

**Ohio Department of Natural Resources
Office of Coastal Management** ★

Ohio Coastal Management Program
105 West Shoreline Drive, Sandusky
ohiodnr.com/coastal
419.626.7980

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Riparian Redevelopment

@ the former ConAgra site – Huron, Ohio
Land Use Debate 2012

redevelopment site



October 4, 2012 – Erie County 8th Grade





Riparian Brownfield Redevelopment

- Authorizations
- Water levels, Climate Change, Best Management Practices and more
- Funding and Grants
- Online Interactive Maps
- Site Pictures
- Questions



Our Mission

Ohio Department of Natural Resources Office of Coastal Management



“Achieve a balance between use and preservation of Lake Erie’s coastal resources, in collaboration with our partners, by effectively administering the Ohio Coastal Management Program.”



To help balance the uses of Lake Erie’s resources with sustaining a healthy environment, the Office of Coastal Management (OCM) administers the federally approved Ohio Coastal Management Program (OCMP). A summary of the OCMP is contained on page 4.

OCM’s responsibilities include education, outreach, resource management, grants administration and regulatory oversight in areas of the OCMP. These responsibilities are codified in Ohio Revised Code §1506 and Ohio Administrative Code §1501-6.

Contact Us:

105 West Shoreline Drive
Sandusky OH 44870
www.ohiodnr.com/coastal

coastal@dnr.state.oh.us
1.888.OhioCMP (toll free)
419.626.7980 (tel)



Being connected to the daily workings of the coast, the resources and the people who live, work and play in Ohio’s Lake Erie region is of vital importance to our constituents.

This is why the Office of Coastal Management is located on Lake Erie - making it unique among Ohio Department of Natural Resource divisions and offices. OCM is the only division/office headquartered outside of Columbus.

The importance of being on the coast is realized daily as coastal and watershed communities, managers, businesses and residents utilize the office to voice concerns, get answers and share information. The office’s location in Sandusky also allows staff to fill requests for on-site technical assistance, presentations to civic groups and programs for school children, property owners and consulting professionals.

Coastal employees are connected to the communities in which we serve – building relationships and strengthening the effectiveness and efficiency of efforts to improve Ohio’s coastal resources.

Mission:

“Achieve a balance between use and preservation of Lake Erie’s coastal resources in collaboration with our partners, by effectively administering the Ohio Coastal Management Program”

Ohio Coastal Management Program



The Office of Coastal Management administers the Ohio Coastal Management Program (OCMP) which was federally approved on May 16, 1997. The program integrates management of Ohio's Lake Erie coastal area in order to preserve, protect, restore and enhance its valuable and sometimes vulnerable resources.



The OCMP is a cooperative endeavor of the state and its political subdivisions. The OCMP sets forth a framework for government action through the establishment of policies in the nine issue areas listed on page 5. The OCMP describes the statutory and regulatory underpinnings of these policies and how improved management will be accomplished.



In addition to the policy areas, the OCMP document describes

- The natural history and geographical setting of Lake Erie and the lake's present status
- The extent of Ohio's Designated Coastal Management Area
- Program organization
- Special management areas
- Federal consistency
- The erosion mitigation process
- Shorefront access and protection planning
- The energy facility planning process.



Learn more:
OCMP Summary Page
www.ohiodnr.com/tabid/9371/default.aspx
OCMP Document Download Page
www.ohiodnr.com/tabid/9260/default.aspx

The nine issue areas and 41 policies in the Ohio Coastal Management Program are listed below. Those in blue are enforceable. The document, chapters and policies may be downloaded at www.ohiodnr.com/tabid/9260/default.aspx

ISSUE AREA

policy # - Policy Name

policy # - Policy Name Enforceable via Ohio Revised Code

COASTAL EROSION & FLOODING

- 1 - Lake Erie Coastal Erosion Area Management
- 2 - Shore Erosion Control
- 3 - Floodplain Management
- 4 - Flood Protection & Mitigation
- 5 - Shore Erosion & Flood Hazard Mitigation Assistance

WATER QUALITY

- 6 - Water Quality
- 7 - Environmental Contaminants: Prevention & Emergency Response
- 8 - Nonpoint Source Pollution
- 9 - Potable Water Supply
- 10 - Area of Concern Remedial Action Plans
- 11 - Ground Water

ECOLOGICALLY SENSITIVE RESOURCES

- 12 - Wetlands
- 13 - Natural Areas & Features
- 14 - Rare & Endangered Species
- 15 - Exotic Species

PORTS & SHORE AREA DEVELOPMENT

- 16 - Public Trust Lands
- 17 - Dredging & Dredged Material Disposal
- 18 - Local Lakeshore Development
- 19 - Lake Erie Ports
- 20 - Transportation Facilities

RECREATION AND CULTURAL RESOURCES

- 21 - Lakeshore Recreation & Access
- 22 - Lake Erie Beaches & Public Bathing
- 23 - Recreational Boating
- 24 - Fishing & Hunting
- 25 - Surplus Public Property
- 26 - Preservation of Cultural Resources

FISH & WILDLIFE MANAGEMENT

- 27 - Fisheries Management
- 28 - Fisheries Research & Interstate Cooperation
- 29 - Wildlife Management

ENVIRONMENTAL QUALITY

- 30 - Air Quality
- 31 - Hazardous, Solid & Infectious Waste Management
- 32 - Marina Facilities
- 33 - Visual & Aesthetic Quality

