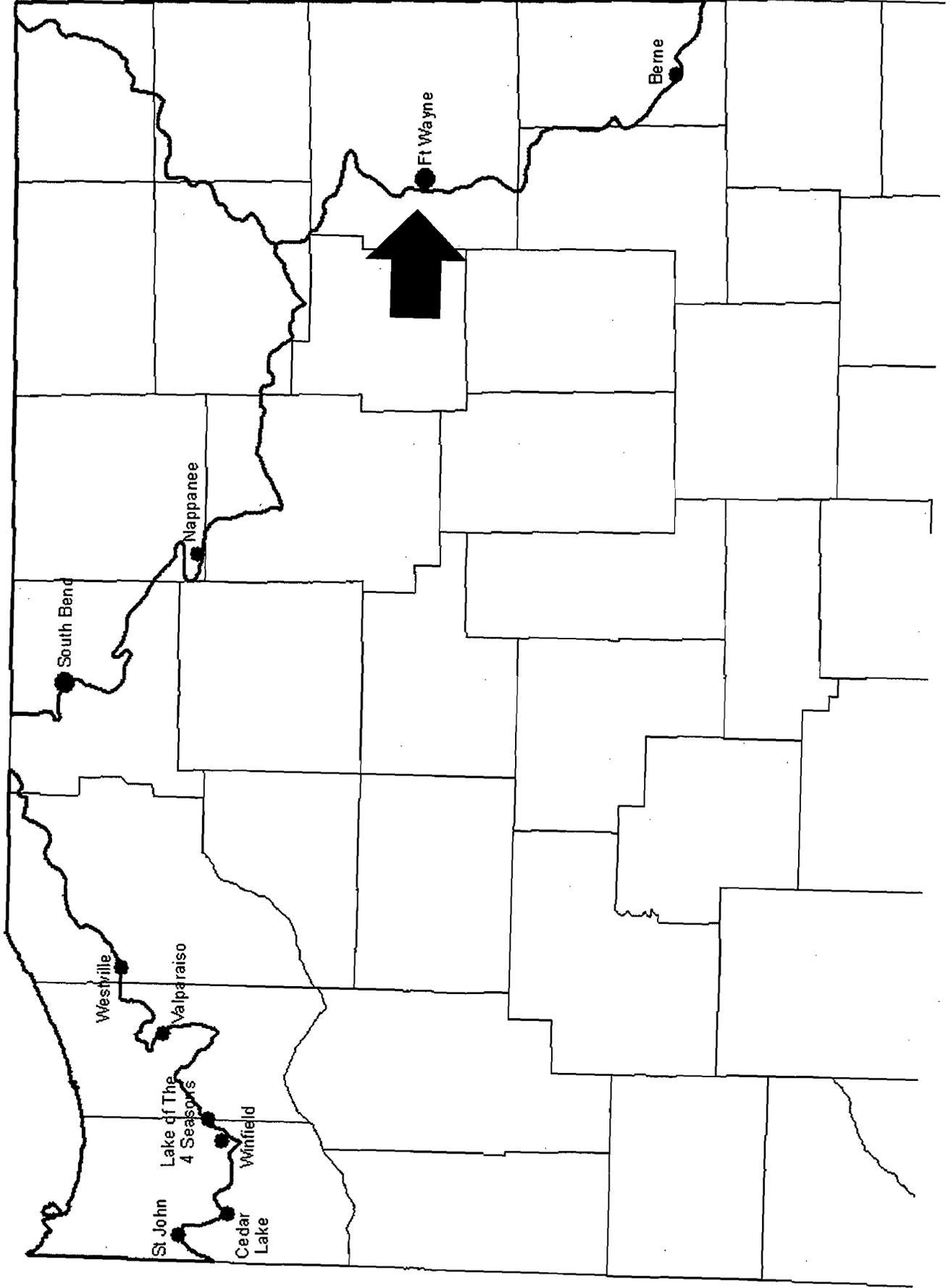
Section 4.9. *Exceptions to the prohibition for straddling communities, straddling counties and intra-basin transfers.*



Water Resource Compact Diversions - Exceptions

- **Straddling communities** any incorporated city, town or the equivalent thereof, wholly within any County that lies partly or completely within the Basin, whose corporate boundary existing as of the effective date of this Compact, is partly within the Basin or partly within two Great Lakes watersheds.
- **Requires Return Flow**
- **Meets Exception Standard > 100,000 gpd**
- **Requires Regional Review if > 5 MGD**

Indiana Communities Straddling Great Lakes Basin Boundary



Water Resource Compact Diversions - Exceptions

▪ Intra-Basin Transfers

- State discretion < 100,000 gpd**
- Between 100,000 gpd & 5 MGD**
 - Exception Standard**
 - Notice to other parties**
 - No feasible alternative in the receiving Great Lake Basin**
- Requires Regional Review if > 5 MGD**

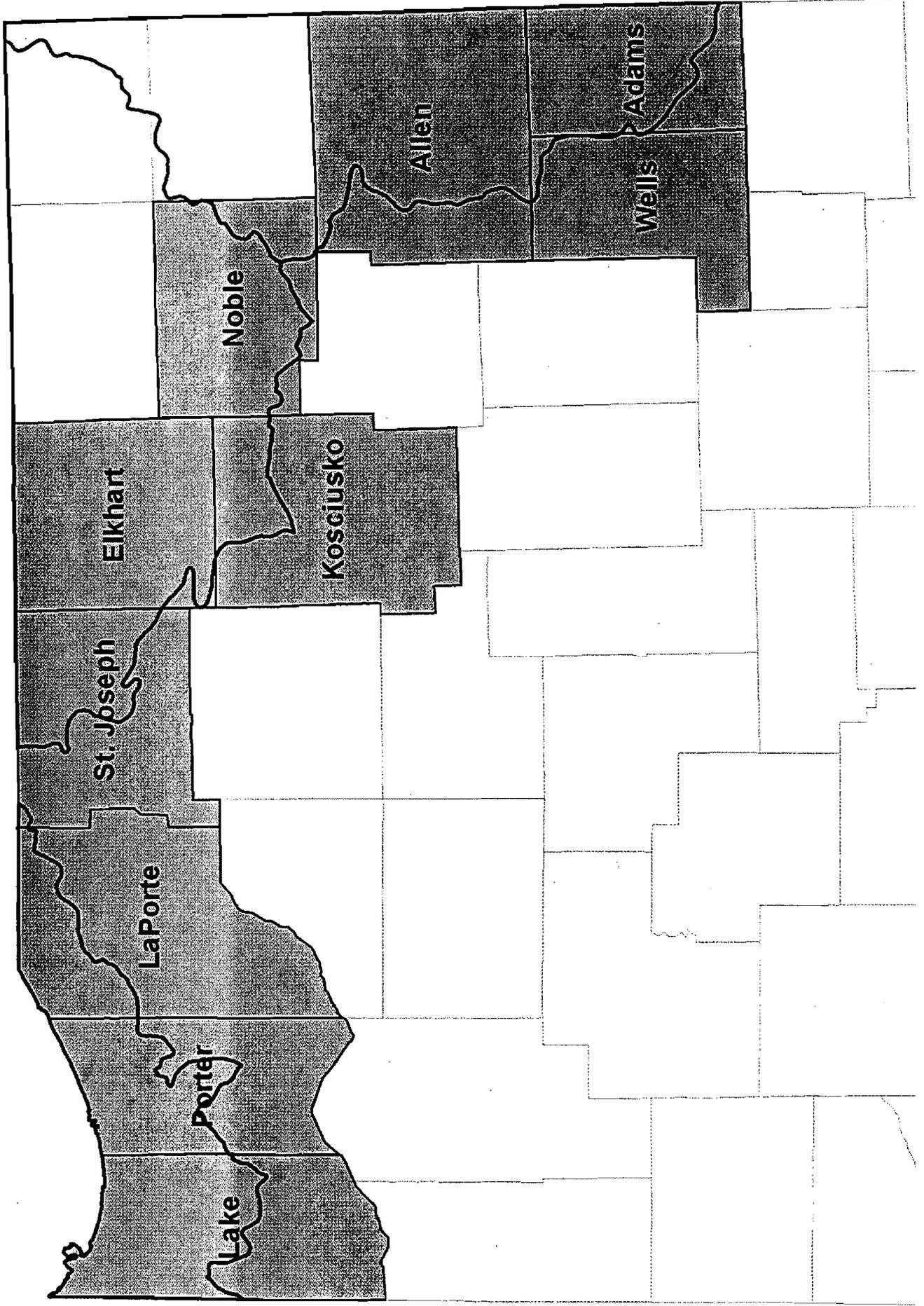
Water Resource Compact Diversions - Exceptions

▪ **Communities in straddling counties** any incorporated city, town or the equivalent thereof, that is located outside the Basin but wholly within a County that lies partly within the Basin and that is not a Straddling Community.

• **Requires Regional Review**

• **Need can not be met in community's basin**

Indiana Counties Straddling Great Lakes Basin Boundary



Diversion Inquiries

1. Chester, Inc.- Valparaiso, Porter Co.

- *Straddling County*
- *Four 12 unit multi-family buildings*
- *Sufficient gw resource available in area*

2. Grand Oaks LLC.- Valparaiso, Porter Co.

- *Straddling County*
- *400 unit housing development*
- *Sufficient gw resource available in area*

3. Twin Lakes Utilities, Lake Co.

- *Straddling Community*
- *Proposed wells to supply Lake of the Four Seasons*
- *Diversion volume established by existing baseline*

IC 14-25-15-5

Responsibilities and powers of the natural resources commission

Sec. 5. The natural resources commission:

.....

(3) shall adopt rules under IC 4-22-2 that implement voluntary water conservation and efficiency programs; and

(4) shall adopt rules under IC 4-22-2, which may provide for general permits, for the implementation, administration, and enforcement of article 4 of the compact.

As added by P.L.4-2008, SEC.5.

Voluntary Water Conservation & Efficiency Programs

- Outreach & Education
- Establishing Baseline Conservation
- Conservation & Efficiency Website:

www.in.gov/dnr/water/6364.htm



DIVISION OF WATER

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Indianapolis, IN 46204-1041

Phone: 317-232-4160
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Toll Free: 877-928-3755
E-mail:
water_inquiry@dnr.in.gov

Water Conservation and Efficiency Efforts

Irrigation Management Practices For Conserving Water, Nutrients & Energy

Knowledge of irrigation management practices allows you to take a more scientific approach to the irrigation process, achieve greater control, and begin to conserve water without compromising crop yield. Basic to this knowledge is understanding your system's capacity to deliver water. All irrigators need to know the net water application rate of their system, the irrigation guidelines for the specific crop being grown, and how to measure soil moisture levels. Good irrigation management requires one to know how much water the irrigation system delivers to a crop's roots over a given period of time, allowing adjustments to be made to the duration and frequency of application in order to maintain a balance between water and nutrients added to the soil, and the amount plants actually use.

Management Practices for Conservation:

- Whole System Maintenance—Identification of leaks in delivery and distribution, preservation of optimal operation pressure, maintaining gauges in good working order, testing regularly for application uniformity, system calibration, identification and repair of pressure and nozzle problems;
- Consistent Scheduling—Effective timing of applications for reducing evaporation rates;
- Utilize low pressure or low volume irrigation techniques with more efficient application practices;
- Utilize low elevation spray and larger drops settings to prevent drift and evaporation;
- Soil Management—Moisture measurement and monitoring to reduce run-off and increase crop water & nutrient utilization;
- Track seasonal crop water use;
- Repair or replace inefficient pumping plants;
- Provide sufficient soil storage capacity in the event rainfall follows irrigation;
- Know your crop's water needs at different stages of development and irrigate accordingly.

For more information regarding water conservation & energy savings visit the Division of Water website at:

www.in.gov/dnr/water/7.113.htm



Water Conservation and Efficiency Checklist

Indiana Irrigators: Voluntary Conservation and Efficiency Efforts— Suggested Best Management Practices Checklist

The Indiana Department of Natural Resources has compiled the following suggested Best Management Practices (BMPs) to provide assistance to Indiana Significant Water Withdrawal Facilities (SWWF) in the development of water conservation & efficiency efforts under the provisions of the Great Lakes-St Lawrence River Basin Compact (IC 14-25-15-5). Pursuant to this legislation, conservation and efficiency efforts are voluntary in nature for existing SWWF facilities in the Great Lakes Basin; however, Indiana is promoting voluntary conservation and efficiency efforts at all facilities throughout the State. This voluntary checklist is being provided to each registered SWWF in Indiana according to their water use category. The checklist contains examples of BMPs that might be considered by a facility. This list is intended as a guide and should not be considered complete or mandatory, as no one set of BMPs would be appropriate for or applicable to, all facilities.

Selection of Best Management Practices for Conservation and Efficiency Efforts:

C u r r e n t	P l a n n e d	
		<p>Please check those items that are <i>currently</i> being utilized by the facility, and those that may be <i>planned</i> or implemented over the next water use reporting year. Do not check either box if the item is not applicable to your facility or organization.</p> <p><u>Please return this checklist with your annual water use report.</u></p>
<input type="checkbox"/>	<input type="checkbox"/>	Develop a system wide (pivot, pump, water supply) maintenance program to reduce in season shut downs, improve water distribution, and enhance overall conservation objectives.
<input type="checkbox"/>	<input type="checkbox"/>	Implement leak detection and repair program to mitigate water losses.
<input type="checkbox"/>	<input type="checkbox"/>	Development of an accurate water measurement system; including mechanical metering, or by figuring water use by flow meters, acre inches applied, or pump capacity.
<input type="checkbox"/>	<input type="checkbox"/>	Monitor & track pumping plant efficiency by comparing total water pumped to total fuel or energy used over a season.
<input type="checkbox"/>	<input type="checkbox"/>	Operation of pumps to meet, but not exceed, application rates to reduce excessive pumping.
<input type="checkbox"/>	<input type="checkbox"/>	Match pump output to distribution equipment design parameters.
<input type="checkbox"/>	<input type="checkbox"/>	Track seasonal crop water use, seasonal adjustments, etc.
<input type="checkbox"/>	<input type="checkbox"/>	Design & manage distribution system to utilize application rates that allow irrigation water to infiltrate the soil and minimize run-off.
<input type="checkbox"/>	<input type="checkbox"/>	Develop soil management practices that measure and monitor soil moisture content to minimize run-off and increase water and nutrient uptake.
<input type="checkbox"/>	<input type="checkbox"/>	Allow for sufficient soil storage capacity to reduce run off in the event rainfall follows irrigation.

Water Conservation and Efficiency Checklist (cont.)

<input type="checkbox"/>	<input type="checkbox"/>	Irrigate according to your crop's needs by tracking allowable soil or substrate moisture depletion at each stage in development.
<input type="checkbox"/>	<input type="checkbox"/>	Know the depth of rooting for each crop irrigated.
<input type="checkbox"/>	<input type="checkbox"/>	Monitor drought and water stress conditions regionally.
<input type="checkbox"/>	<input type="checkbox"/>	Utilize low pressure or low volume irrigation techniques with more efficient application practices.
<input type="checkbox"/>	<input type="checkbox"/>	Incorporate water conservation policies and procedures into employee training programs.
<input type="checkbox"/>	<input type="checkbox"/>	Participate in water conservation advisory group or organization to raise awareness.
<input type="checkbox"/>	<input type="checkbox"/>	Other [please specify]: _____ _____ _____ _____ _____

Evaluation and Modification of Voluntary Conservation and Efficiency Efforts

Upon adoption of applicable voluntary Best Management Practices (BMPs), the facility may consider evaluating and updating their goals and objectives on a periodic basis. Modifications to chosen BMPs may be based upon an evaluation of previously selected goals and objectives and any new relevant information or changes in water use processes.

The facility could consider documenting the following information to evaluate their voluntary selection of conservation and efficiency goals and the BMPs to reach them:

- A list of dates and descriptions of BMPs chosen as well as conservation & efficiency measures implemented
- Means used to quantify water savings
- Approximate amounts of water saved for each measure implemented
- Discussion about whether or not the goals of the plan have been met
- If objectives were not met, an analysis of why the objectives were not met and a discussion of revisions to goals & objectives and the chosen BMPs may be helpful for the facility to meet their voluntary objectives in the future.

