

Great Lakes Needs Assessment

Minutes from Planning Team Meetings February 13-14, 2006

I. Introductions

The February 13th-14th meeting was organized as part of the Great Lakes Needs Assessment sponsored by NOAA Coastal Services Center (Center) and the Great Lakes Commission (GLC). This assessment is following the protocol of the Center's 12-step needs assessment guidance located on the web at www.csc.noaa.gov/needs/. The goal of this needs assessment is to collect sufficient information about the issue areas defined as Coastal Community Development (CCD), Data Information Integration and Distribution (DIID) and Ports and Navigation and to characterize the needs and gaps of these issues within the Great Lakes region. The Ports and Navigation issue area was highlighted as part of this meeting, however, the discussions for this issue area have taken place at separate meetings in order to leverage opportunities offered by various conferences nationwide to interact with stakeholders of this issue area. A follow-up meeting was held with the primary staff person from the Great Lakes Commission working on the Ports and Navigation issue area on February 21st in Duluth, MN, in order to identify areas of overlap between the three issue areas.

At this point in the needs assessment, staff has reviewed background literature and information on these issue areas, established planning teams, interviewed planning team members via phone, and organized this planning team meeting. The goal of this meeting was to collect information and feedback from the planning teams on the overarching needs within each issue area. The overarching needs were identified through a combination of structured interviews with planning team members and the literature review. These overarching needs were presented as a starting point for discussion and it was recognized that they could change as result of the planning team discussion.

For each issue area the teams discussed the needs, why they are needs, how these needs might be met, and who the target audiences are to help the process gain further insight into these topics. The greatest emphasis for this discussion was on determining what areas of need to focus on and why as well as identifying target audiences. Identifying how these needs may be addressed and who is best suited to address them will follow from further discussion with the target audiences.

The following people participated in the discussion as part of the planning teams:

- A. CCD Team Attendees
 - 1. Mike Klepinger – MI Sea Grant
 - 2. John Kuriawa – NOAA-OCRM
 - 3. Gary Matlock – NOAA-Coastal Ocean
 - 4. Mike Molnar – IN CMP
 - 5. Cathie Cunningham-Ballard – MI CMP
 - 6. David Mackey – OH CMP
 - 7. Sonia Joseph – GLERL-NOAA Sea Grant

- B. DIID Planning Team Attendees
 - 1. Mike Robertson – Ontario Ministry of Natural Resources
 - 2. Becky Lameka - GLC
 - 3. Susan Fox – NOAA-CSC
 - 4. David Hart – WI Sea Grant

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5. Matt Smar – MI DEQ
6. Connie Livchak – OH DNR
7. Jeff Herter – NY
8. Rochelle Sturtevant – GLERL-NOAA Sea Grant

C. Staff Attendees

1. Consultant Team
 - a Diane Desotelle - Desotelle Consulting PLC
 - b Rudy Schoolderman – Community Growth Institute
 - c Sarah Beaster – Beaster Consulting
2. NOAA-Coastal Services Center (NOAA-CSC)
 - a Tricia Ryan
3. Great Lakes Commission (GLC)
 - a Victoria Pebbles
 - b Roger Gauthier

II. Needs Assessment Steps

There are 12 steps in the Center's needs assessment process as follows:

1. Confirm issues and audience
 - a Coastal Community Development
 - b Data Information Integration and Distribution
 - c Ports and Navigation – This issue area is being handled separately, but will work in parallel with the CCD and DIID process
2. Establish Planning Teams
3. Establish Goals and Objectives
4. Characterize Audience
5. Perform information and literature search
6. Select Data Collection Methods
7. Determine Audience Sampling Scheme
8. Design Pilot and Data Collection Instrument
9. Gather and Record Data
10. Perform Data Analysis
11. Manage Data
12. Synthesize Data and Create Report

As part of the consultant teams activities to date steps one through three have been completed, while steps four and five are ongoing efforts. The findings from steps one through five will inform the data collection efforts as described in steps six through nine.

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III. CCD Needs Discussion

Prior to addressing the specific needs within CCD, there was some discussion on the definition of CCD. There are players in this issue area that have different needs. For example, Coastal Management Programs want access to NOAA resources, small communities may not see or look for the NOAA link, and the drivers of CCD include a broad array of organizations and agencies at the local level. All great lake states are home-rule; meaning land use decisions are made at the local level. However, the CCD issues are also driven by regional and state policies. These policies may include incentives that have unintended consequences for unsustainable practices, such as tax, infrastructure and transportation policy that promote urban and rural sprawl.