ENERGY & MINERAL RESOURCES

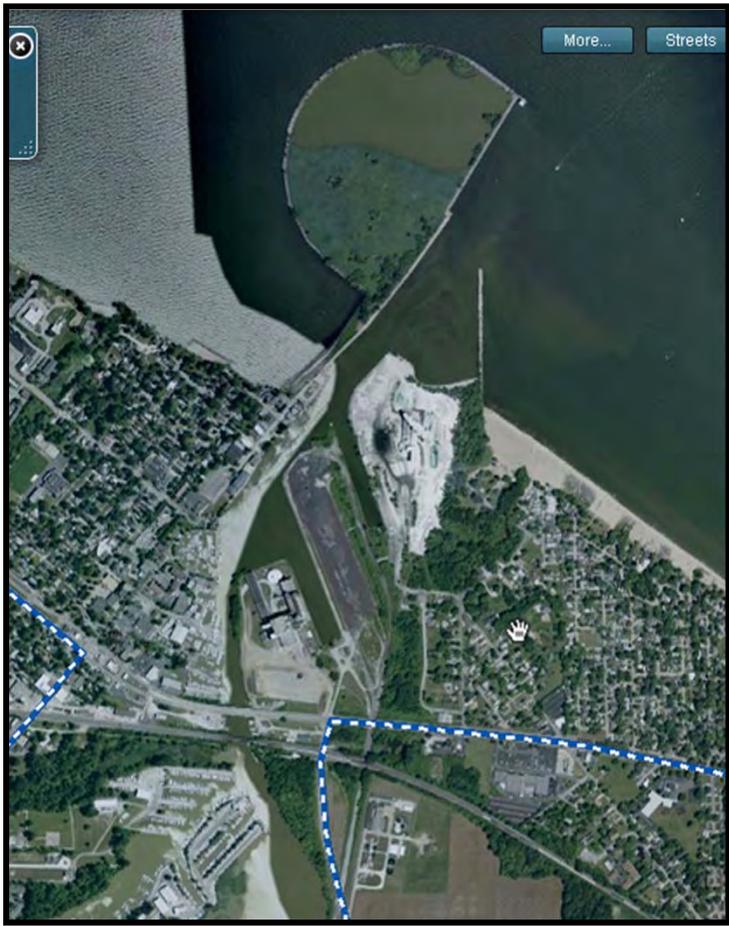
- 34 - Energy Facility Siting
- 35 - Energy Resource Storage & Transshipment
- 36 - Oil & Natural Gas Drilling
- 37 - Offshore Mineral Extraction
- 38 - Surface Mining

WATER QUANTITY

- 39 - Water Diversion
- 40 - Lake Erie Water Levels
- 41 - Water Management



Designated Coastal Management Area





Administer the

Ohio Coastal Management Program

- Enforceable Policies

- Ohio Revised Code ([Chapter 1506](#))
<http://codes.ohio.gov/orc/1506>
- Ohio Administrative Code ([Chapter 1501-6](#))
<http://codes.ohio.gov/oac/1501-6>



- Consistency

www.ohiodnr.com/tabid/9291/default.aspx

- State (1506.03)
- Federal (OCMP Chapter 7)
 - Federal – Section 404 Permit
 - State – Section 401 Permit
 - Local - Floodplain Regulations
 - There may be additional regulations your project needs to comply with based on your proposed development.



Download the Coastal Permits and Leases Application Booklet

www.ohiodnr.com/tabid/9295/default.aspx





State and Federal Consistency

- State Consistency (ORC 1506.03)
- Federal Consistency: Federal Actions (activities, permits, financial assistance) likely to affect Ohio's Designated Coastal Management Area must be consistent with the Ohio Coastal Management Program policies.
 - State has “veto power” of federal activities in Designated Coastal Management Area (DCMA).
 - Includes out of state actions that affect the DCMA.
 - Policies linked to enforceable authorities of state agencies.
 - Federal agencies may not proceed with “Actions” until a consistency concurrence has been issued.
 - No categorical exemptions



Consistency Review Process

- Permit and project information is received by ODNR.
- REALM conducts Environmental Review – responsible for gathering comments from divisions.
- OCM uses Environmental Review results in its consistency review.
- **TIME FRAME:** 60 days to 6 months

www.ohiodnr.com/tabid/9281/Default.aspx





For development you may also need:

Federal Regulations:

- **Section 404 Permit**
 - from the U.S. Army Corps of Engineers is required...
 - by Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act
 - for the construction, excavation, or deposition of materials in, over or under navigable waters of the United States and for the discharge of dredged or fill material into the waters of the United States, including certain wetlands..

www.ohiodnr.com/tabid/9286/Default.aspx

www.ohiodnr.com/LinkClick.aspx?fileticket=m5Lr96TvBAk%3d&tabid=9281

Contact:

USACE Buffalo District Office: 716-879-4330 | - Oak Harbor Ohio Field Office: 419-898-3491





For development you may also need:

State of Ohio Regulations:

- **Section 401 Permit**
 - Water Quality Certification from the Ohio EPA is required...
 - by the federal Clean Water Act
 - In order to obtain a Section 404 Permit and any other federal permits/licenses for projects resulting in discharge of dredged/fill materials into **any** waters of the State.