Have questions, comments, or need further assistance?

Please contact the Indiana Department of Natural Resources, Division of Water at 317-232-4160 or toll free 877-928-3755 (choose option 4); or see our website at: www.in.gov/dnr/water.

Mail your completed checklist to:

Division of Water
Indiana Department of Natural Resources
402 W. Washington St Room: W264
Indianapolis, IN 46204-2641

Facility Registration Information:

Voluntary Conservation & Efficiency Checklist Survey Results

	Great Lakes Basins	
<ul style="list-style-type: none">• 3652 Facilities• 1868 Replies• 51% rate of return	<ul style="list-style-type: none">• 858 Facilities• 464 Replies• 54% rate of return	<ul style="list-style-type: none">• 2794 Facilities• 1404 Replies• 50% rate of return

Voluntary Conservation & Efficiency

~Checklist Survey Results~

Great Lakes Basins

<ul style="list-style-type: none">• Industrial/Energy Production 30%• Irrigation 75%• Public 56%• Rural/Misc 27%• All Uses 49%

<ul style="list-style-type: none">• Industrial/Energy Production 52%• Irrigation 52%• Public 28%• Rural/Misc 0%• All Uses 43%

<ul style="list-style-type: none">• Industrial/Energy Production 51%• Irrigation 59%• Public 49%• Rural/Misc 42%• All Uses 56%

Survey Says

- Industrial & Energy Production

- *Statement 4*— Install cooling towers or retrofit once-through applications with closed loop recirculation systems to reduce cooling water use.
- *Statement 10*— Turn off all flows during shutdowns and use solenoid valves to stop the flow of water when production stops.

- Irrigation

- *Statement 5*— Operation of pumps to meet, but not exceed, application rates to reduce excessive pumping.
- *Statement 1*— Develop a system wide (pivot, pump, water supply) maintenance program to reduce in season shut downs, improve water distribution, and enhance overall conservation objectives.

- Public Water Supply

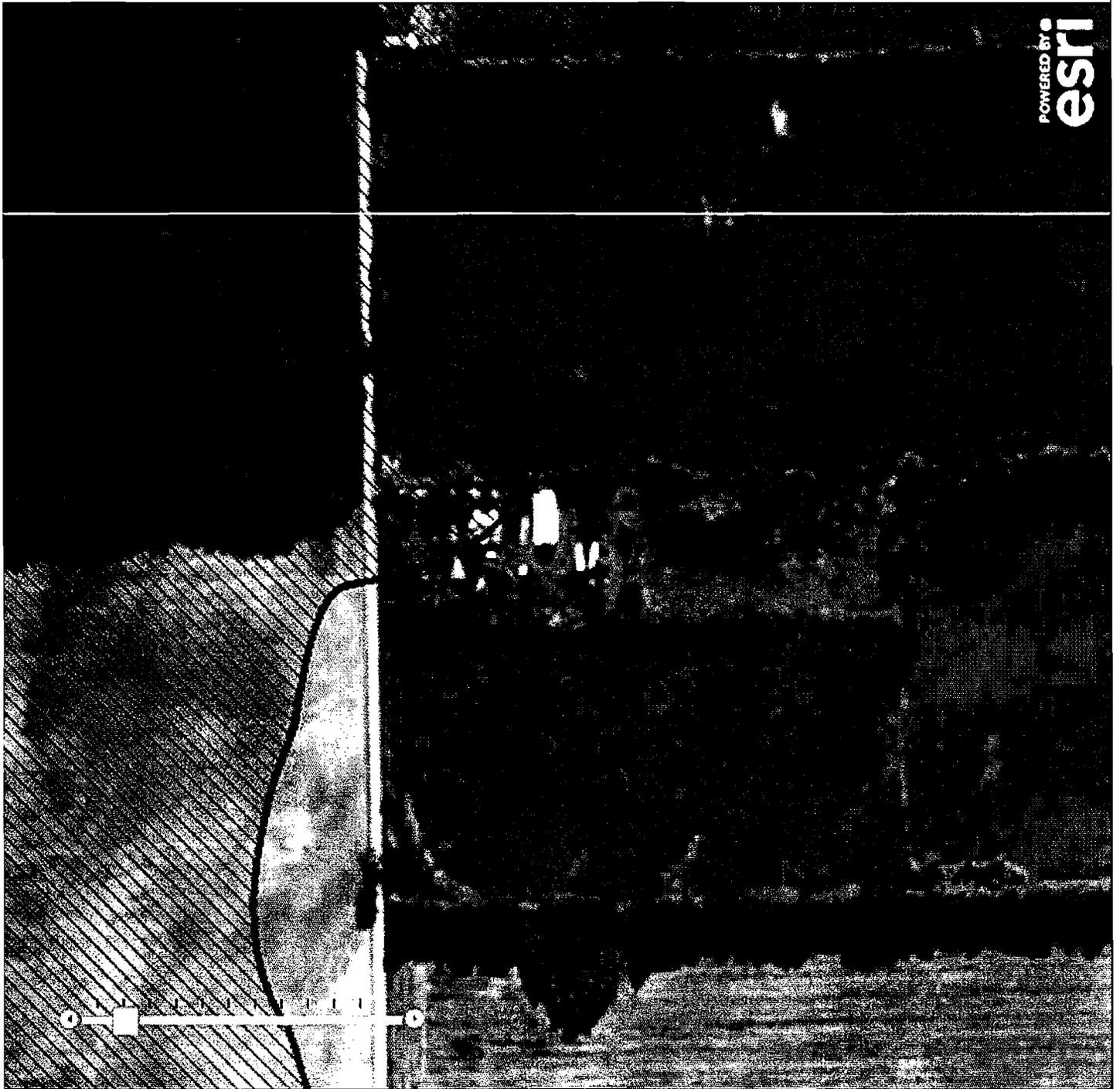
- *Statement 5*— Implementation of universal metering combined with a meter testing, calibration, and replacement program.
- *Statement 6*— Develop a system wide large water meter (1 ½" and larger) testing, repair and/or replacement program to increase revenues and to mitigate water losses to enhance conservation objectives.

- Rural Use / Miscellaneous

- *Statement 4*— Development of an accurate water measurement system; including mechanical metering, or by figuring water use by flow meters, by acre inches applied, or by pump capacity.
- *Statement 6*— Operate pumps to meet, but not exceed, necessary rates to reduce excessive pumping.

To Do/Challenges

- Rules
 - Temporary October 2011
 - Permanent effective by 12/8/2013
- Groundwater Boundaries
 - Practical Challenges
- Relativity
 - Math
 - Weighing local impacts
- Return Flow
 - Single source and discharge
 - Multiple intakes, users, discharges



POWERED BY
esri

Great Lakes Context

Hydrology

Lake	Superior	Michigan	Huron	Erie	Ontario
Elevation	600 ft	577	577	569	243
Length	350 mi	307	206	241	193
Breadth	160 mi	118	183	57	
Ave. Depth	483 ft	279	195		283
Max. Depth		925	750	210	802
Volume	2,900 mi ³	1,180	850	116	393
Surface Area	31,700 mi ²	22,300	23,000	9,910	7,340
Drainage Area	49,300 mi ²	45,600		30,140	24,720
Shoreline	2,726 mi	1,638	3,827	871	712
Retention		99	22		6

1 mi³ = 1.1 trillion gallons, GL Total = 5439 mi³ = 5.9 quadrillion gallons.



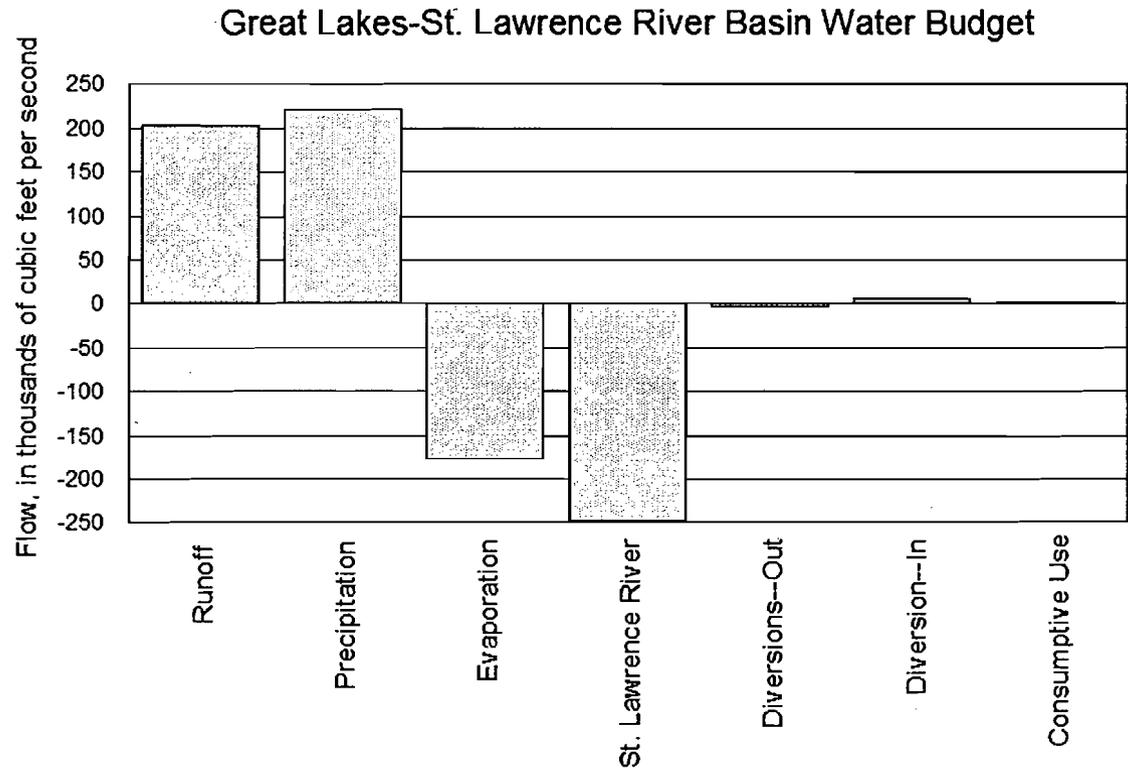
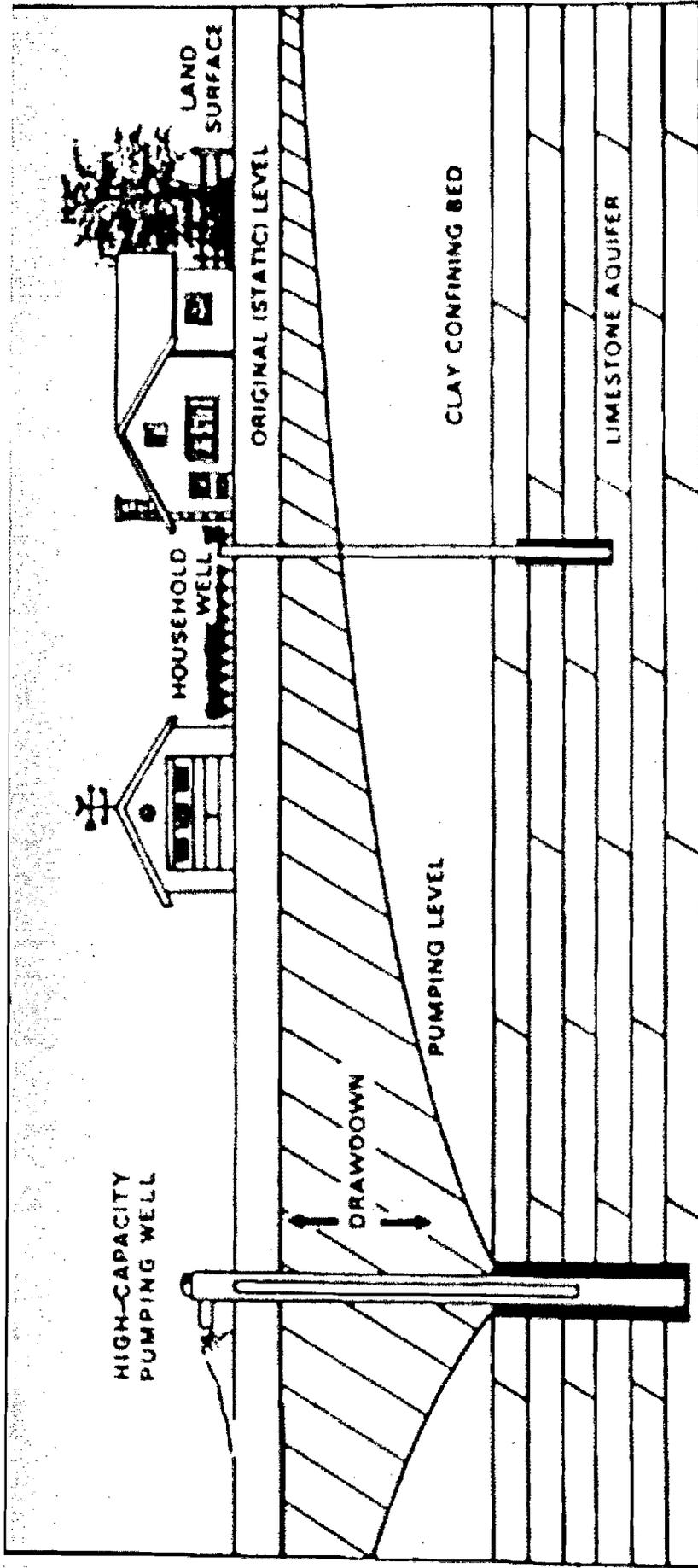


Figure 1. Great Lakes-St. Lawrence River Basin water budget using average annual flows from 1948-1998. (Source of data, Great Lakes Environmental Research Laboratory.)