There are multiple tiers of land use decision-making and the issues they seek to provide direction on including the built and protected environment, smart growth, economic development, sustainable integrated planning, etc. An additional consideration is whether CCD's focus is just on land use planning or if it should consider a more integrated vision of planning that relates to land, water and air.

A time and space consideration was also identified as part of this discussion. This needs assessment process is focusing on the 8-state Great Lakes region and all the groups and levels within them and they all update plans at various times. For example, local government units (LGUs) might have a 30-year transportation plan and a 10-year land use plan. The non-point source programs within the Coastal Management Programs (CMPs) have 5-year plans. The GLC is about to prepare a 5-year strategic plan. When considering climate change, the planning horizon is likely to be even longer. Consideration of time and area as part of this discussion informs not only the question of how can existing data within NOAA be used in the short term but also what are the data needs for the long term to answer questions that fit within these various time horizons. This needs assessment is essentially geared to provide strategic direction for a Center presence during a 5-year timeframe.

The group did not reach a resolution on what exactly constituted CCD issues. The discussion however did clarify the breadth of the issues that could be covered under CCD. A decision was made to discuss the various overarching needs areas within CCD and to return to this discussion if the group felt it was pertinent to providing direction for the discussion. Finally, the initial discussions with the project team when developing the workplan, identified CCD issues within the context of local governments facing increasing pressure to balance economic growth and associated land development and the protection of open space and natural features. Within this context CCD's lens is to identify how communities can meet social and economic needs while protecting the environment so these needs can be sustained over the long term.

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The following summarizes key comments received from planning team members that characterize the CCD issues under three broad themes: **sustainable planning; data and models for better decisionmaking; and integrating ecosystem management into planning**

A. Sustainable Planning within CCD

1. Sustainable Planning as a need includes

a Regional Framework (what can be done at state and federal level) to incorporate sustainable planning practices at the local level

b Land Use Education (for whom? Needs to be further defined.)

(1) Local officials

(2) State officials

(3) Developers

c Plan Development, Implementation, Evaluation and Modification

(1) This includes creating plans where they are needed, implementing plans in place and following up with plans by evaluating their successes and failures and modifying the plans as needed to improve the process of sustainable planning

2. Why is Sustainable Planning a need?

a Local level is where planning happens

b At the state and federal level there are conflicting incentives/subsidies that may or may not support sustainable planning principles.

c (Lack of) Motivation for local officials getting education (how to motivate?)

d Inadequate knowledge of sustainable planning

e Inadequate political will for sustainable planning

f Fragmentation of planning efforts addressing economic growth and environmental protection challenges with the same underlying root causes--All GL states are home rule

g Citizens need to feel a sense of ownership to their plans and efforts

h Planning is often more reactive rather than proactive in its approach

i Regulation is not the only tool to provide

3. How could these needs be met?

a Regional Framework

➤ Coordinate at the Regional Level; provide leadership at the Local Level –Think regionally and of the value of the Great Lakes and cement it into thinking beyond LGU borders

➤ Demonstrate societal benefits of sustainable planning

➤ Demonstrate economic benefits of sustainable planning (Think globally, act locally)

➤ Transfer knowledge/experiences among states as well as between states and LGUs

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- Provide for inter-jurisdictional coordination
- b Land Use Education**
- Educate local boards, commissions, task forces to promote sustainable development in coastal communities through land use planning and implementation of such plans
- Educate developers
- Provide regional land use materials from a group with credibility.
- Promote a Coastal identity
- c Plan Development and Implementation**
- Link States (CMPs), nonprofits, LGUs, etc. together
- From a regional perspective, transfer knowledge/experiences between states
- Develop incentive programs that promote sustainability across all sectors
- Assist with Plan Evaluation by reviewing for its regional components
- Assist with Plan modification (how is the Plan working regionally?)
- Assess if plans are being implemented
- Assess impact/effectiveness of plans—develop metrics/indicators to measure-at regional level

4. Who is the targeted audience for Sustainable Planning?

- a Municipal leagues; township associations (state reps); APA state chapters; University extension agents
- b MPOs and RPOs
- c Watershed Councils and NGOs
- d State “Planning” Agencies –can be several agencies in states where there is no clear lead
- e Tribes
- f CMP program
 - (1) Would benefit from information developed by objective third party with credibility – There are different needs among states, some have more capacity and credibility than others depending on history of program.
 - (2) Link to another program (federal or local depending on credibility)