Contact:

Ohio EPA Division of Surface Water
614-644-2001

www.epa.ohio.gov/dsw





For development you may also need:

- **Local Regulations** (county, municipal):
 - Vary by community.
 - May include:
 - Floodplain regulations
 - Building permits
 - Zoning restrictions
 - Health Department authorizations
- **Other Regulations**
 - Liquor Permits (state)
 - Public Utilities Commission of Ohio

Coastal Guidance
for construction or development along Ohio's Lake Erie shore



TABLE OF CONTENTS

Page	Information
3	Coastal Regulations (Coastal Guidance Sheet No. 1)
5	Shore Structure Permits (Coastal Guidance Sheet No. 2)
7	Submerged Lands Leases (Coastal Guidance Sheet No. 3)
9	Local Resolution or Ordinance (Coastal Guidance Sheet No. 4)
11	Coastal Erosion Area Permits (Coastal Guidance Sheet No. 5)
13	Federal Consistency (Coastal Guidance Sheet No. 6)
15	Erosion Control Loans (Coastal Guidance Sheet No. 7)
17	Engineering and Surveying Contacts (Coastal Guidance Sheet No. 8)
19	Floodplain Management Program
21	Facts about Flood Insurance
23	Federal Emergency Management Agency Map Service Center Order Form
25	Lake Erie Watersnake Post-Delisting Guidelines for Construction, Development and Land Management

ONLINE RESOURCES:

Ohio Coastal Management Program Document: ohiodnr.com/tabid/9260/default.aspx

OCMP Coastal Guidance and Regulatory Homepage: ohiodnr.com/tabid/9281/default.aspx

Ohio Coastal Design Manual: ohiodnr.com/tabid/23074/default.aspx

Lake Erie Shore Erosion Management Plan: ohiodnr.com/tabid/20501/default.aspx

Ohio Coastal Atlas: ohiodnr.com/tabid/23320/default.aspx
• includes maps and data for engineering & surveying, Lake Erie shore erosion, wind turbine placement, Ecology of the Lake Erie region, ports, harbors, recreational boating facilities and more.

Ohio Department of Natural Resources
Office of Coastal Management

100 West Shoreline Drive
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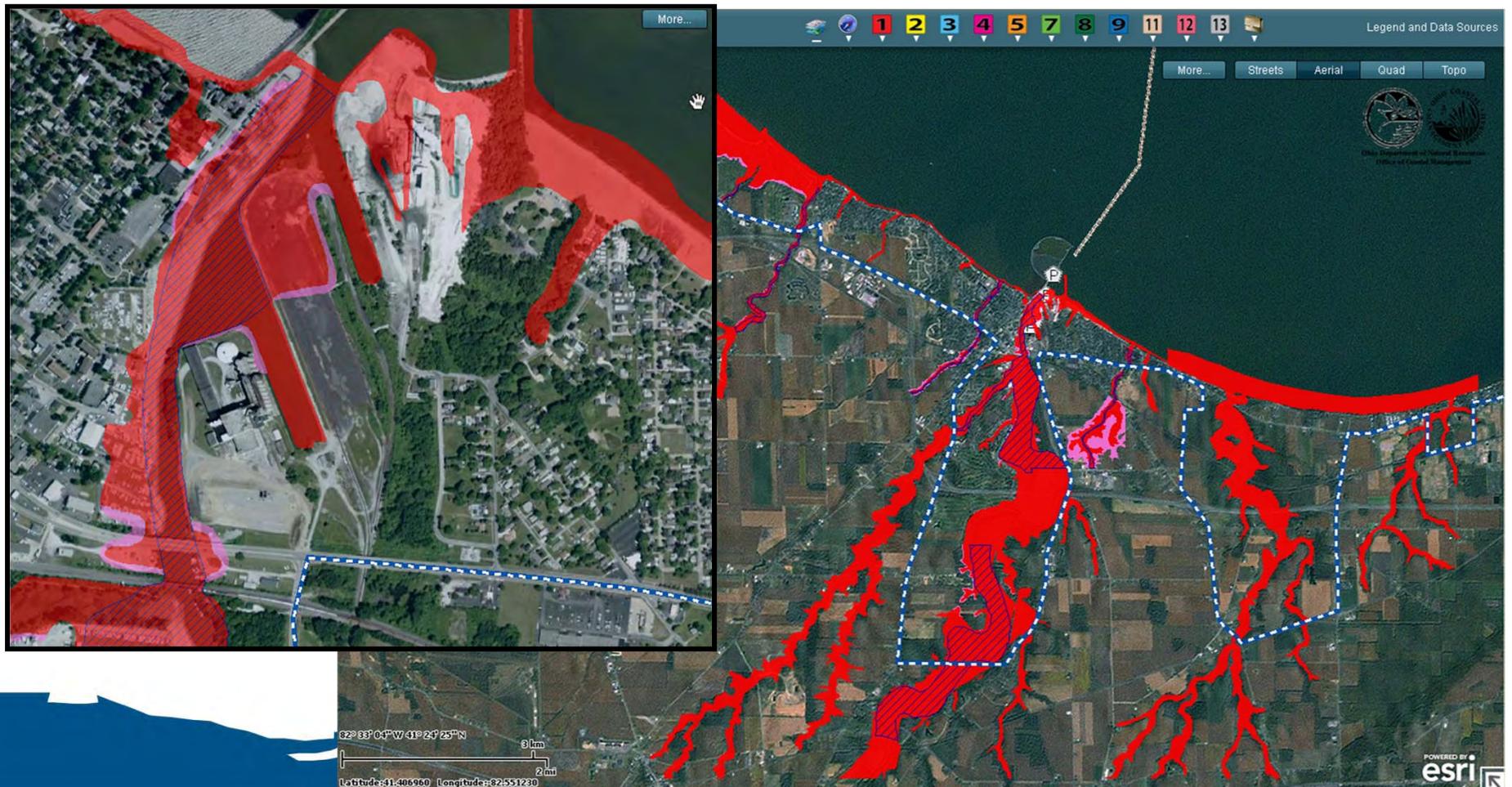
419-426-7500
122 West 1-800-Ohio-CMP
coastal@dnr.state.oh.us

www.ohiodnr.com/tabid/9286/default.aspx



Flood Hazard Areas/Regulations

- Ohio DNR Division of Soil and Water Resources
 - Ohio Revised Code: 1506.04, 1521 and 307