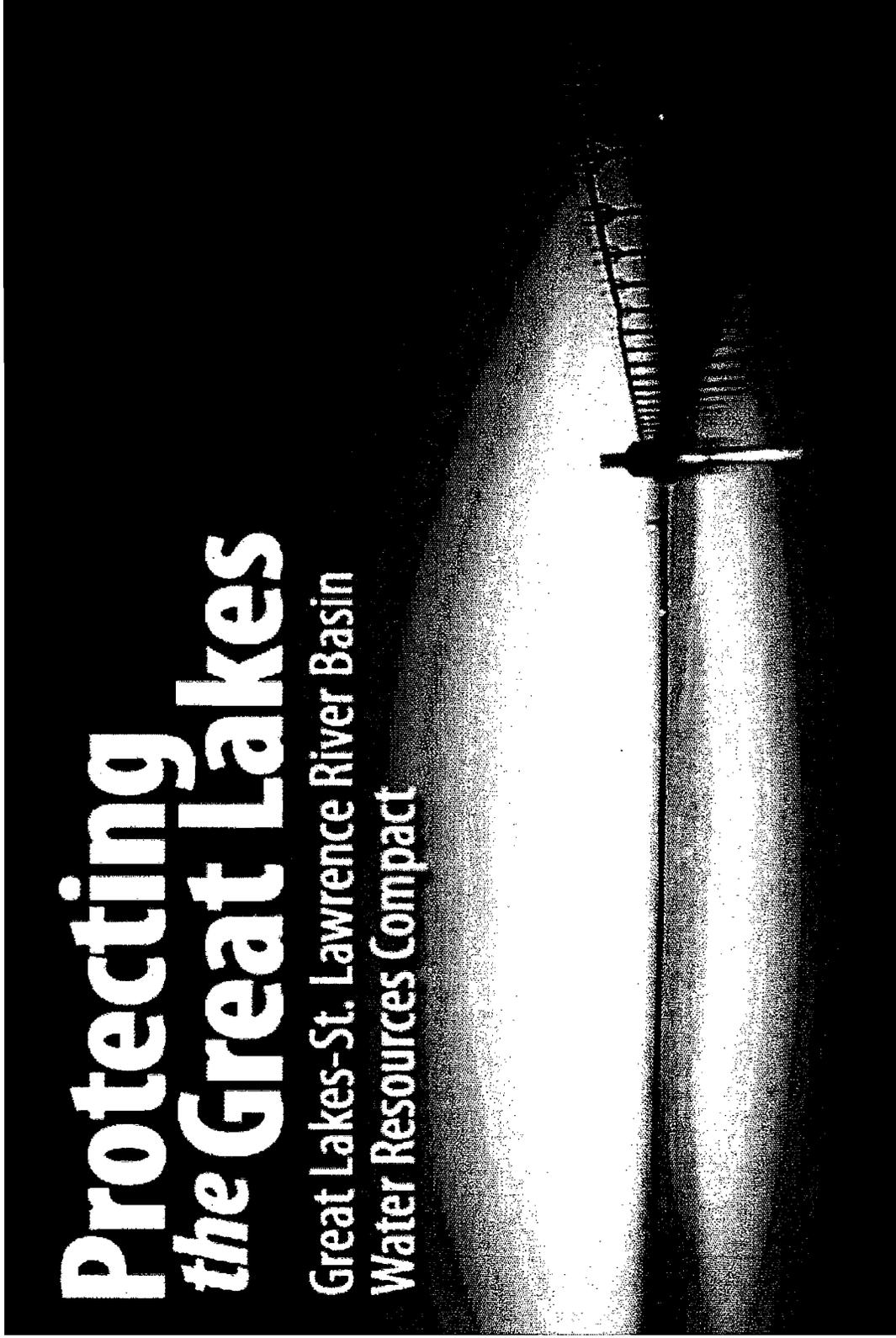
IC 14-25-4



**IDNR, Division of Water
Great Lakes Compact Webpage at:
<http://www.in.gov/dnr/water/5216.htm>**

Protecting the Great Lakes

**Great Lakes-St. Lawrence River Basin
Water Resources Compact**



Lake Michigan Coastal Program

Indiana Department of Natural Resources
Division of Nature Preserves



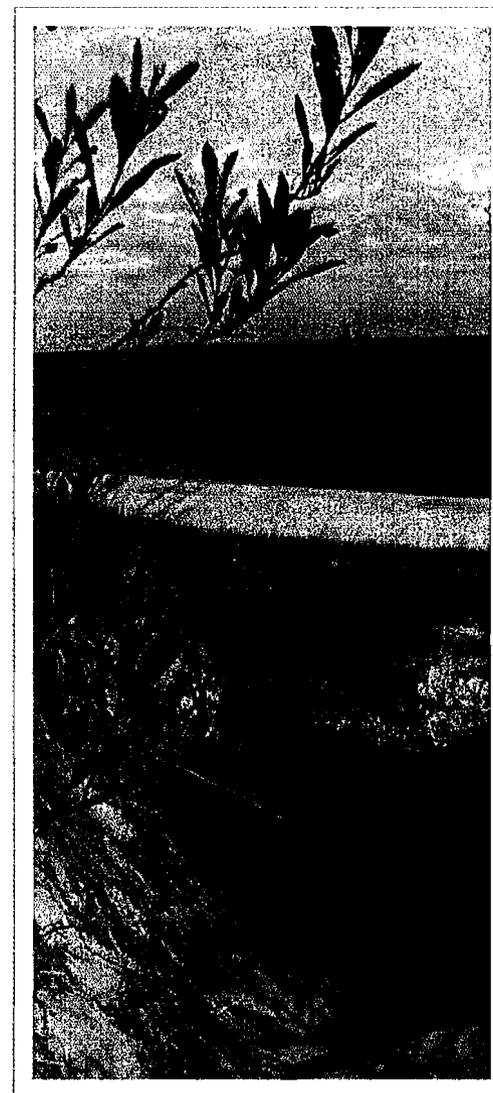
What is the Lake Michigan Coastal Program?

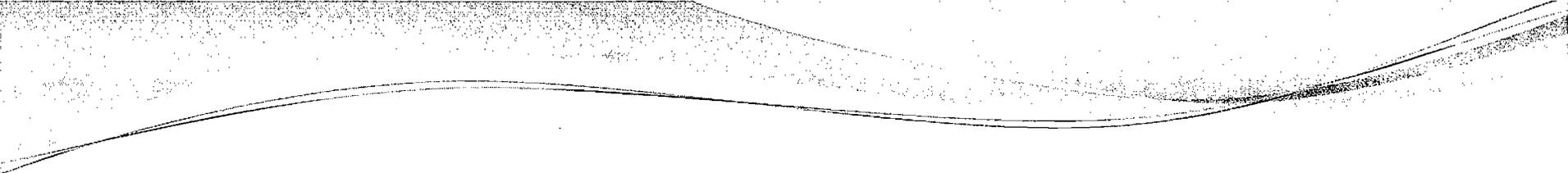
Program based on existing state policies and laws

NOAA Coastal Management partnership program

Federal matching fund grant program – leverages local funds

Partnership for addressing regional priorities



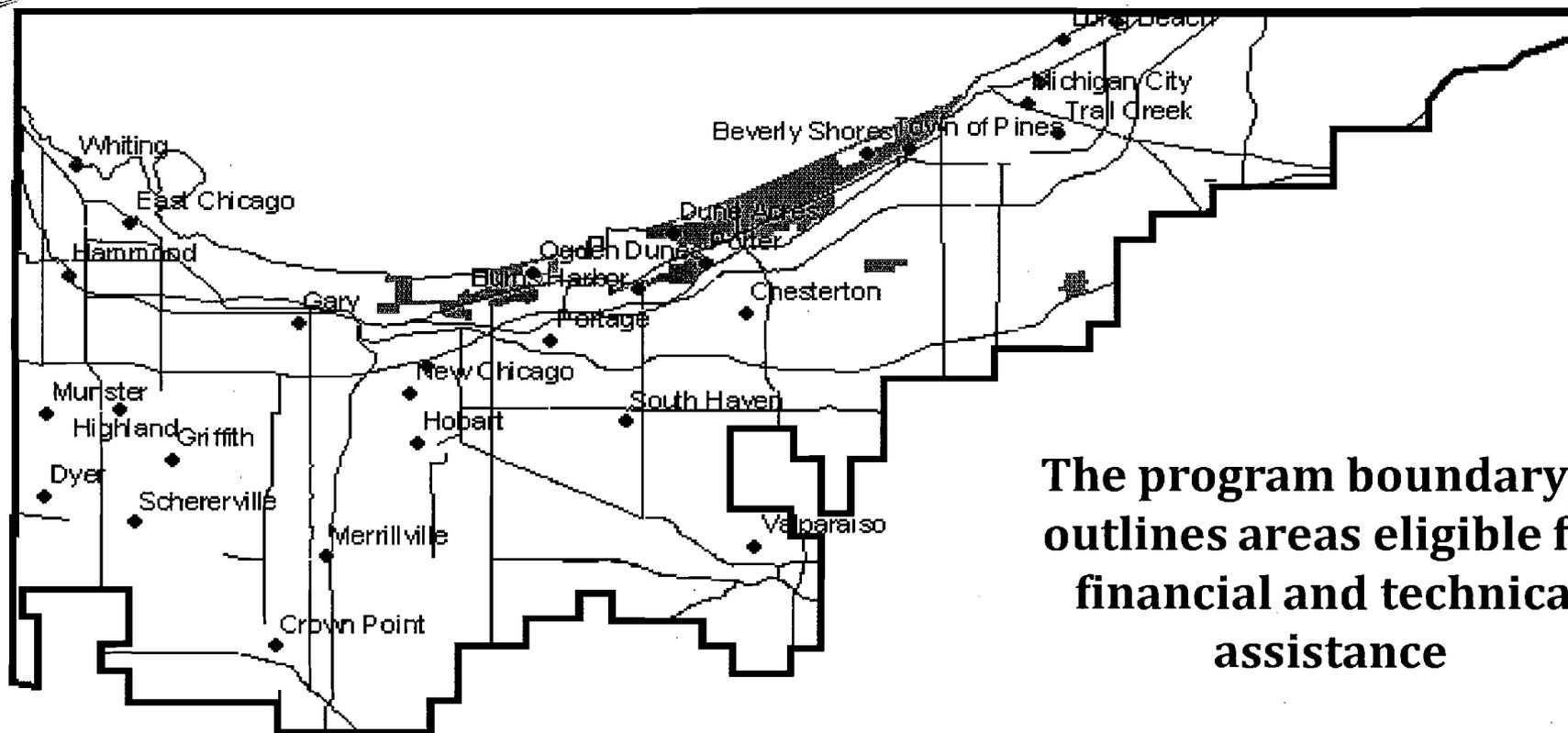


LMCP Purpose

The purpose of the Indiana Lake Michigan Coastal Program is to enhance the state's role in planning for and managing natural and cultural resources in the coastal region and to support partnerships between federal, state and local agencies and organizations.

LMCP Vision:

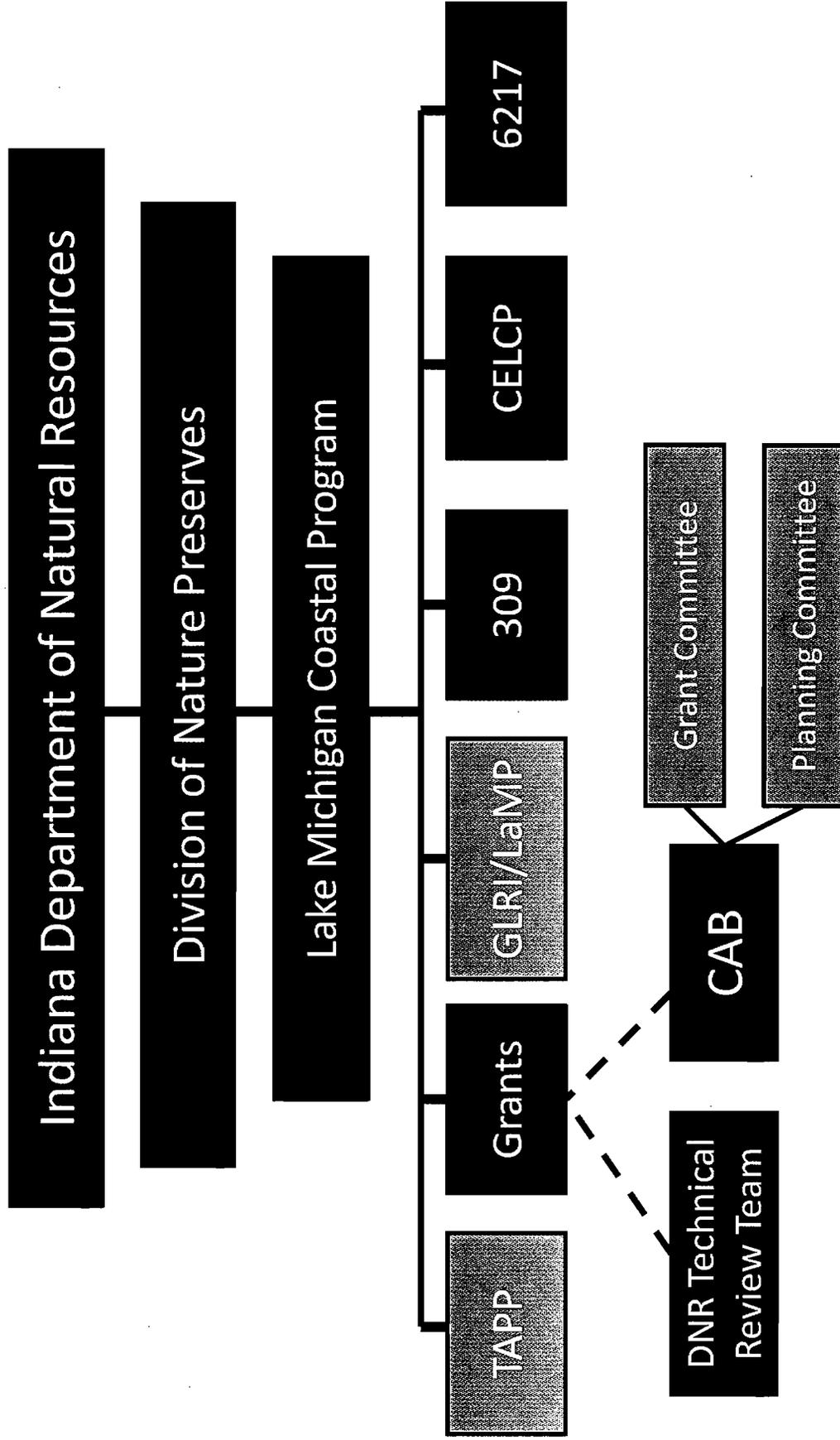
The Lake Michigan coastal community is healthy and thriving for this and future generations



The program boundary outlines areas eligible for financial and technical assistance

What area does the program include?

Program Structure





Who is the Program?

Program Staff

- Mike Molnar – Program Manager
- Jenny Orsburn – Program Specialist
- Colin Highlands – Coastal Nonpoint Coordinator
- Charlotte Lemieux – Program Assistant
- Sergio Mendoza – Coastal Resource Planner

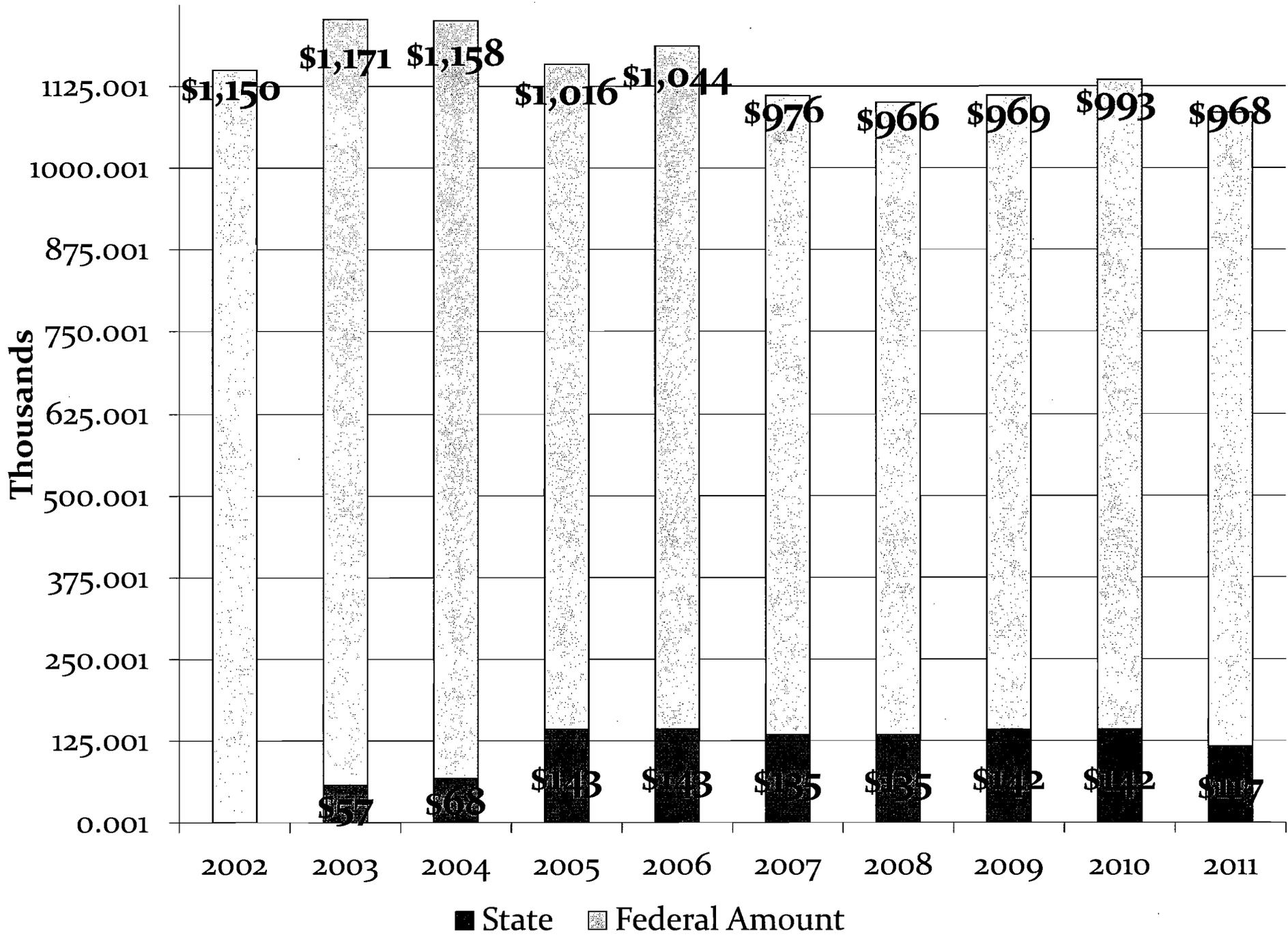
Partner Program Staff

- Division of Nature Preserves – Derek Nimetz
- Division of Water – Steve Davis



What is the Focus?