B. Data and Models for Better Decision Making within CCD

1. Data and Models for Better Decision Making as a need includes

- a Ease of access and education on data and tools
- b Adapt to simplified models from science-based research
- c Provide cost/benefit economic analysis from sustainable actions

2. Why is Data and Models for Better Decision Making a need?

- a Land use decision-making is at the local level

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- b LGUs vary widely in technical capacity; some communities lack technical staff capabilities to make data usable for local decision makers
- c Communities don't have access to data and models; not aware of world of data available so don't even know what they need; many communities still using paper maps
- d High resolution data is not available in many areas; the-landscape scale data not detailed enough to inform local decisions
- e Communities need to better understand the significance of the data
- f Need information to account for cumulative and secondary impacts of actions
- g Low sense of urgency and lack of public awareness of problems
- h Cost/benefit analysis will help measure public benefit from sustainable actions

3. **How could these needs be met?**

a Ease of access and education on data and tools/Sharing of information and experience on a Great Lakes Regional Level.

- Organize a network of planning and zoning officials to compare/contrast commonalities in CCD
- Help LGUs overcome the perception they are so unique that they need to "re-create the wheel"
- Provide for inter-jurisdictional coordination; Transfer knowledge/experiences between states and LGUs
- Coordinate at the Regional Level; provide leadership at the Local Level; Think regionally and of the value of the Great Lakes and cement it into thinking beyond LGU borders
- Demonstrate societal benefits of sustainable planning
- Demonstrate economic benefits of sustainable planning
- Provide habitat initiatives by interviewing groups on what data they have, how they obtain it, and what they want
- Offer technical assistance to LGU's by providing training of available data and tools

b Adapt to simplified models from science-based research

- Produce academia level research and science and offer this as a practical tool that can be used on the local level.
- Implement NOAA models and capabilities to assist decision-making and policy development to the local level with tools they can use

c Provide cost/benefit economic analysis from sustainable actions

- Fund research on economic benefits of sustainable development (maintaining eco-system services such as clean water, recreation opportunities etc.) and provide results to the public.
- Develop information on what are the other great lakes states are doing to use in the region.

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4. Who is the targeted audience for Data and Models for Better Decision Making?

- a MPOs and RPOs (GIS technicians)
- b County Planning Departments
- c Watershed Councils and NGOs
- d State Agency GIS departments
- e GIS centers and economic researchers in academic institutions
- f CMP and Sea Grant staff/extension agents (link with training)
- g Federal agencies (NOAA, EPA, USFW, FEMA)
 - These offer services but may not be the audience
 - They affect County decision making, however
 - State, county, etc. may not be aware of the need coming down the pipe, example how is regulatory environment changing as a result of risk management and what are the data and model needs.
 - Break down the silos, create organizations working together (is this not the next step)
- h Tribes

C. Integrating Ecosystem Management into Planning

1. Integrating Ecosystem Management into Planning as a need includes

- a Unified planning and land, water, air use and management coordination on a regional (ecosystem) level
- b Leadership on the local level
- c Foster inter-jurisdictional communication and data collection
- d Monitoring/assessment of land use planning and preservation efforts

2. Why is Integrating Ecosystem Management into Planning a need?

- a Integrating watershed planning with community land use planning efforts benefits Great Lakes system as a whole
- b Need better ways to characterize or define regional "ecosystem"
- c Need to have access to information about significant natural features
- d The individual pieces/decisions are contributing to the system but there is a lack of authority to manage different ecological functions of the ecosystem
- e Lack of adequate understanding of its practical application
- f No agency or organization responsible for overseeing or implementation
- g Monitoring is primary need to quantify successes and impacts of planning efforts (connect to planning cycle-sustainable planning)

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3. **How could these needs be met?**
 - a **Unified planning and land, water, air use and management coordination on a regional (ecosystem) level**
 - Clearly identify watershed needs on a basin and regional level. Establish goals and authority/leadership or chain of responsibility to address this.
 - Establish a Great Lakes vision for management goals; identify the societal goals too
 - Address multiple sources of stresses through an eco-system based approach rather than managing individual sources of stress of specific species.
 - Engage diverse array of groups to maintain interest, provide education and gain a regional sense of ownership
 - Work with states to establish frameworks
 - b **Leadership on the local level**
 - Work with the 26 Great Lakes Basin MPO's and RPO's to implement basin-wide sustainable land development programs.
 - Train tomorrow's leaders and professionals.
 - Provide technical, planning and process assistance to communities.
 - c **Foster inter-jurisdictional communication and data collection**
 - Co-host regional land use education workshops and conferences within the regional ecosystems to bring LGUs together.
 - Share success stories
 - Provide a web-based link for communication and information from a Great Lakes Regional perspective (i.e. duluthstreams.org)
 - d **Monitoring/assessment of land use planning and preservation efforts**
 - Provide for bi-national support for funding and implementation of efforts to set standards and coordination of data collection (see data integration and information distribution issue area)
 - Develop indicators to evaluate protection and restoration efforts to stressors
 - Provide better data at local level and how it fits into the context of the Great Lakes Region.
 - Motivate locals to do it
 - Coordinate a monitoring program to determine basin-wide progress toward sustainable goals