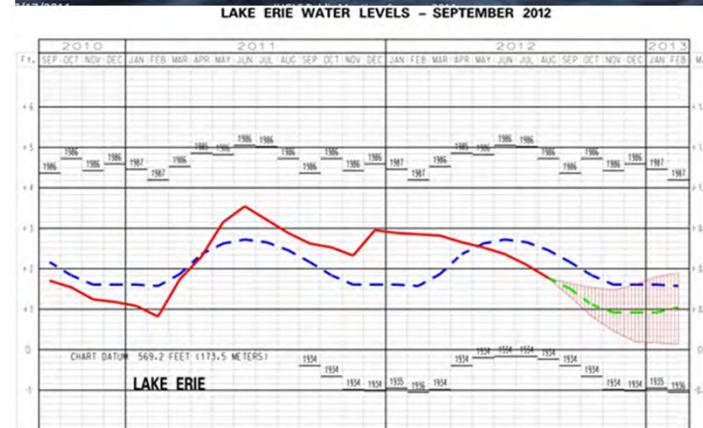
Specific Types of Business:

- **Example:** Ferry Transportation and Water Taxis are regulated by PUCO
PUCO = Public Utilities Commission of Ohio.
- If you are considering ferry/water taxi, you will also need to know information about draw of the boat, depth of water, etc.
- *NOTE:* water depth (bathymetry) usually appears in meters.



Natural forces formed and continue to shape Lake Erie and its watershed.

- Lake Formation
 - Isostatic rebound is ongoing
- Lake levels
 - Fluctuate
 - Have been recorded 150+ years
 - can effect erosion and accretion



www.lre.usace.army.mil/kd/Items/actions.cfm?action=Show&item_id=3883&destination=ShowItem

Lake Erie influences local and regional weather and climate.

- Lake Erie's moderates the local climate
- Changes in Lake Erie's circulation, water temperature and ice cover can produce changes in local weather
 - snow belt from Cleveland to Buffalo
 - Precipitation can be traced to water evaporated from Lake Erie
- Lake Erie is influenced by global climate change

Weather

what is happening outside right now.

Climate

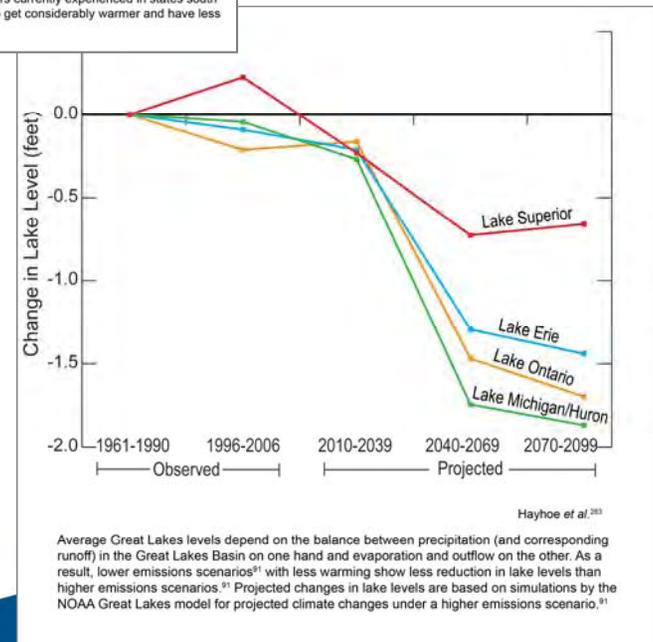
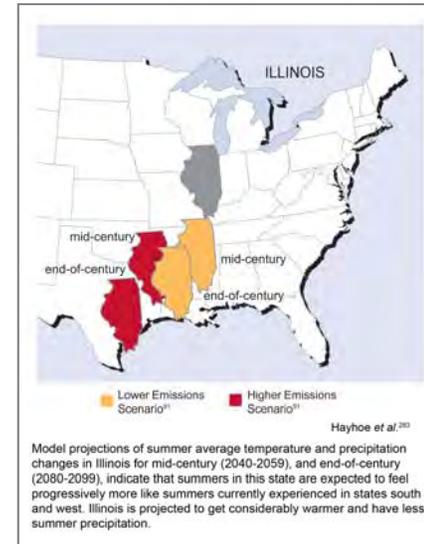
average weather in a location over a long period of time.



Lake Erie influences local and regional weather and climate.

www.globalchange.gov

- Over the past 50 years, the Midwest and Great Lakes region has experienced a 31 percent increase in heavy precipitation events
 - U.S. Global Change Research Program
- Scientific models predict increased periods of heavy rainfall amounts and increased periods of high temperatures /drought conditions.
- ? Will increased stormwater runoff increase water levels that will flood the proposed development sight—even if only on a temporary basis?
- ? Will decreased Lake Erie water levels make it difficult for shipping/boat traffic to come into dock?