- Protect and restore significant natural resources
- Prevent the loss of life and property in coastal hazard areas
- Improve public access for recreational purposes
- Protect and restore important historic and cultural resources
- Improve government coordination
- Prevent and reduce non-point pollution that affects coastal waters
- Revitalize urban waterfronts and ports
- Provide for priority water-dependent uses





How Do the Coastal Stakeholders Participate?

Coastal Advisory Board

- Group representing regional stakeholder interests
- 13 voting and 9 nonvoting members

Mission Statement

The Coastal Advisory Board provides a public forum for diverse stakeholders to assist with the implementation of the Lake Michigan Coastal Program.

Coastal Advisory Board

- Consider regional issues affecting Lake Michigan coastal resources for discussion
- Make recommendations on priorities and projects for the Coastal Grants Program
- Represent stakeholders
- Provide input on LMCP Programs through CAB committees





LMCP Committees

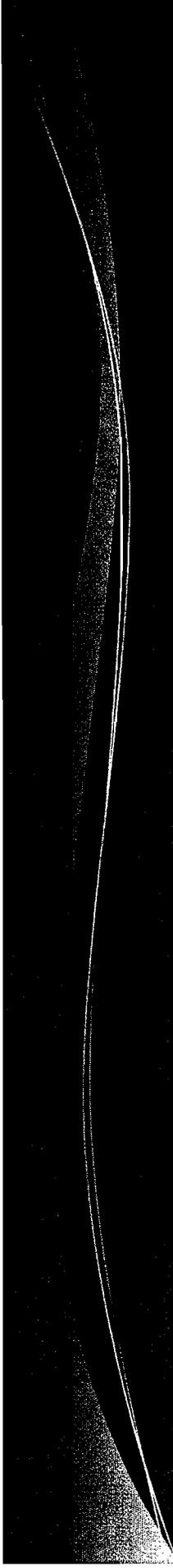
All Chaired by CAB Member – (Staff Contact)

• Grants – (Jenny Orsburn)

• Education/Outreach – (Mike Molnar)

• Technical Assistance – (Sergio Mendoza)

• Coastal & Estuarine Land Conservation
Program/CAS – (Mike Molnar)



Coastal Grants

Jenny Orsburn
Program Specialist

Coastal Grants Program

Set aside majority of federal funds for pass-thru grant program

Annual priority setting

Match is 1:1

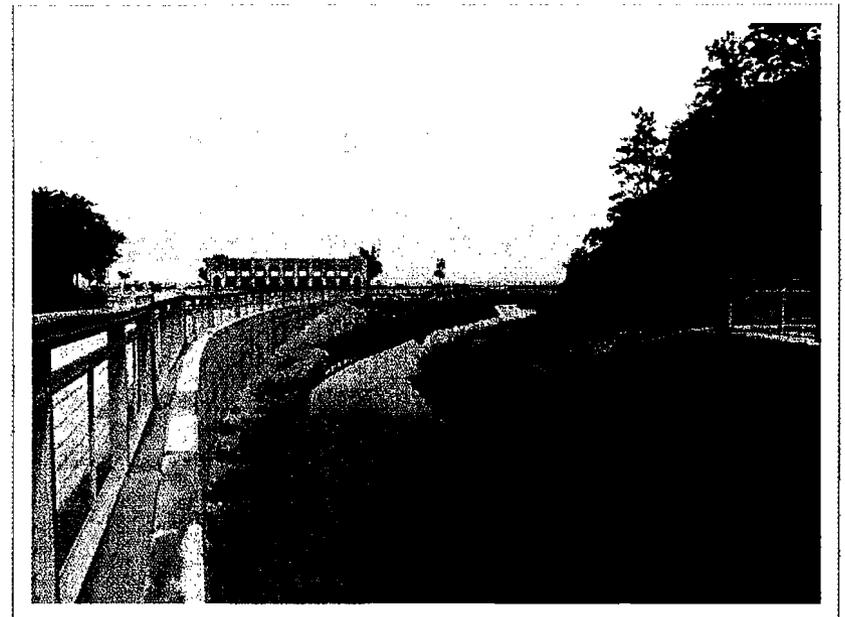
Section 306

- Planning/Coordination/Management
- Education/Outreach
- Applied Research
- Small Grant Program

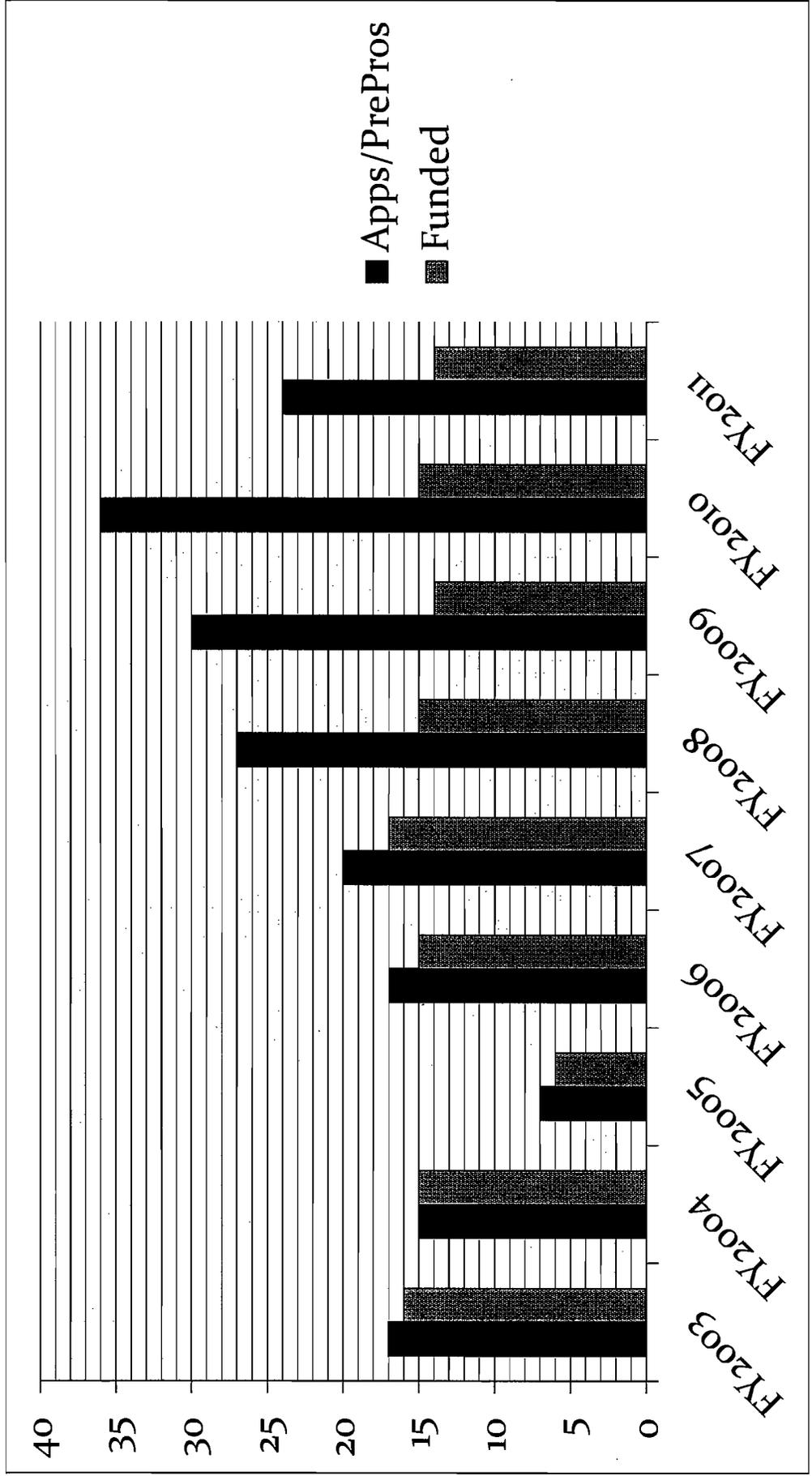
Section 306(a)

- Low Cost Construction
- Acquisition

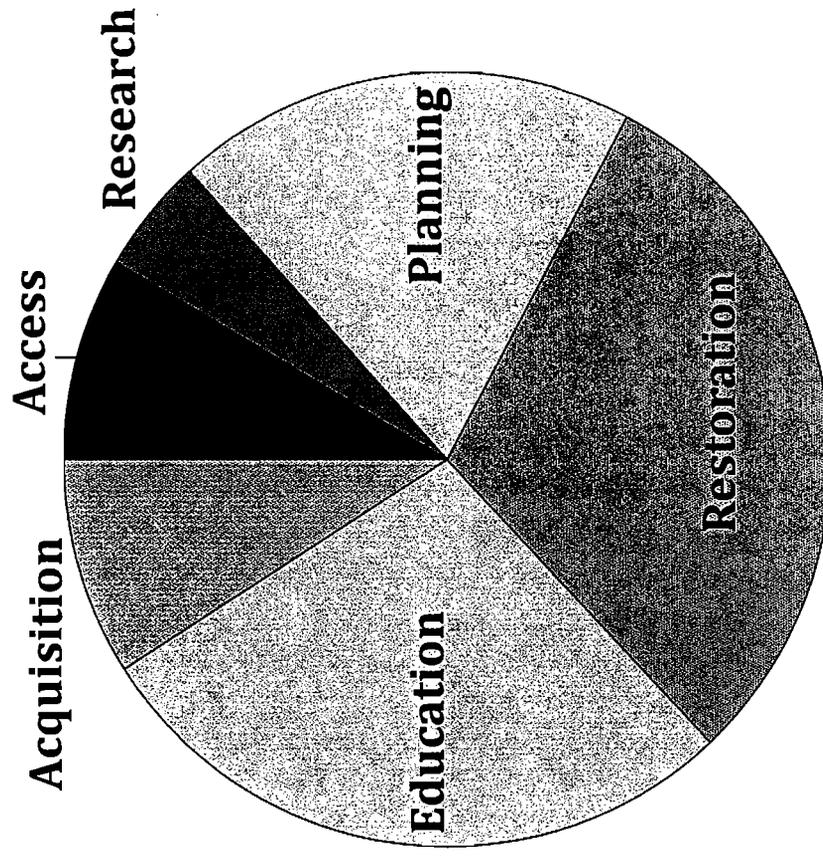
SMALL GRANTS



LMCP Grant Program numbers



LMCP Project Types 2002-2011





- [DNR Home](#)
- [ILMAP](#)

- [Advisory Board](#)
- [Coastal Grants](#)
- [Coastal Issues](#)
- [Current News](#)
- [Federal Consistency](#)
- [Links](#)
- [Programs Information](#)
- [Program Reports](#)
- [Publications](#)
- [Shoreline Newsletter](#)

INMCP - Coastal Grants

Coastal Grants

The map below displays a sample of Lake Michigan Coastal Grants between the years 2003 and 2010 ranging from Low Cost Construction to Education/Outreach project types. While numerous grants are awarded each year, it's helpful to have a visual connection with the project locations and types in the coastal region.

The map will be updated as additional grant projects are identified. To learn more about a report location, zoom in or out by scrolling on the sidebar. Click on the project dot to see attributes as well access to each fact sheet.

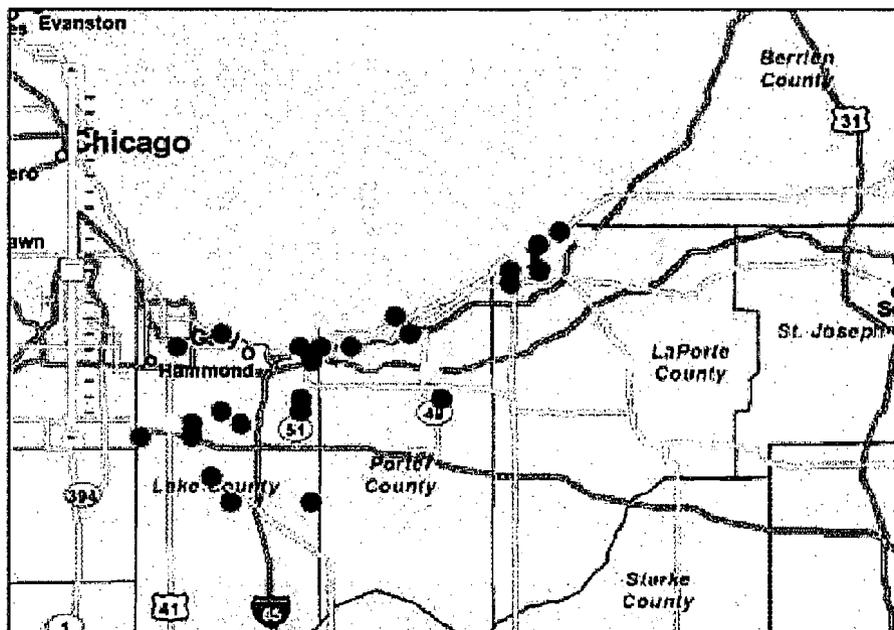
If the map continues to scroll after zooming, reload the page in your Web Browser (press the F5 key).

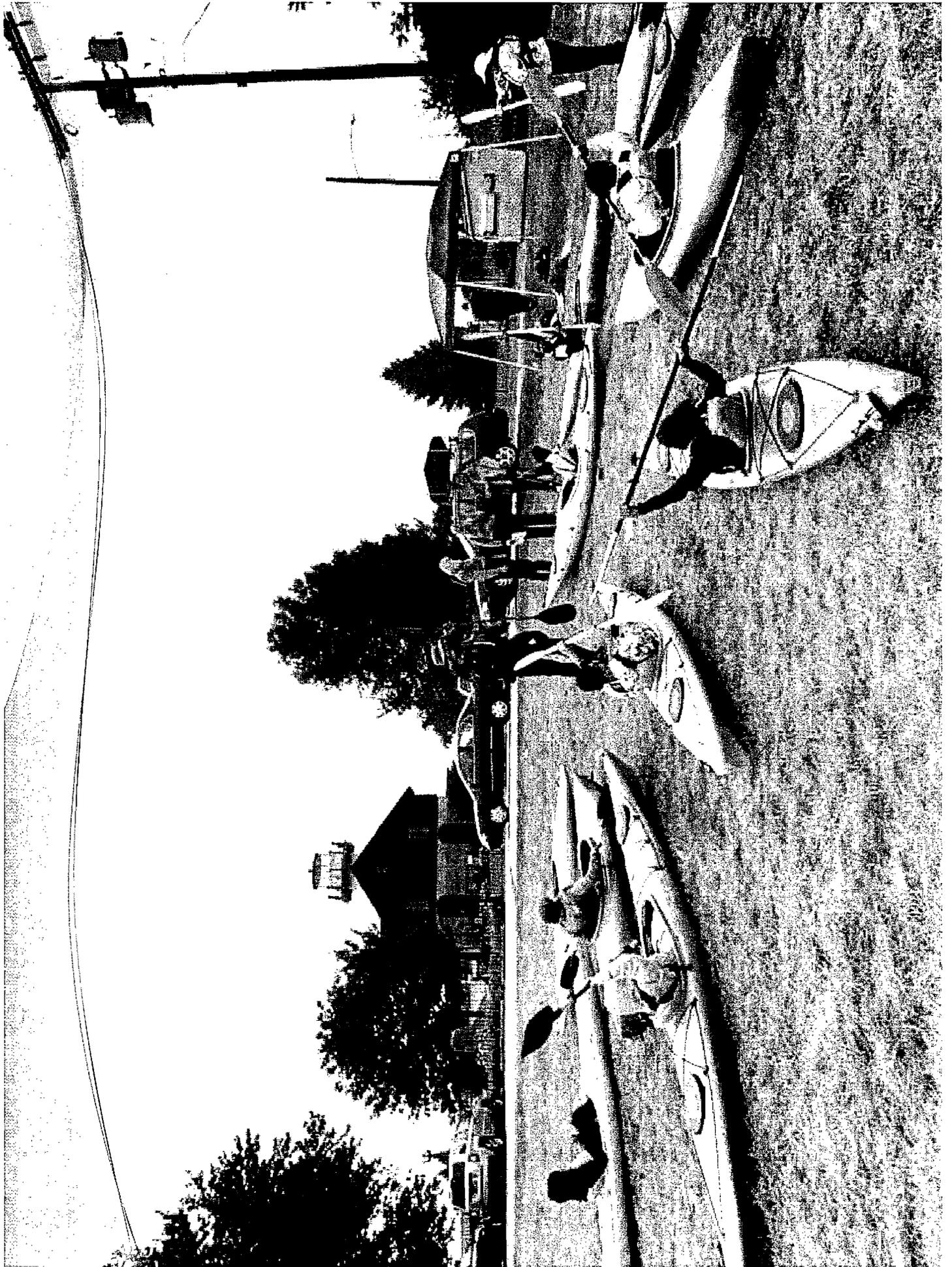
Indiana Department of Natural Resources **DNR**