4. **Who is the targeted audience for Integrating Ecosystem Management into planning?**
 - a Watershed Councils and NGOs
 - b State Natural Heritage Programs
 - c TNC and other regional land conservancies
 - d Natural History Museums

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- e Trust for Public Land
- f DU, Audubon
- g RPOs and MPOs
- h State Environmental Regulatory and Resource Management agencies
- i Federal agencies with land holdings/land management responsibilities

D. Other Needs in CCD

1. Other needs in CCD that were identified include:

- a First nations need representation within this needs assessment.
- b Connect research community with CMP community
- c Grant capacity building
- d Assistance in identifying coastal and natural resources among local jurisdictions and setting habitat restoration priorities
- e Provide for Coastal Access
- f Capacity building

2. Why are these needs?

- a **First nations representation in the needs assessment**
 - (1) This audience comprises an important part of the Great Lakes region and the values, strengths, and needs within these communities should be addressed.
- b **Connect research community with CMP community**
 - (1) Currently there are no clear forums in place where CMP managers work with the research community in setting priorities. An example from MI shows that even within one state the coordination of needs between CMP managers and the universities can prove to be difficult.
- c **Grant capacity building**
 - (1) LGU's are not always effective in grant writing and management
 - (2) Lack of knowledge of funding opportunities of various programs for CMP/CCD needs.
 - (3) Lack of awareness of existing research leads to funding of projects that have already taken place elsewhere
- d **Assistance in identifying coastal and natural resources among local jurisdictions and setting habitat restoration priorities:**
 - (1) Focus has been on water quality and quantity and less on habitat.
 - (2) Lack of resources (people and funding)
- e **Provide for Coastal Access**
 - (1) Coastal access is critical in order to have public support for CMP policy. Have to maintain opportunities for the public to connect with the lakes.

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f **Capacity Building**

(1) There are known and unknown needs. A challenge exists in moving communities to recognize their unknown needs. This requires communities to have more information in order to raise their awareness.

(2) Different programs (examples given: state level CMP or MPO's/RPO's) have different capacity needs and this should be reflected in the interactions of these entities with the Center.

3. **How could these needs be met?**

a **First nations representation in the needs assessment**

- Include them in focus group or survey method

b **Connect research community with CMP community**

- Create a forum to coordinate Coastal Management Programs research needs with research entities to identify opportunities for:

- Joint funding of research
- Funding Coordination (Challenge is that organizations operate on different funding cycles, which makes coordination important but also difficult)
- Setting priorities for the region at the state and regional level.

c **Grant capacity building**

- Provide training and guidance in writing grants for land use planning and implementation (i.e., development of ordinances, education tools, incentive programs, etc.)
- Connect research community with grants community to promote more focused research
- Establish a resource that assists LGU's in identification of grant program opportunities.

d **Assistance in identifying coastal and natural resources among local jurisdictions and habitat restoration priorities**

- Provide for regional scale of natural resource inventories
- Provide functional value analysis of the natural resource inventories and help LGUs prioritize land use tools for the resource (i.e., land acquisition, transfer development rights, best management practices, etc.)
- Restore coastal habitats in cooperation with LGUs
- Identify "canary" species (i.e., provide indicator species of ecosystem health and their "limiting factors" (i.e. their requirements to keep them flourishing).
- NOAA could play a role in providing data that is identified by states as a need. For example documentation of habitat fragmentation.

e **Provide for Coastal Access**

- Inventory lake access points.
- Provide education (physical and visual impact) should lake access be lost to the public.