Lake Erie Ports = Transportation Facilities

- Maintenance Dredging Backlog
+ Structure Repair Needs

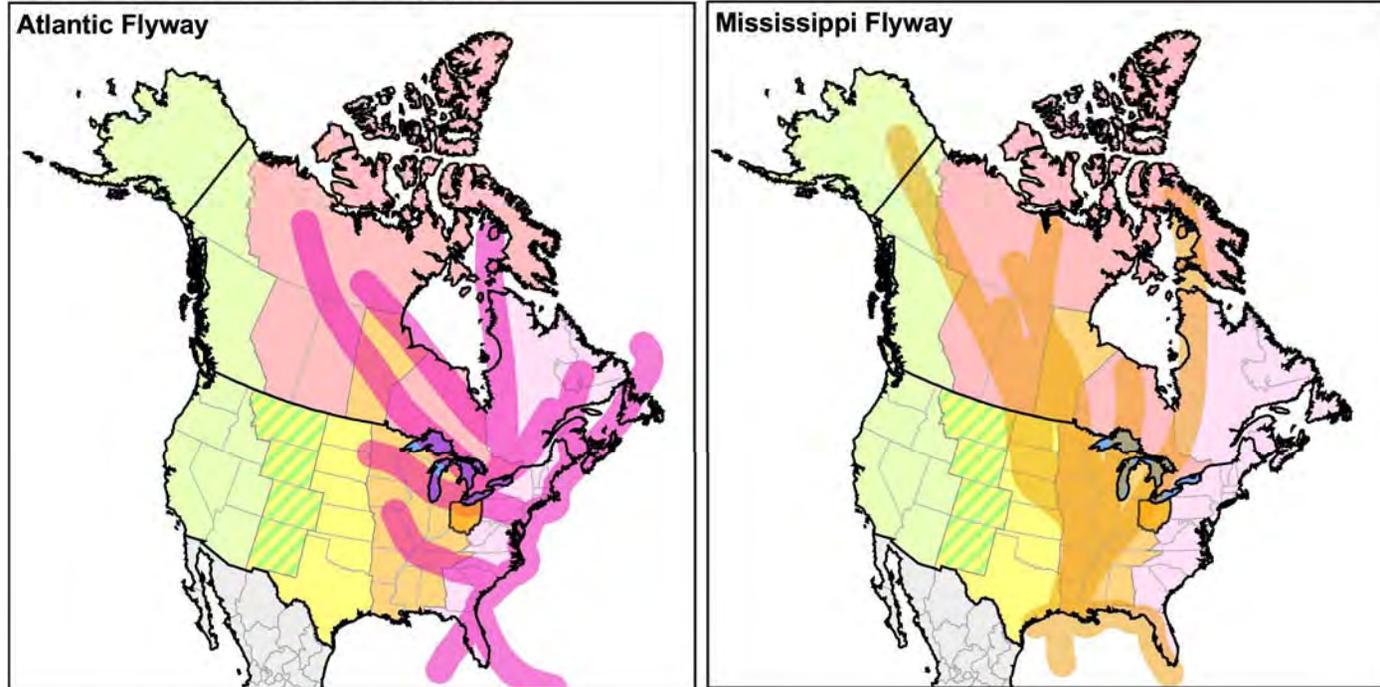
\$214,470,0444 @ all USACE Ohio LE Ports
in 2011.

\$5,635,216 @ the Huron River



Lake Erie supports a great diversity of life and ecosystems.

Migratory Bird Flyways and Regions



Lake Erie supports a great diversity of life and ecosystems.

- Altered construction activity time frames may be required by ODNR Division of Wildlife and U.S. Fish and Wildlife Service in order to protect spawning walleye, larval and juvenile production areas.
- **TIME FRAME:** March 15 to June 30 = No in water work for the Huron River area



Lake Erie and humans in its watershed are connected.

Lake Erie impacts us. It...

- ...supplies freshwater
- moderates the climate,
- influences the weather, culture & human health.
- ...is a source of food, mineral and energy resources, recreation and jobs.
- ... is a transportation highway
- ...plays a role in national security.

We impact the lake and watershed.

- Lake Erie is affected by the decisions and actions of people throughout its watershed
- Anything that is in the Lake Erie Watershed can be washed by rain into a river... and then into Lake Erie.



Lake Erie and humans in its watershed are connected.

CHALLENGE

We impact the lake and watershed.

- Minimize impacts to land, air, water.
- Improve Huron River water quality.

How will you meet this challenge?

- Best Management Practices (BMPs)
- Innovative Solutions





Environmental Stewardship Ideas & BMPs

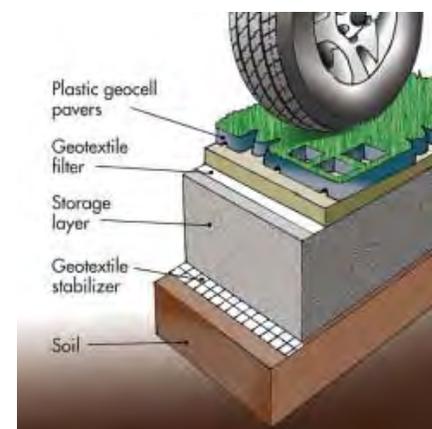
- Control/limit water runoff
 - Urban nonpoint source pollution/runoff pollution
 - Ohio Coastal Nonpoint Pollution Control Program
 - www.ohiodnr.com/tabid/8861/Default.aspx
 - www.ohiodnr.com/tabid/4131/Default.aspx
 - www.epa.state.oh.us/dsw/nps/index.aspx
- Create Riparian Wetlands
- Green Building
- Compost and Recycling
- Solar
- Ohio Clean Marina/Boater programs





Control/Limit Water Runoff

- Install rain barrels to collect water from rooftops to use in gardens.
- Pervious paving
- Directing downspouts to areas where runoff can soak into soil such as rain gardens.
- Leave a natural area/filter strip along river.
- Landscaping with native plants.
- Composting yard waste and re-using it in garden landscaping.