- Education/ Outreach
- Land Acquisition
- Low Cost Construction
- Planning/ Coordination/ Management

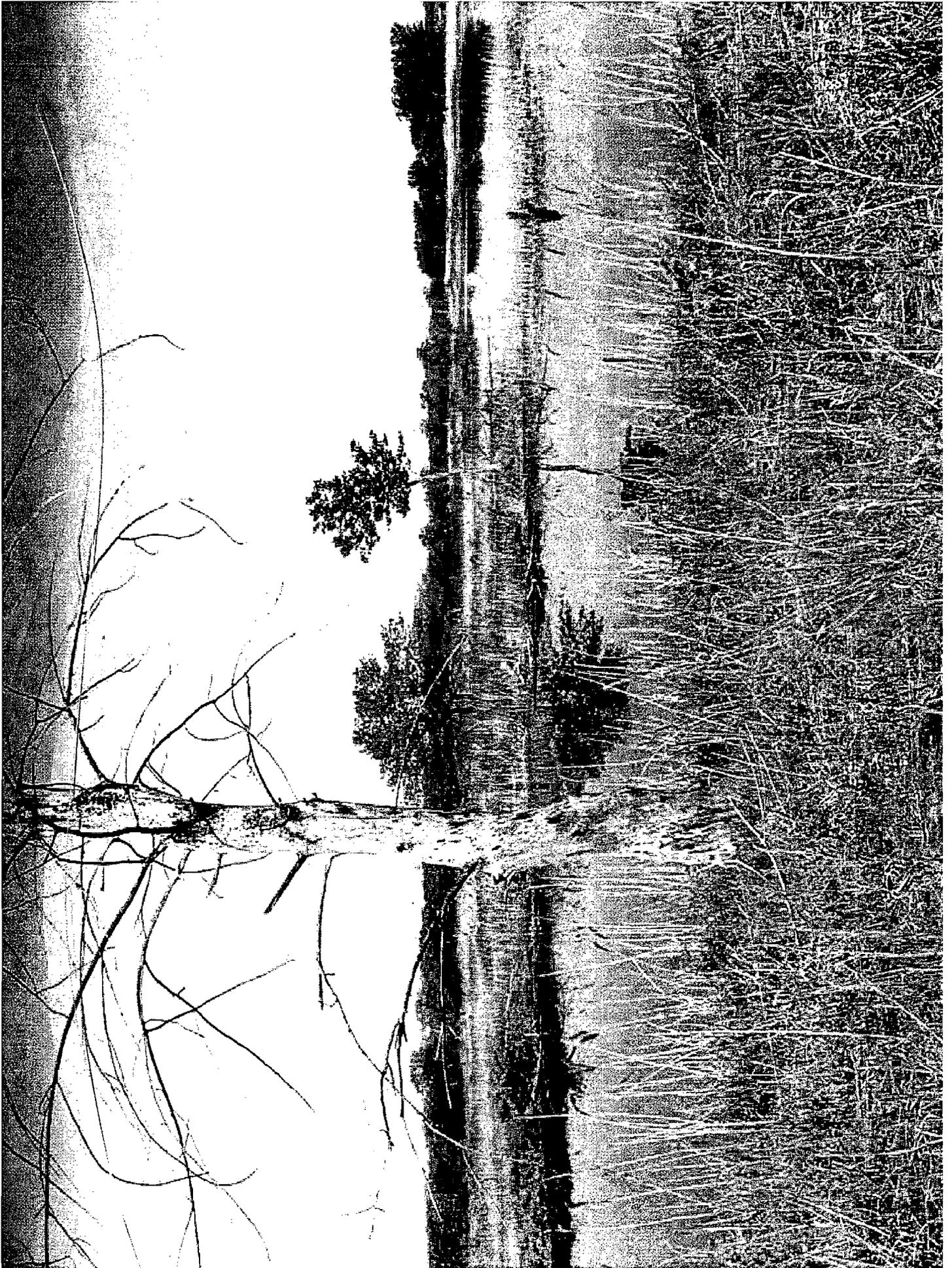
- Tips**
- Drag the map in any direction to pan.
 - Hold the shift key and left mouse button to select an area to magnify.
 - Click on a site (circle) to view details.

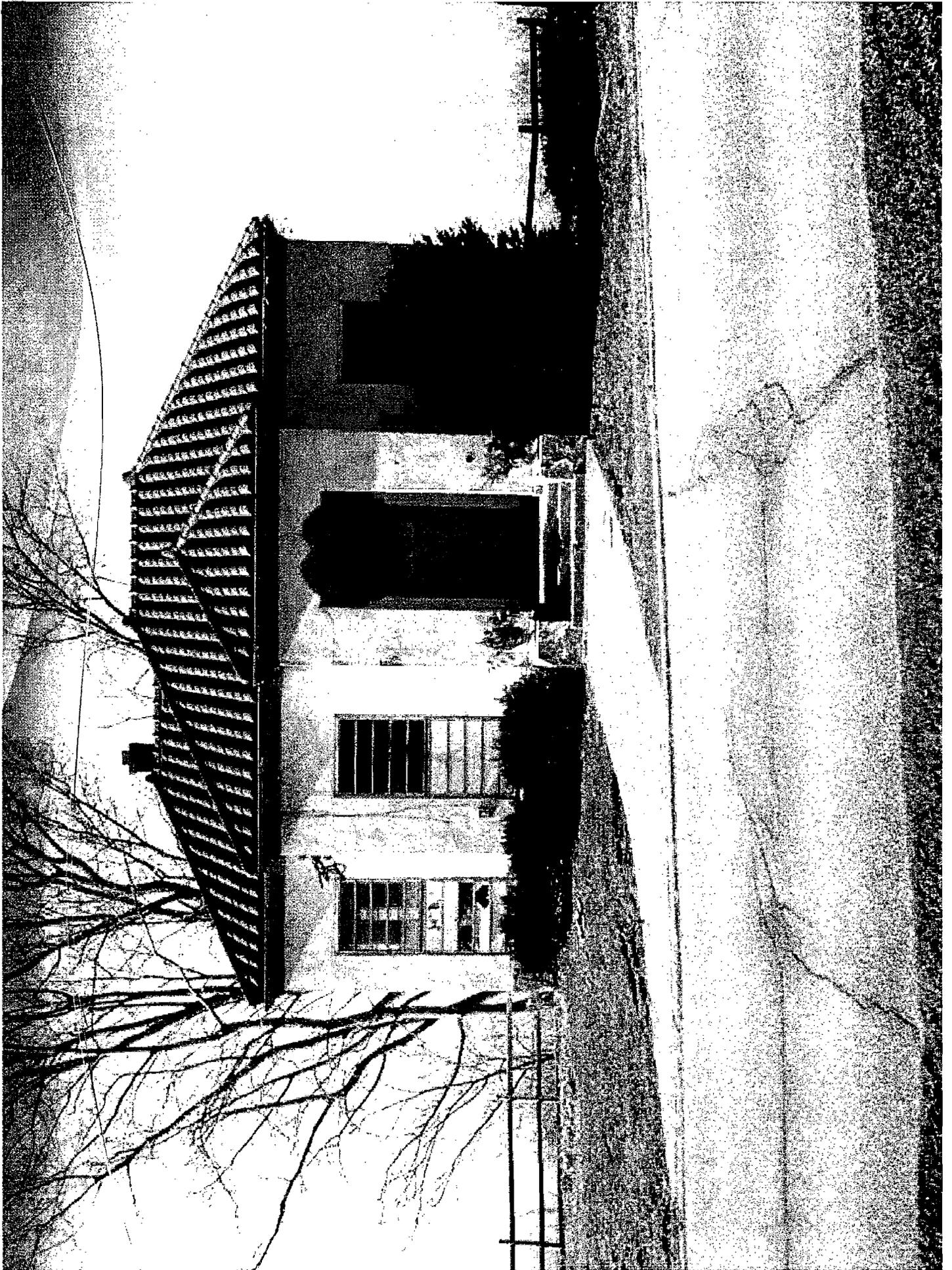
[Print Map](#)







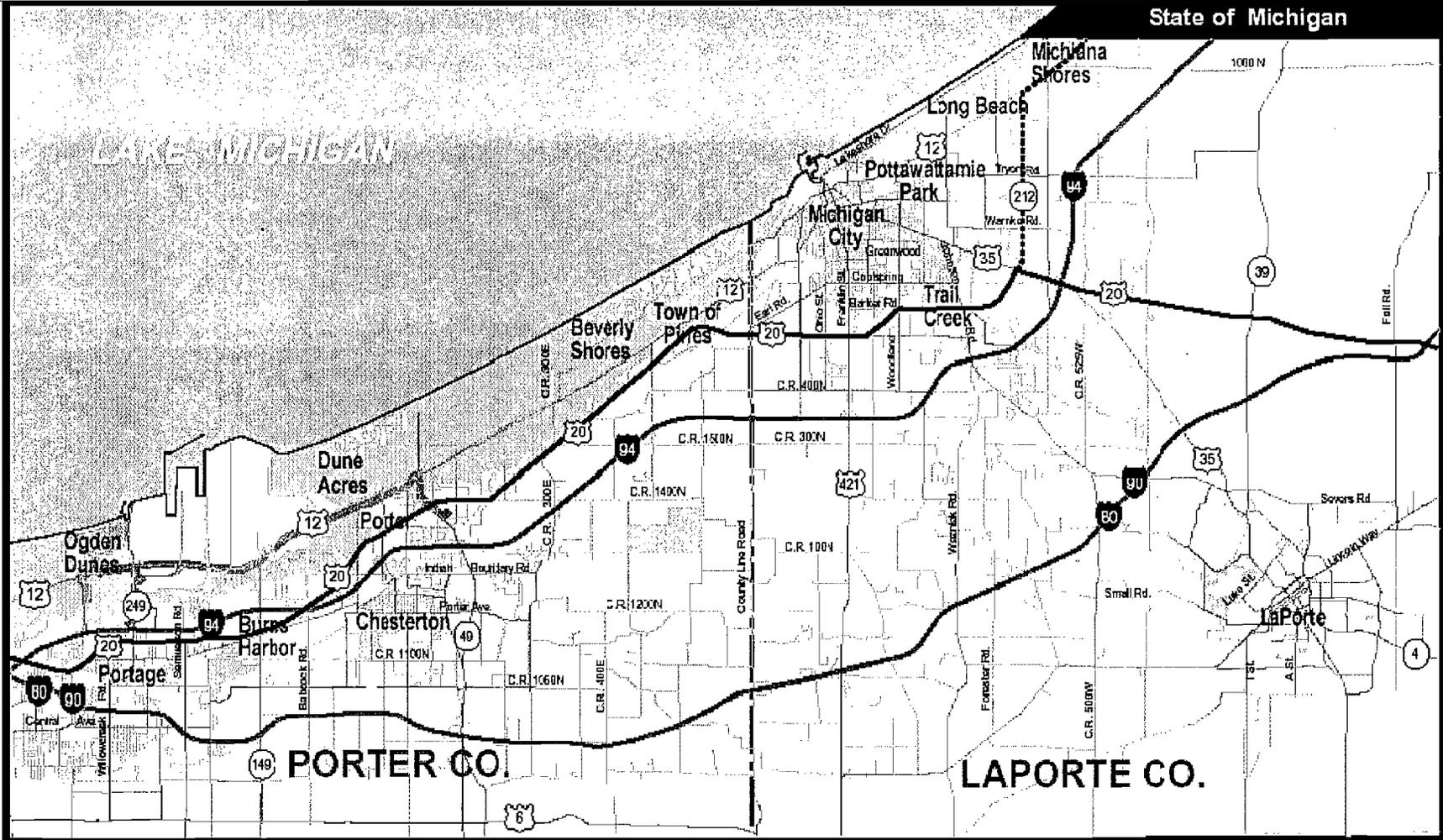








State of Michigan



LAKE MICHIGAN

1000 N



0 1 2 3 Miles

Marquette Plan Phase II

— Proposed Boundary
- - - Alternative Boundary

Nonpoint Source Management Program

Colin Highlands



Background

Nonpoint Source (NPS) Water Pollution

- Rainfall or snowmelt moving over or through the ground.
- Pollutants picked up along the way

The leading cause of water pollution

Federal Role: Mostly non-regulatory

Congress: “State and local solution preferable”

- NPS / Land Use

Coastal Zone Management Act

- Mandated Management Measures

Mgmt. Measure Categories



Agriculture



Forestry



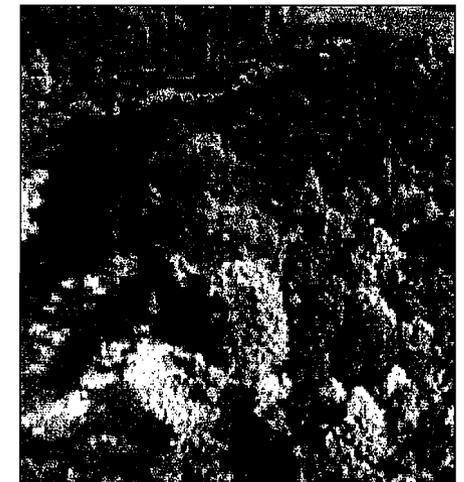
Urban/Rural Areas



Marianas &
Recreational Boating



Hydromodification



Wetlands, Riparian
Areas & VTS



How do we achieve these measures?

Identify programs and authorities such as...

- Existing State and local rules and regulations

Coordinate with local government

- Develop new ordinances and programs

Educate

- Ongoing

Technical Assistance

- Project formulation and grant guidance
- Geographic Information Systems (GIS)

Clean Marina Program

Purpose: Reduce pollution impacts associated with marinas using a voluntary approach.

Comprehensive Checklist Requirement

- Meet all federal and state regulatory requirements
- Implement 80% of recommended BMP's

DNR offers...

- Clean Marina Guidebook
- Technical Assistance
- Educational / Promotional Material

Dedicated Clean Marinas

- Michigan City (2)
- Hammond
- Portage





Technical Assistance

Portage Township Trustee's Office

- Limited resources
- Not familiar with environmental principals or practices
- Build capacity

DNR Assistance

- Project formulation
- Grant application assistance
- Locating funding sources
- Connecting with partners

Education

Indiana Lake Michigan Coastal Program

A Synthesis of Environmental Goals and Objectives

Plans and Strategies for the Indiana Lake Michigan Coastal Region

Last Updated: 2/15/2011



DNR
Department of Natural Resources

Download this document from the web at
<http://www.in.gov/dnr/lakemich/6084.htm>

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Section 309 Enhancement Program

Voluntary program

Encourages states to develop program changes (enhancements) in one or more of nine areas.

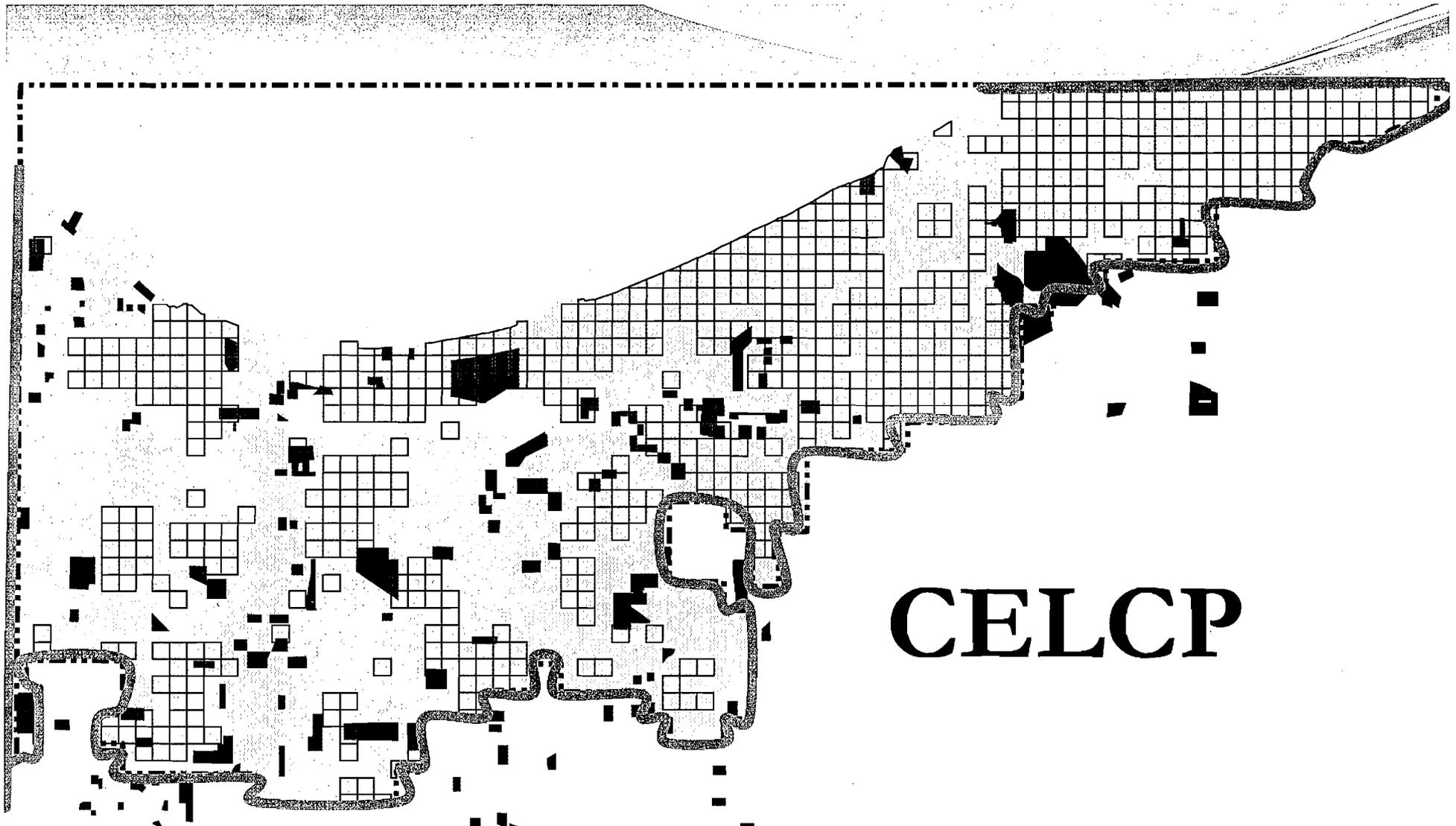
Provides dedicated funds to:

- Develop Assessment and five-year Strategy
- Conduct program changes
- Implement program changes for two years

2011 – 2015 Section 309 Projects

OVERALL STRATEGY BUDGET SUMMARY

Issue Area	Project	2011	2012	2013	2014	2015
		Year 1	Year 2	Year 3	Year 4	Year 5
Hazards	Updated Maps and Assessments	\$25,000	\$25,000	\$20,000		
Public Access	Historic Resource Public Access Opportunities	\$25,000	\$15,000			
Lake Resources	Lakefront Water Assessment	\$36,000				
	Sediment Transport Models and Sand Bypass		\$35,000			
Energy	Resource Assessments			\$55,000	\$75,000	
	Alternative Energy Siting Criteria					\$75,000
Annual Total		\$86,000	\$75,000	\$75,000	\$75,000	\$75,000



CELCP

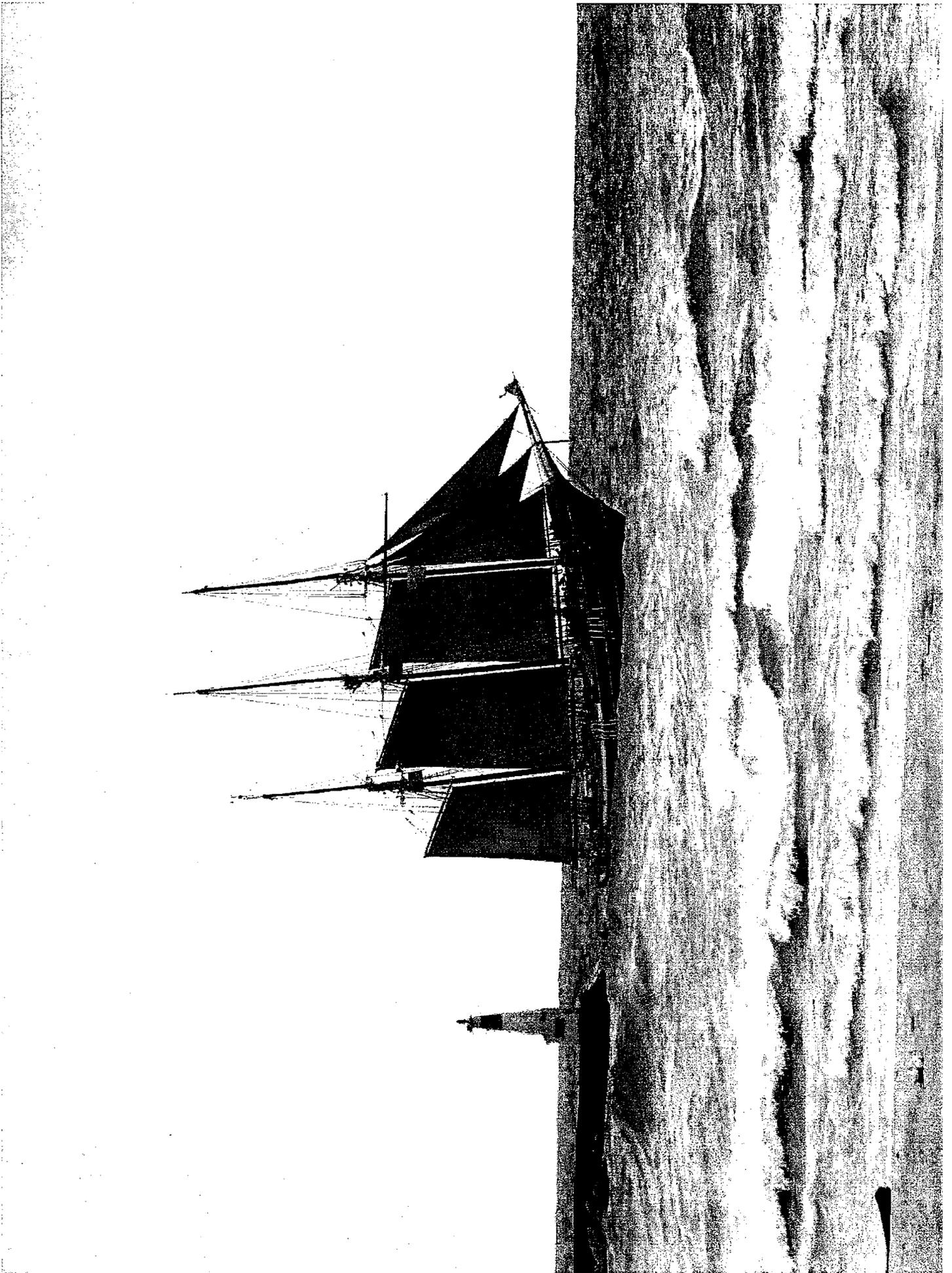
Threat Assessment and Prioritization - Predicted areas of residential development (blue) and open space (green), 2000-2030, from the Northwestern Indiana Regional Planning Commission report "2030 Connections." Black outlines show areas identified as ecologically important from IBI. Excerpted from IU *Biodiversity Conservation Possibilities and Threat Assessment for the Indiana Lake Michigan Coastal Management Program*



CELCP Project Eligibility

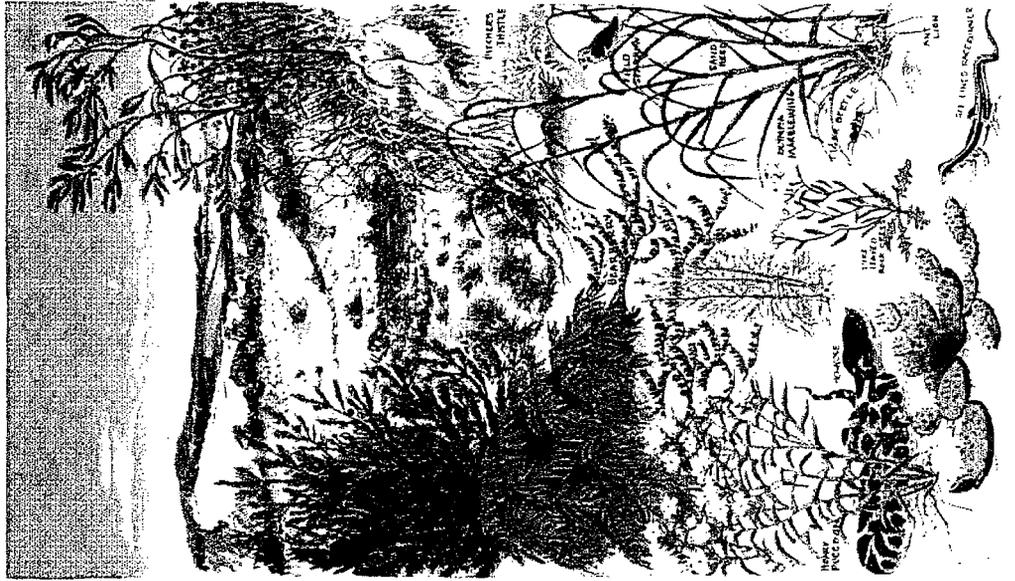
- Be located within Indiana's coastal watershed boundary
- Match of 1:1
- **\$3 M maximum request**
- Be held in public ownership and provide conservation in perpetuity
- Provide for public access or other public benefit, as appropriate and consistent with resource protection
- Be consistent with the Indiana LMCP approved under the CZMA
- Applicant must have resource capacity to maintain project site in perpetuity

Education and Outreach



ECOSYSTEMS of the INDIANA COASTAL REGION

THE DUNES



Additional Information

<http://www.in.gov/dnr/lakemich/>





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mmolnar@dnr.IN.gov

Charlotte Lemieux

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Dunes State Park Annex Office:

Indiana Dunes State Park

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Colin Highlands

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Sergio Mendoza

Coastal Resource Planner

219/926-9757

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
of Protecting Hoosiers and Our Environment



Environmental Quality Service Council IDEM Great Lakes Issues September 29, 2011

Thomas W. Easterly, P.E., BCEE, QEP
Commissioner, Indiana Department of
Environmental Management

1

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
of Protecting Hoosiers and Our Environment



Water Quality—IDEM Authority and Responsibilities

- IDEM is Responsible for ensuring that
Great Lakes Waters in the State of Indiana
are suitable for their intended uses:
 - Fishing
 - Swimming
 - Water Supply

2



Water Quality—IDEM Authority and Responsibilities

- IDEM uses its normal authorities:
 - Assess the quality of the waters.
 - Develop regulations to protect the waters.
 - Issue permits to restrict discharges to levels that protect the waters.
 - Compliance assistance and enforcement.
 - Corrective action (dredging) and education.

3



Water Quality Funding

- In addition to normal state and federal funds used throughout the state, there are additional funds targeted to the Great Lakes including:
 - Great Lakes Legacy Act funds.
 - Natural Resource Damage settlement funds.
 - Beaches funding.
 - Great Lakes Restoration Initiative funds
 - Lakewide Management Plan (LaMP) Grant

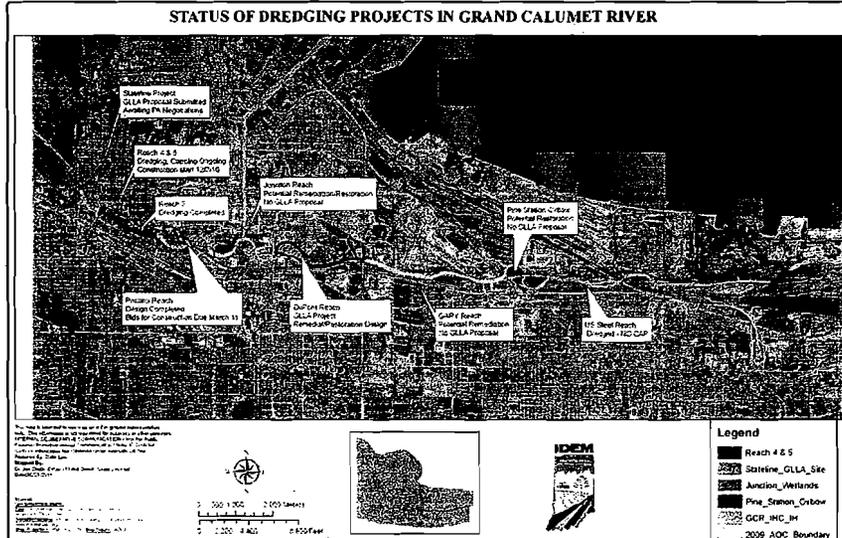


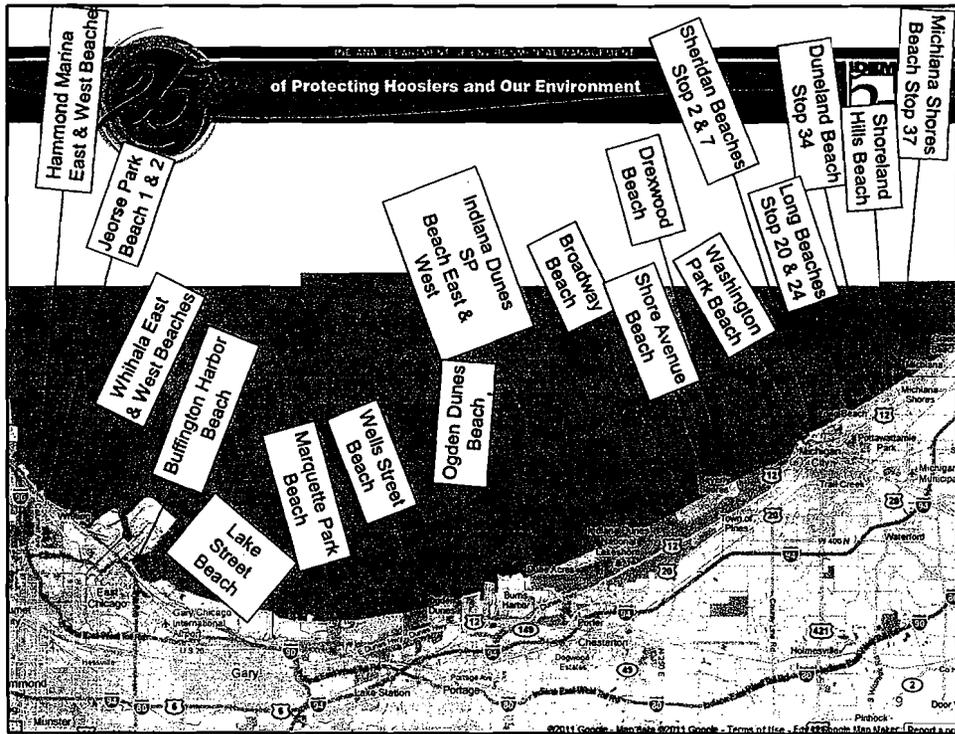
Great Lakes Legacy Act Funding

- Indiana Uses Great Lakes Legacy Act funds (managed by U.S. EPA's Great Lakes National Program Office or GLNPO) matched primarily by Natural Resource Damage settlements to fund dredging projects to address historical pollution, primarily on the Grand Calumet River.