Create Riparian Wetlands

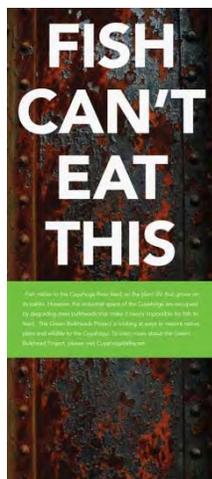
- Recent study valued wetlands at more than \$300,000 per acre for their services.
- Wetlands have environmental 👍, social 😊 and economic 💰 value.
 - Retain up to 80% of nitrates and 92% percent of phosphorus in surface water 💰 👍
 - Break down contaminants such as pesticides and medications. 💰 👍
 - Homes for wildlife and plants. 😊 👍
 - Nature-based tourism 😊 💰
- Grants may be available for innovative projects 😊 💰





Create Riparian Wetlands (ideas)

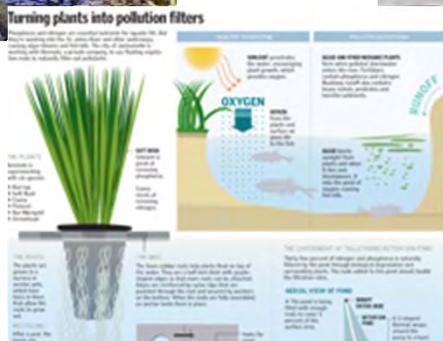
- CHUBS – Cuyahoga Habitat Underwater Baskets
“Green Bulkheads”
 - www.crcpo.org/GreenBulkheads/GreenBulkheadnews0408.pdf (PDF)
 - www.cuyahogariverrap.org/newsgreenbulkhead.html (webpage)
 - <http://cuyahogavalley.net/green-bulkheads.aspx>





Create Riparian Wetlands (ideas)

- Floating Islands
- Beemats





Green Construction/Sustainable Building

- U.S. Green Building Council
www.usgbc.org
The [Green Building Certification Institute \(GBCI\)](http://www.usgbc.org) administers LEED certification
- LEED = Leadership in Energy and Environmental Design
 - LEED Rating System
www.usgbc.org/DisplayPage.aspx?CMSPageID=222
- PNC Smart Home
www.cmnh.org/site/atthemuseum/onexhibit/smarthome.aspx
Cleveland Museum of Natural History

The screenshot shows the LEED website interface. At the top, there is a search bar and navigation tabs for Rating systems, Certification, Applying LEED, Developing LEED, and Credentials. Below this is a grid of rating system categories: NEW CONSTRUCTION (MAJOR RENOVATIONS), EXISTING BUILDINGS (OPERATIONS & MAINTENANCE), COMMERCIAL INTERIORS, CORE & SHELL DEVELOPMENT, and RETAIL. A second row includes SCHOOLS, HOMES, NEIGHBORHOOD DEVELOPMENT, HEALTHCARE, and Selection Guidance. The main content area is titled "LEED Green Building Rating Systems" and explains that rating systems are groups of requirements for projects. It lists main credit categories: Sustainable sites, Water efficiency, Energy & atmosphere, Materials & resources, and Indoor environmental quality. A "REGISTER A PROJECT" button and a search bar for projects are also visible.

Rating system	Points
Platinum	94
Sustainable Sites	15/21
Water Efficiency	9/11
Energy & Atmosphere	23/37
Materials & Resources	2/14
Indoor Environmental Quality	9/17
Innovation in Operations	4/4
Total	100 points (110 actual)



Ohio Clean Marinas/Boaters Programs

- www.ohioseagrant.osu.edu/cleanmarinas
 - Book of BMPs for marinas to follow to protect clean water and fresh air.
 - Includes shrink-wrap recycling program.

- www.ohioseagrant.osu.edu/cleanboaters
 - Engine maintenance
 - Vessel cleaning
 - Petroleum control





Marinas in Ohio's Lake Erie Watershed





Additional Resources:

- Office of Coastal Management Map Viewers
- Pictures of ConAgra site
- Erie County Soil and Water Conservation District
 - www.eriecounty.oh.gov/departments-and-agencies/environmental-resources/erie-soil-and-water-conservation-district/
- Lake Erie Shore Erosion Management Plan
 - Glossary of coastal terminology.
 - Erosion Control Methods (types of shore structures)
 - www.ohiodnr.com/tabid/20501/Default.aspx





OCM Map Viewers

STEPS:

- Go to:
www.ohiodnr.com/coastal
- Select: “Coastal Atlas/GIS” from the top navigation line.
- Select: “Interactive Atlas” from the top navigation line.
- Select: Blue “Launch Viewer” box. A new window browser will open

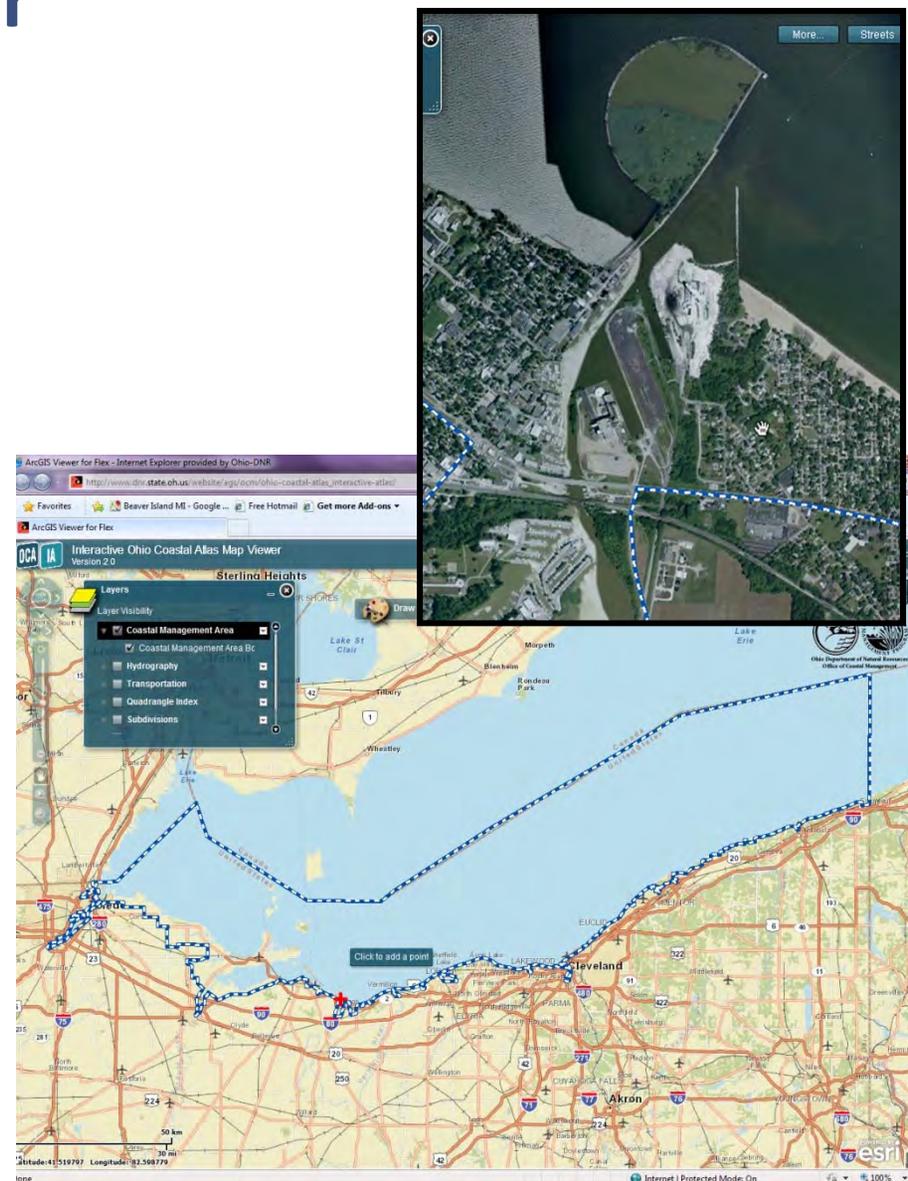
A screenshot of the Ohio Coastal Atlas website. The top navigation bar includes links for "Coastal Home", "Second Edition Atlas", "Interactive Atlas", "Use Case Map Viewers", "Map Library & GIS", and "Resources". The main content area features a map of Lake Erie with a blue "Create" button. A sidebar on the left lists navigation options: "Coastal Atlas Home", "Home", "Publications", "Second Edition Atlas", "DVD Atlas", "Mapping Tools", "Interactive Atlas", "Use Case Map Viewers", "Engineering and Surveying", "Lake Erie Environment", "Lake Erie Public Access", "Lake Erie Shore Erosion Management", "Lake Erie Watershed", "Ports, Harbors and Recreational Boating", "Wind Turbine Placement Favorability", "Mapping & GIS", "Map Library", "GIS & Metadata", "Learn More", "Atlas Partners", "ICAN", "Funding", and "Awards". The main text describes the Ohio Coastal Atlas (OCA) as a suite of mapping resources developed by the Ohio Department of Natural Resources Office of Coastal Management (OCM) to provide coastal decision-makers, land management professionals, engineers, educators, interest groups and the general public with information about Lake Erie and its watershed. It mentions the printed "Ohio Coastal Atlas, Second Edition (2007)", an interactive atlas, and various theme-oriented "Interactive Use Case Map Viewers". It also states that the OCA was first developed as a 240-page print publication to spatially address "big picture" aspects of Lake Erie and effectively illustrates interactions between cultural, biological, physical and natural resources in the Lake Erie basin and watershed. The atlas is a collaborative effort among many partnering organizations and brings many different and diverse disciplines together into a user-friendly format that is easily understood by those not familiar with certain subject matters. For more information, it provides contact information for Ohio Coastal Atlas Coordinator Brian George, including a phone number (419-626-7980).



Coastal Map Viewer

STEPS:

- When the “Ohio Coastal Atlas” window browser opens, either view tutorials to learn how to use the maps or click “Continue.”
- In the **layers** box select: Coastal Management Area to view this area.





Coastal Map Viewer

STEPS to add data:

- Select: the “+” symbol in the yellow diamond along the top of the page.
- To view marina data:
 - Select: “Public Access and Recreational Data” a pop up window will appear.
 - Select: “Boating Access Facilities” data then click the “Load Service” button.
 - After you load the service, the type of data you added will appear in the “Layers” heading at the top.
 - After you load the service, you can close out the add data window unless you want to add more data under the particular heading.



Coastal Map Viewer - STEPS to add data:

The screenshot displays the 'Interactive Ohio Coastal Atlas Map Viewer' interface. The map shows the Lake Erie basin with various layers overlaid. A 'Layers' panel on the left lists 'Coastal Management Area', 'Coastal Management Area Bc', 'Hydrography', 'Transportation', 'Quadrangle Index', and 'Subdivisions'. A 'Public Access and Recreation Data' panel is open, showing a search bar and a table of services.

ServiceName	ServiceDescription
Boating Access Facilities	Displays the locations of boating access facilities for motorized watercraft, including public ramps and docks, private marinas and commercial facilities.
Lake Erie Public Access	Displays Ohio's Lake Erie public access sites as listed in the Lake Erie Public Access Guidebook; includes parks, nature preserves and wildlife areas.
Trails	Displays trails in the Lake Erie Watershed; includes water trails and scenic byways.