STATUS OF DREDGING PROJECTS IN GRAND CALUMET RIVER



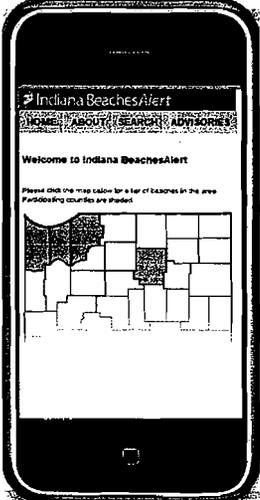


INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
of Protecting Hoosiers and Our Environment



Indiana BeachesAlert

- Mobile application allowing beachgoers to check the status of favorite beaches from any Web-enabled cell phone or mobile device
- Shows “real-time” information throughout the beach season
- Allows beachgoers to subscribe to e-mail or text alerts about particular beaches



10



Great Lakes Legacy Dredging Costs

Project Name	Construction	State Share	Est. O&M
West Branch Grand Calumet I	\$33,000,000	\$11,550,000	\$1,000,000
West Branch Grand Calumet II	\$45,000,000	\$15,750,000	\$1,000,000
NIPSCO to State Line	\$12,500,000	\$2,640,000	\$500,000
DuPont Reach	\$88,779,110	\$31,072,689	\$1,000,000
Totals	\$179,279,110	\$61,012,689	\$3,500,000



BEACH Act Funding

- Indiana Uses Beaches Environmental Assessment and Coastal Health (BEACH) Act Funding to help pay for the sampling of water at beaches and to inform people of whether the beach is safe for swimming that day.



LaMP Funding

- The Lake Michigan Lakewide Management Plan (LaMP) grant funds an IDEM position to coordinate Indiana Lake Michigan management plan and remedial action plan work. The purpose of this work is to restore and maintain the physical, chemical and biological integrity of the lake.
 - Jeorse Park beach contamination study.

13



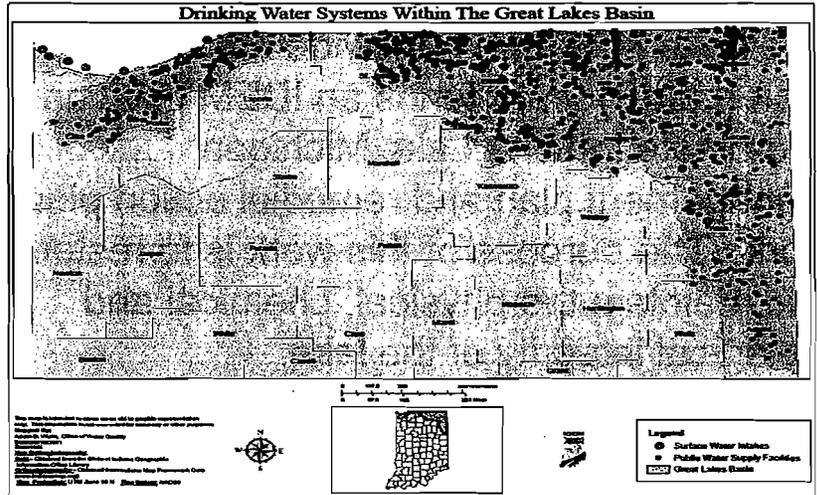
Uses and Consumption of Water

- In Indiana, Great Lakes basin waters are used for:
 - Recreation
 - Public water supply
 - Industrial water supply
- While large amounts of water are withdrawn from the lake, virtually all of that water is returned as treated waste water.

14



Drinking Water Use in the Great Lakes Basin



Uses and Consumption of Water

- Due to the Chicago Diversion initiated in 1848 and expanded after the 1885 cholera outbreak, Chicago is allowed to remove 2.068 billion gallons a day from Lake Michigan and discharge it into the Mississippi River.
- This diversion equals about 2" per year of Lake Michigan water depth.



Pollution Sources and Impacts

- Indiana has a number of municipal and industrial entities discharging treated waste water directly or indirectly into Lake Michigan and Lake Erie—all of these discharges are limited by permits designed to protect the water quality.

17



Pollution Sources and Impacts

- Indiana also has four communities that discharge untreated sewage during rain events and are not covered by legally enforceable plans to address their combined sewer overflows. (Gary, Hammond, Mishawaka, South Bend).
- The discharge of untreated sewage is a cause of beach closings.

18



Pollution Sources and Impacts

- The eutrophication (high algae, low oxygen) of the western basin of Lake Erie is the most significant water quality issue in the Great Lakes.
- This eutrophication is believed to be caused by excessive inputs of phosphorous into Lake Erie, including through the Maumee River.

15



Pollution Sources and Impacts

- While there are some beach closings, and contaminated sediments, Lake Michigan is generally quite clean.
- While Indiana has a fish consumption advisory for mercury in Lake Michigan, 5 of the 6 samples evaluated were safe to eat—our current practice is to list a water on the basis of a single high sample.

16



Pollution Sources and Impacts

- Aquatic Invasive Species
 - Zebra and quagga mussels
 - Sea lamprey
 - Round goby
 - Spiny waterflea
 - Viral Haemorrhagic Septicaemia (VHS)
 - Eurasian watermilfoil
 - **Asian Carp**



Grand Calumet Historical Issues

Beneficial Use Impairments

- | | |
|--|---|
| ✓ Restrictions on Fish & Wildlife Consumption | ✓ Eutrophication or Undesirable Algae |
| ✓ Tainting of Fish & Wildlife Flavor | ✓ Restrictions on Drinking Water Consumption, or Taste & Odor |
| ✓ Degradation of Fish & Wildlife Populations | ✓ Beach Closings |
| ✓ Fish Tumors or Other Deformities | ✓ Degradation of Aesthetics |
| ✓ Bird and Animal Deformities or Reproductive Problems | ✓ Degradation of Phytoplankton & Zooplankton Populations |
| ✓ Degradation of Benthos | ✓ Added Cost to Agriculture & Industry |
| ✓ Restrictions on Dredging Activities | ✓ Loss of Fish & Wildlife Habitat |



Indiana BeachesAlert: Flags



- Flags alert beachgoers to conditions at beach
- Easy to see and remember "stop light" color-codes are used
- Favorite beach closed or under an advisory? The mobile app makes finding a nearby beach open for swimming easy

- = Beach Closure
- = Beach Advisory
- = Beach Open



Beach Water is OK for Swimming?

YEAR	AVERAGE	BEST	WORST
2010	82.5%	99%	26.4%
2011	84.8%	98.9%	51.4%



Top Great Lakes Concerns

- New Aquatic Invasive Species.
- Eutrophication and nutrient inputs.
- Untreated sewage discharges (CSOs, SSOs) causing unsafe swimming conditions.
- Contaminated river and lake sediments.
- Fluctuating lake levels.

25



Questions?

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**66th Annual Meeting
of the Midwestern Legislative Conference
of
The Council of State Governments**

**EQSC
09/29/2011
Exhibit #5**

The Westin Indianapolis
Indianapolis, Indiana

July 17 – 20, 2011

Resolution on Combating Aquatic Invasive Species

- WHEREAS,** the introduction and rapid spread of aquatic invasive species (AIS) is a very serious environmental and economic threat facing our country and our region today; and
- WHEREAS,** an “invasive species” is defined as a species: (1) that is not native, and (2) whose introduction causes, or is likely to cause, harm to economies, ecosystems or human health (United States Federal Executive Order 13112); and
- WHEREAS,** the history of invasive species in the Great Lakes and Mississippi River watersheds shows that AIS can devastate local ecosystems, out-compete local species, spread over vast distances, and cause widespread economic damage; and
- WHEREAS,** some AIS, such as zebra mussels, quagga mussels and round goby entered the Great Lakes because of discharges of untreated ballast water from ocean-going ships and then spread into the Mississippi River basin and beyond through canals such as the Chicago Area Waterway System (CAWS); and
- WHEREAS,** other AIS, such as bighead carp and silver carp (Asian carp), were imported for use in aquaculture and wastewater treatment, but then escaped into, and widely spread within, the Mississippi River basin, and now threaten to enter the Great Lakes through the CAWS; and
- WHEREAS,** the national scope of the AIS problem demands urgent and concerted action by the federal and state governments to: (1) prevent any new introduction of AIS into the waters of the United States; (2) stop the further spread of already established AIS within or through waterways and between watersheds while maintaining or enhancing existing beneficial uses of affected waterways; and (3) control AIS populations to the fullest extent possible through aggressive monitoring, rapid response and eradication efforts; and
- WHEREAS,** Congress has empowered the U.S. Environmental Protection Agency, under the Clean Water Act, and the U.S. Coast Guard under the National Invasive Species Act, to regulate and require treatment of

ballast water discharges from vessels to prevent the introduction and spread of AIS; and

WHEREAS, the U.S. Congress in 2007 authorized the U.S. Army Corps of Engineers to conduct, and in 2009 provided funding for, “a feasibility study of the range of options and technologies available to prevent the spread of aquatic nuisance species between the Great Lakes and Mississippi River Basins through the Chicago Sanitary and Ship Canal and other pathways” (Pub. L. No. 110-114, § 3061(d)), but the Corps has publicly stated that it does not intend to complete even an initial version of the study – which it refers to as the Great Lakes Mississippi River Interbasin Study (GLMRIS) – until 2015 at the earliest; and

WHEREAS, a broad consensus has emerged among many scientists and stakeholders, including the multistate Great Lakes Commission, that “the best permanent solution for the long term health of both the Mississippi River and Great Lakes watersheds is ecological separation, with the goal being to prevent all interbasin movement of AIS while maintaining and enhancing existing beneficial uses of the affected waterways,” (March 18, 2011 resolution); and

WHEREAS, the federal government has convened an Asian Carp Regional Coordinating Committee, comprised of the Corps, other federal agencies, and representatives of Illinois and other Great Lakes states, that has developed and is implementing with federal funds an Asian Carp Control Strategy Framework comprised of various actions intended to reduce the risk that Asian carp will invade the Great Lakes; and

WHEREAS, confronting the challenge of AIS in the Great Lakes basin is a matter of binational concern shared by the Government of Canada and provincial governments, and the subject of a binational risk assessment being developed in collaboration with the Great Lakes Fishery Commission; and

WHEREAS, the Mississippi Interstate Cooperative Resource Association – a partnership of 28 state natural resource departments dedicated to improving aquatic resource management in the Mississippi River basin – has developed the Action Plan to Minimize Ecological Impacts of Aquatic Invasive Species in the Mississippi River Basin that includes, among other priority recommendations: developing enforceable ballast-water treatment standards to prevent introduction of new AIS; enacting measures to prevent the movement of AIS through canals and waterways; and funding and implementing science-based monitoring, rapid response, and control programs for the most troublesome AIS, such as Asian carp; now therefore be it

RESOLVED, that the Midwestern Legislative Conference urges the U.S. EPA and the U.S. Coast Guard to expedite the development and enforcement of appropriate, science-based standards to prevent the introduction and spread of AIS through ballast water discharges in the waters of the United States; and be it further

- RESOLVED,** that the Midwestern Legislative Conference urges the U.S. Army Corps of Engineers to expedite – and urges Congress to require that the Army Corps expedite – that portion of the Great Lakes and Mississippi River Interbasin Study addressing options to prevent the movement of all AIS, in either direction, through the Chicago Area Waterway System, including permanent ecological separation of the watersheds at strategic locations in the Waterway, while maintaining and enhancing existing beneficial uses of the affected waterways; and be it further
- RESOLVED,** that dialogue must continue with appropriate Canadian federal and provincial authorities on measures considered or undertaken to confront the challenge of AIS in the Great Lakes basin; and be it further
- RESOLVED,** that the Midwestern Legislative Conference urges Congress to authorize and fund the U.S. Army Corps of Engineers and other appropriate federal agencies to undertake and prioritize science-based measures to control and prevent the spread of populations of Asian carp and other AIS in the Mississippi River and Great Lakes watersheds; and be it further
- RESOLVED,** that this resolution be submitted to appropriate federal, state and provincial officials.



GREAT LAKES
LEGISLATIVE CAUCUS

September 20, 2011

Dr. Susan Hedman
Administrator
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, IL 60604

Mr. James Vollmershausen
Regional Director General
Environment Canada
Ontario Region
4905 Dufferin Street
Toronto, ON M3H 5T4

Dear Dr. Hedman and Mr. Vollmershausen:

We the undersigned members of the Great Lakes Legislative Caucus (GLLC) are writing to transmit our comments on the proposed changes contemplated for amending the Great Lakes Water Quality Agreement between the United States and Canada. The GLLC is a nonpartisan, binational organization representing the eight U.S. states and two Canadian provinces that are home to the Great Lakes. One of our primary goals is to promote the restoration and protection of the Great Lakes. As elected officials from the jurisdictions that will bear significant responsibility for implementing the Agreement, we have a very significant stake in the amended Agreement.

Process: We are disappointed that the Parties are not publicly releasing the actual wording proposed for the amended Agreement. While we appreciate the opportunity to comment on the “directions” in which the Agreement seems headed, without seeing the specific language, it is difficult for us to assess how well the proposed amendments will protect and restore the Great Lakes. We are providing comments at this stage on what information has been released to the public. We request the opportunity to review and comment on the draft Agreement before it becomes final.

Scope: We applaud the Parties for adopting a basin-wide ecosystem-level approach. We would like to see consistency throughout the basin in terms of the goals for cleaning up existing contamination and for preventing future impairments to water quality. In addition, it is imperative for the new Agreement to place a strong emphasis on action, identifying specific timelines and milestones for achieving the desired restoration and protection endpoints for each lake. Without specific targets and sufficient funding, progress in restoring the Great Lakes will remain slow even as new threats continue to emerge.

Governance: Replacing the current Binational Executive Committee with a Great Lakes Executive Committee (GLEC) may be an improvement. We appreciate the Parties’ commitment to recognize explicitly the “roles of governments and jurisdictions in the Great Lakes region” and to “communicate with governments and stakeholders.” Because our members represent public constituencies as well as state and provincial governments, the GLLC requests a seat on the new GLEC so that state and provincial legislators can be involved in clarifying roles and identifying opportunities for stakeholder and public participation. We also request the opportunity to appoint representatives to participate on annex-specific subcommittees charged with operationalizing the provisions of the Agreement.

Accountability: Requiring Comprehensive Progress Reports every three years is a step in the right direction, especially if the reports are released prior to the planned summit meetings for Great Lakes stakeholders. State and provincial legislators should be briefed on these reports as well as have the opportunity to participate in the summit meetings.

Public Engagement: We are very much in favor of increasing public engagement in efforts to protect and restore the Great Lakes. Going forward, the public engagement process will need to improve significantly upon the binational process employed in the course of amending the Agreement in 2010-2011. We trust that with greater stakeholder involvement in the GLEC and annex subcommittees, the process will, indeed, improve.

Notification: We appreciate the spirit behind the new notification component that would require the Parties to exchange information on “planned facilities or activities that could have environmental effects on the waters of the Great Lakes.” Without seeing the detailed language, however, we wonder how this new component will work in practice. Who will be responsible for providing the notification, to whom, when, and what consequences will there be for not providing notification? Will there be a science-based, risk-informed threshold for notifications? That is, would a proposed shipment of nuclear waste rise to the same notification urgency as a planned new refinery? At the very least, the new component should require the Parties to share any notifications with states and provinces, including the legislatures.

Areas of Concern (AOC): Cleanup has been completed at only four of the 43 Areas of Concern, leaving most sites to continue posing a risk to human health and the environment. Going forward, it is critical for both Parties to accelerate the pace at which contaminated sites are cleaned up.

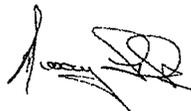
Funding: Achieving the Agreement’s goal of restoring and maintaining “the chemical, physical, and biological integrity of the waters of the Great Lakes Basin Ecosystem” will require the commitment of significant resources by both Parties at a time when financial constraints abound. The Great Lakes are a vital resource to our states and provinces, providing drinking water to 40 million people and generating billions of dollars in economic activity for our region. We urge the Parties to place a high priority on restoring and protecting our Lakes. On the U.S. side, the federal government has proposed \$350 million in funding for the Great Lakes Restoration Initiative in FY12 – a decrease of \$125 million or 26% from the FY10 appropriation. In contrast, the Department of Energy’s proposed FY12 budget for protecting the Columbia River in the Pacific Northwest is \$1.36 billion – an increase of 24% over current levels. Such a disparity in funding priorities is neither logical nor acceptable. We urge the Parties to work at the domestic level to ensure that funding for implementing the Agreement is sufficient to help all levels of government meet the challenges of restoring and protecting the binational treasure that is the Great Lakes.

We appreciate the opportunity to comment on the proposed directions for an amended Agreement. We would welcome the chance to be briefed on the language of the draft Agreement. If you have any questions regarding this letter, please contact Minnesota State Senator Ann H. Rest at 651.296.2889 or Lisa Janairo at 920.458.5910.

Sincerely,



Senator Ann Rest, Chair
Minnesota



Senator Terry Link
Illinois



Representative Karen May
Illinois



Senator Ed Charbonneau
Indiana



Senator Joe Zakas
Indiana



Senator Goeff Hansen
Michigan



Representative Eileen Kowall
Michigan



Representative Joe Atkins
Minnesota



Senator Scott Dibble
Minnesota



Representative Rick Hansen
Minnesota

Senator John Howe
Minnesota

Senator Mary Jo McGuire
Minnesota

Representative Denny McNamara
Minnesota

Senator Katie Sieben
Minnesota

Senator George Maziarz
New York

Representative John Barnes
Ohio

Representative Teresa Fedor
Ohio

Senator Michael J. Skindell
Ohio

Senator Shirley Smith
Ohio

Senator Nina Turner
Ohio

Senator Jane M. Earll
Pennsylvania

Representative Patrick J. Harkins
Pennsylvania

Representative John Hornaman
Pennsylvania

Senator Dave Hansen
Wisconsin

Representative Cory Mason
Wisconsin

Representative Louis Molepske, Jr.
Wisconsin

Representative Jon Richards
Wisconsin

Senator Lena Taylor
Wisconsin

MNA François Ouimet
Québec

MNA François Rebello
Québec



GREAT LAKES LEGISLATIVE CAUCUS

STATE GREAT LAKES AND WATER LEGISLATION, 2011

(This list of bills is based on staff research. If you know of legislation that should be added to the list, please contact Tim Anderson at 630/925-1922 or tanderson@csg.org. The list was last updated September 12.)

State	Bill Number	Description	Primary sponsor/author	Status
Illinois	<u>HB 1558</u>	create Lake Michigan Offshore Wind Energy Council	<u>Rep. Robyn Gabel</u>	signed into law
Illinois	<u>HB 2056</u>	create the Household Pharmaceutical Disposal Fund	<u>Rep. JoAnn Osmond</u>	signed into law
Illinois	<u>HB 3372</u>	encourage use of green stormwater infrastructure at local level to reduce water pollution	<u>Rep. Mike Fortner</u>	passed by House
Illinois	<u>HB 3623</u>	ensure fees paid into Clean Water Fund goes to clean water protection	<u>Rep. Sara Feigenholtz</u>	assigned to Appropriations-General Services Committee
Illinois	<u>HB 3624</u>	ensure fees paid into Clean Water Fund goes to clean water protection	<u>Rep. Sara Feigenholtz</u>	assigned to Environment & Energy Committee
Illinois	<u>SB 38</u>	include installation of rainwater harvesting system in plumbing code	<u>Sen. Susan Garrett</u>	passed by Senate
Illinois	<u>SB 863</u>	Allow confined disposal facility in Waukegan Harbor (Lake Michigan)	<u>Sen. Terry Link</u>	failed to pass on floor vote
Illinois	<u>SB 1314</u>	create the Offshore Wind Energy Facilities Advisory Council	<u>Sen. Jeffrey Schoenberg</u>	re-referred to Assignments Committee
Illinois	<u>SB 1617</u>	prohibit installation or operation of dry-cleaning machines that use perchloroethylene by 2030	<u>Sen. Heather Steans</u>	passed by Senate
Illinois	<u>SB 1980</u>	ensure fees paid into Clean Water Fund goes to clean water protection	<u>Sen. Susan Garrett</u>	assigned to Appropriations II Committee

Illinois	<u>SB 1981</u>	ensure fees paid into Clean Water Fund goes to clean water protection	<u>Sen. Susan Garrett</u>	re-referred to Assignments Committee
Illinois	<u>SB 2195</u>	encourage use of local green infrastructure practices in stormwater management	<u>Sen. Toi Hutchinson</u>	re-referred to Assignments Committee
Indiana	<u>HB 1425</u>	restrict use of fertilizer containing phosphorus	<u>Rep. Dick Dodge</u>	referred to Natural Resources Committee
Indiana	<u>SB 118</u>	allow political subdivision to adopt an ordinance regulating the use of fertilizer material that contains phosphate	<u>Sen. Dennis Kruse</u>	referred to Energy and Environmental Affairs Committee
Indiana	<u>SB 157</u>	establish the Great Lakes conservation and quality task force to review topics related to supply, quality of water in Great Lakes	<u>Sen. Joe Zakas</u>	signed into law
Indiana	<u>SB 379</u>	ensure money in the Lake and River Enhancement Fund is used for purposes specified in statute creating the fund	<u>Sen. Susan Glick</u>	referred to Committee on Agriculture and Natural Resources
Indiana	<u>SB 412</u>	require each oceangoing vessel engaging in port operations to obtain a permit with goal of preventing discharge of aquatic invasive species	<u>Sen. Joe Zakas</u>	referred to Committee on Energy and Environmental Affairs
Michigan	<u>HB 4133</u>	create water quality alliances between municipalities	<u>Rep. Kurt Heise</u>	referred to Natural Resources, Tourism and Outdoor Recreation Committee
Michigan	<u>HB 4499</u>	prohibit off-shore wind development	<u>Rep. Ray Franz</u>	referred to Energy and Technology Committee
Michigan	<u>HB 4826</u>	require advisory council to recommend laws that prevent introduction and spread of invasive species	<u>Rep. Frank Foster</u>	referred to Natural Resources, Tourism and Outdoor Recreation Committee
Michigan	<u>HB 4827</u>	require advisory council to develop state recommendations on federal vessel permit related to ballast water treatment standards	<u>Rep. Peter Pettalia</u>	referred to Natural Resources, Tourism and Outdoor Recreation Committee
Michigan	<u>HB 4828</u>	create an aquatic invasive species advisory council within the Department of Environmental Quality	<u>Rep. Amanda Price</u>	referred to Natural Resources, Tourism and Outdoor Recreation Committee
Michigan	<u>HB 4882</u>	create a permitting program to allow for sinking of vessels, other recreational diving structures in Great Lakes for scuba diving	<u>Rep. Greg MacMaster</u>	referred to Natural Resources, Tourism and Outdoor Recreation Committee
Michigan	<u>SB 18</u>	prohibit use of nonnative species as bait	<u>Sen. Rick Jones</u>	referred to Natural Resources, Environment and Great Lakes Committee

Michigan	<u>SB 168</u>	exempt county road commissions from Wetlands Protection Act	<u>Sen. Tom Casperson</u>	referred to Natural Resources, Environment and Great Lakes Committee
Michigan	<u>SB 508</u>	require establishment of aquatic invasive species council to develop recommendations on federal vessel permit related to ballast water treatment standards	<u>Sen. Tom Casperson</u>	referred to Outdoor Recreation and Tourism Committee
Michigan	<u>SB 509</u>	establish membership of and rules for aquatic invasive species advisory council	<u>Sen. Howard Walker</u>	referred to Outdoor Recreation and Tourism Committee
Michigan	<u>SB 510</u>	direct aquatic invasive species council to make recommendations on state ballast water rules and other polices to prevent introduction, spread of AIS	<u>Sen. Goeff Hansen</u>	referred to Outdoor Recreation and Tourism Committee
Michigan	<u>HCR 3</u>	express support for attorney general's efforts to accelerate federal efforts to devise plan to prevent Asian carp from invading Great Lakes	<u>Rep. Joel Johnson</u>	referred to Natural Resources, Tourism and Outdoor Recreation Committee
Michigan	<u>HCR 7</u>	urge U.S. Congress and U.S. Army Corps to take immediate actions to prevent Asian carp from entering Great Lakes and develop long-term strategies	<u>Rep. Joel Johnson</u>	adopted by House and Senate
Michigan	<u>HCR 8</u>	urge U.S. Congress to make every effort to expedite and fund Great Lakes and Mississippi River Basin Interbasin Study and to ensure Asian carp do not invade Great Lakes	<u>Rep. Peter Pettalia</u>	adopted by House and Senate
Michigan	<u>HR 14</u>	express support for attorney general's efforts to accelerate federal efforts to devise plan to prevent Asian carp from invading Great Lakes	<u>Rep. Frank Foster</u>	adopted by House
Michigan	<u>HR 15</u>	urge U.S. Congress to make every effort to expedite and fund Great Lakes and Mississippi River Basin Interbasin Study and to ensure Asian carp do not invade Great Lakes	<u>Rep. Holly Hughes</u>	adopted by House
Michigan	<u>HR 16</u>	urge U.S. Congress and U.S. Army Corps to take immediate actions to prevent Asian carp from entering Great Lakes and develop long-term strategies	<u>Rep. Kurt Damrow</u>	adopted by House
Minnesota	<u>HF 182</u>	place a moratorium on state agency water rulemaking; require a study of existing rules	<u>Rep. Michael Beard</u>	passed by House committees
Minnesota	<u>HF 882</u>	require urban storm water retention pond buffer	<u>Rep. Denny McNamara</u>	referred to Energy and Natural Resources Policy and Finance Committee

Minnesota	<u>HF 1162</u>	change provisions and penalties related to control of nonnative species	<u>Rep. John Ward</u>	passed by House committees
Minnesota	<u>SF 196</u>	place a moratorium on state agency water rulemaking; require a study of existing rules	<u>Sen. John Pederson</u>	see <u>SF 1029</u> (passed by Senate)
Minnesota	<u>SF 616</u>	require urban storm water retention pond buffer	<u>Sen. Michael Jungbauer</u>	referred to Environment and Natural Resources Committee
Minnesota	<u>SF 762</u>	appropriate money from Clean Water Fund for programs to prevent aquatic invasive species	<u>Sen. Paul Gazelka</u>	referred to Environment and Natural Resources Committee
Minnesota	<u>SF 796</u>	create a pilot water quality enhancement program based on citizen participation	<u>Sen. James Metzen</u>	referred to Environment and Natural Resources Committee
Minnesota	<u>SF 847</u>	change provisions and penalties related to control of nonnative species	<u>Sen. Tom Saxhaug</u>	referred to Environment and Natural Resources Committee
Minnesota	<u>SF 1115</u>	change provisions, strengthen penalties and bolster state oversight related to control of nonnative species	<u>Sen. Bill Ingebrigtsen</u>	signed into law
New York	<u>AB 366</u>	require notice and public hearings for plans to develop wetlands areas	<u>Assemblyman Michael Cusick</u>	referred to Codes Committee
New York	<u>AB 1026</u>	prohibit sale of bottled water in a beverage container unless container includes certain information on label	<u>Assemblywoman Audrey Pheffer</u>	referred to Codes Committee
New York	<u>AB 1532</u>	prohibit smoking on public beaches and in public parks	<u>Assemblyman Jeffrey Dinowitz</u>	referred to Health Committee
New York	<u>AB 1661</u>	enact The Mercury Free Water Resources and Mercury Reduction Management Strategy Act	<u>Assemblywoman Linda Rosenthal</u>	referred to Environmental Conservation Committee
New York	<u>AB 3374</u>	provide state regulatory authority of wetlands that are more than 1 acre	<u>Assemblyman Robert Sweeney</u>	passed by Assembly
New York	<u>AB 3771</u>	prohibit application of pesticides in bodies of used as a source of drinking water	<u>Assemblyman Herman Farrell Jr.</u>	referred to Environmental Conservation Committee
New York	<u>AB 4317</u>	construct and maintain Lake Erie research center and warm water fish species hatchery	<u>Assemblyman Dennis Gabryszak</u>	referred to Environmental Conservation Committee

New York	<u>AB 5318</u>	require permits for interbasin diversions of water and approval of modification to existing systems	<u>Assemblyman Robert Sweeney</u>	signed into law
New York	<u>AB 5638</u>	increase penalties for wetlands violations	<u>Assemblyman Robert Sweeney</u>	passed by Assembly
New York	<u>AB 5670</u>	prohibit application of lawn fertilizers with phosphorous to any watersheds/drainage basins in certain counties where county legislature has passed a local law	<u>Assemblyman Fred Thiele Jr.</u>	referred to Environmental Conservation Committee
New York	<u>SB 145</u>	authorize state to participate in Great Lakes aquatic nuisance species coalition	<u>Sen. George Maziarz</u>	referred to Environmental Conservation Committee
New York	<u>SB 3519</u>	establish an aquatic invasive species volunteer steward program	<u>Sen. Owen Johnson</u>	referred to Finance Committee
New York	<u>SB 3554</u>	prohibit application of phosphorus-containing lawn fertilizers in certain areas	<u>Sen. Kenneth LaValle</u>	referred to Environmental Conservation Committee
New York	<u>SB 3798</u>	require permits for interbasin diversions of water and approval of modification to existing systems	<u>Sen. Mark Grisanti</u>	see AB 5318
Ohio	<u>HB 231</u>	establish a program for the issuance of permits for the withdrawal and consumptive use of waters from Lake Erie basin	<u>Rep. Terry Boose</u>	vetoed
Ohio	<u>HB 257</u>	establish a program for the issuance of permits for the withdrawal and consumptive use of waters from Lake Erie basin	<u>Rep. Terry Boose</u>	referred to Agriculture, Environment & Natural Resources Committee
Ohio	<u>SB 78</u>	ban the removal of natural gas from under the bed of Lake Erie	<u>Sen. Michael Skindell</u>	referred to Agriculture, Environment & Natural Resources Committee
Ohio	<u>SB 170</u>	establish a program for the issuance of permits for the withdrawal and consumptive use of waters from Lake Erie basin	<u>Sen. Tim Grendell</u>	referred to Agriculture, Environment & Natural Resources Committee
Ohio	<u>SB 186</u>	establish a program for the issuance of permits for the withdrawal and consumptive use of waters from Lake Erie basin	<u>Sen. Michael Skindell</u>	referred to Agriculture, Environment & Natural Resources Committee
Pennsylvania	<u>HB 33</u>	tax natural gas drilling, with some revenue going to water protection through Environmental Stewardship Fund	<u>Rep. Gregory Vitali</u>	referred to Finance Committee
Pennsylvania	<u>HB 781</u>	require further protection of water supplies from oil and gas wells	<u>Rep. Michael Hanna</u>	referred to Environmental Resources and Energy Committee
Pennsylvania	<u>HB 833</u>	impose a natural gas production severance tax that would, in part, fund water infrastructure improvements	<u>Rep. Camille Bud George</u>	referred to Environmental Resources and Energy Committee

Pennsylvania	<u>HB 1406</u>	enact a natural gas severance tax that would, in part, fund environmental initiatives, including water protection	<u>Rep. Kate Harper</u>	referred to Environmental Resources and Energy Committee
Pennsylvania	<u>SB 596</u>	establish Emergency Drinking Water Support Fund	<u>Sen. Jay Costa</u>	referred to Environmental Resources and Energy Committee
Pennsylvania	<u>SB 905</u>	impose a natural gas production severance that would, in part, fund water infrastructure and protection projects	<u>Sen. John Yudichak</u>	referred to Environmental Resources and Energy Committee
Wisconsin	<u>AB 40</u>	change rules on water pollution and phosphorus discharges; increase bonding authority for clean water and drinking water programs as well as sediment removal projects in Great Lakes; among other provisions	<u>Joint Committee on Finance</u>	signed into law