Latitude: 42.621487 Longitude: -81.948695



Coastal Map Viewer - STEPS to add data:

The screenshot displays the 'Interactive Ohio Coastal Atlas Map Viewer' interface. The title bar shows 'OCA IA Interactive Ohio Coastal Atlas Map Viewer Version 2.0'. The map is centered on the Cleveland area, showing a blue dashed line representing the 'Coastal Management Area' boundary. A 'Layers' panel is open on the left, with 'Coastal Management Area' selected. The map includes various data points (colored circles) and a 'Draw and Me...' button. The interface also features a 'Data Sources' section, a 'Layers' panel, and a 'Draw and Me...' button. The map shows the coastline of Lake Erie and the surrounding land area, with various cities and roads labeled. The interface includes a scale bar (50 km / 30 mi), coordinates (Latitude: 42.323684, Longitude: -82.182155), and a 'Powered by esri' logo. The bottom status bar indicates 'Internet | Protected Mode: On' and a zoom level of 100%.

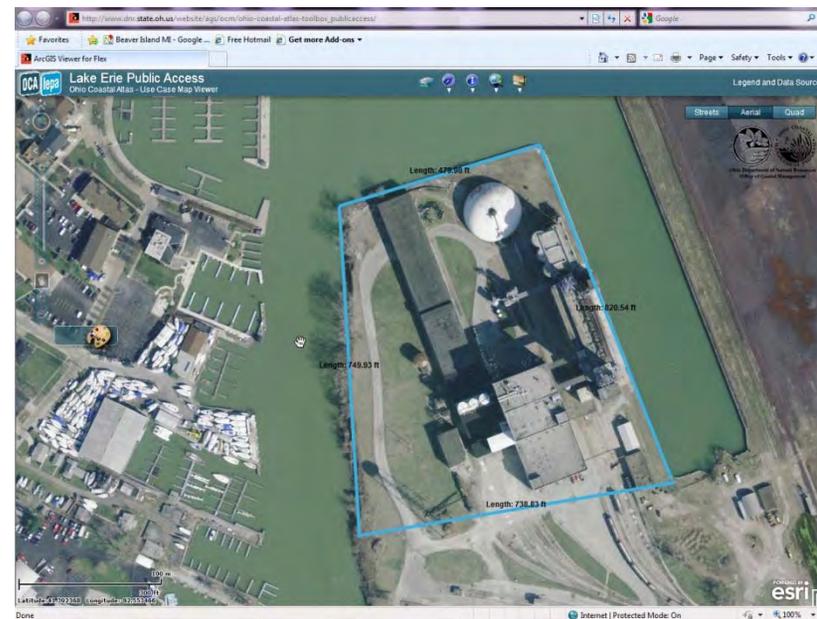
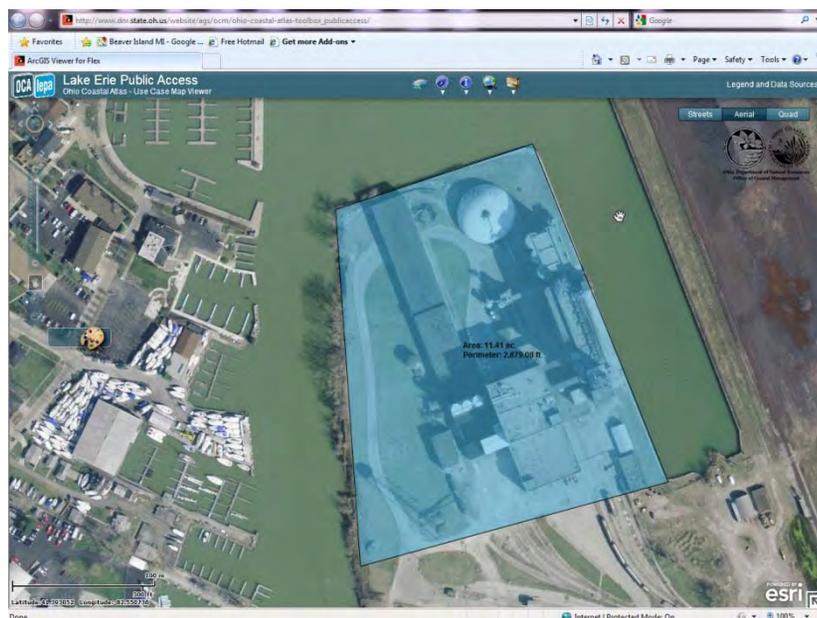


Coastal Map Viewer

- **STEPS to draw/measure and add polygons to represent buildings:**
 - Select: “Aerial” on the view tab in the upper right hand corner.
 - Zoom in the map until you have it appropriately sized. Even after you add measurements, you can still pan and zoom on the map.
 - Select: “Tools” which is the crisscrossed shovel and pick in the top navigation.
 - If you want to see the measurements, select the “Show Measurements” box.
 - Select the tool you want to use.
 - *NOTE: There is no “go back” button. If you add a drawing/text, you can’t take it away – but you can change its size, shape and location. When you clear the drawings, all of them disappear.*



Coastal Map Viewer – Draw and Measure





Coastal Map Viewer – Saving Your Map

- **STEPS to save your map:**
 - Once you are satisfied with the view that you have on your map, select the “Print Screen” button on your keyboard.
 - Then, select an open Word document or PowerPoint presentation. Then select “Control+V” on the keyboard to paste the map into your document/presentation.
 - You may need to use the crop/size functions to appropriately view the map.



On-site pictures from Sept. 26, 2012



- Blue dots are photo locations.



DSCN8238.MOV





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