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E. Suggested Discussion Items for these needs

1. Capacity Building for MPOs and RPOs and Extensions who are key players in CCD
2. Some confusion over “needs” – of whom? By whom?
 - a Audience is one step above the end user as Center typically works with CMP programs and Sea Grant/Extension programs
 - b Need to add Universities to audience
 - c Need to add First Nations to audience
3. What needs to be done within NOAA to better communicate its programs and services to the GL region—include as basic question in needs assessment
4. Need more focus on state level needs—CMP program needs, Sea Grant needs, State Resource Management and Regulatory Agencies—those entities that will be communicating most with local decision makers and who will be implementing regional frameworks/approaches
5. CMPs in several Great Lakes states are the lead state “planning entities”
6. What about subregion – multi-county, multi-LGUs
7. Lacking an extension arm of the GLC regionally – extension is successful and has the extension arm locally
8. Where is added value
 - a Stop the duplication
 - b Some people on state level need to work with NOAA to reach into data; some also have similar NOAA capabilities, but would like NOAA data more accessible

IV. DIID Needs Discussion

The Data Information Integration and Distribution planning team recognized the need for a watershed (regional) approach regarding data and information, one which forces people to think across political boundaries. A core set of data layers across the watershed is needed in order to understand the changes taking place over time, predict trends, understand economic impacts, and make informed decisions, especially during critical times.

With eight states, one province, and multiple organizations creating and managing data, approaches to data collection, use of standards, and metadata production are very different. In order to create consistent data, organizations will need to recognize the benefits of utilizing standards and creating metadata, and make it a priority.

Utilizing and enhancing existing searchable metadata inventories and geospatial clearinghouses is essential in order to not duplicate efforts already underway regarding data access and exchange. However, legal agreements may need to be developed in order for increased data sharing to take place.

It was also recognized that communication between states is key, in order to not duplicate efforts, to utilize limited funding, and to share information on current projects. Local decision-makers and resource managers also need technical tools and training in order to manage their local watersheds.

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The following summarizes key comments received from planning team members that characterize the CCD issues under four broad themes: consistency; coordination and communication; technical assistance, and observing and monitoring.

A. Consistency within DIID

1. Consistency as a need within DIID includes

- a Data Standards
- b Determine compatibility of lake-wide programs that are conducted on a state-by-state basis
- c Indicator Development and Implementation

2. Why is Consistency a need?

- a On a lake-wide scale, with eight states, various regional commissions, and one province (all working under different mandates) it is difficult to achieve consistency regarding data and information
- b Need consistent data in order to do predictive modeling of the human impacts to the environment and in turn to determine effectiveness of management and decision-making
- c The incentives for local data collectors to utilize data standards and to create metadata are not always clear
- d Lack of funding equals poor data management and therefore reduced access to data
- e Organizational priorities have not focused on data management or metadata creation
- f Local, state, regional organizations use unique methods for data collection, management and exchange
- g Many indicators already exist, but are they feasible and can they be measured?

3. How could these needs be met?

a Data Standards

- Agree on, expand (customize standards), and implement standards (metadata, scales, projections, geo-referencing) for future data collection
- Involve users in creating the standards to ensure buy-in and to emphasize how this would benefit them
- Ensure data standards are adhered to through contracts and as requisite for receiving funding
- Adopt Z39.50 (computer-to-computer information searching) protocols for all metadata tools and applications used in the public sector
- Require mandatory metadata production before sharing data through a clearinghouse structure (see NY and ON example)
- Normalize historic data to make it compatible with current and future data

b Compatibility

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- Inventory programs to determine compatibility before establishing templates for standard data collection methods
- Develop geodatabase templates for data collection and management – using key attributes. Allow for additional data pertinent to specific programs/projects
- c Indicator Development and Implementation**
- Determine the overlap between NOAA/OCRM requirements on a state level and SOLEC indicators

B. Coordination and Communication within DIID

1. **Coordination and Communication in DIID as a need includes**
 - a Data Sharing through Regional Coordination
 - b Partnerships

2. **Why is Coordination and Communication a need?**
 - a Data is isolated in various organizations
 - b Restrictions on data sharing within organizations (local, state, regional)
 - c Need a watershed approach in order to work across boundaries
 - d Reduce the “re-creating the wheel” syndrome
 - e Address the lack of communication between data collectors and data users

3. **How could these needs be met?**
 - a Data Sharing through Regional Coordination**
 - Develop MOU's or other agreements (e.g. Ontario Geospatial Data Exchange) between regional, state, and local agencies for ease of data exchange between groups; work to resolve issues related to legal data sharing for effective partnerships
 - Continue to use GeoSpatial 1-Stop website as data clearinghouse, rather than duplicating efforts
 - Utilize metadata clearinghouses currently in use (such as Ramona) and continue to populate databases
 - Develop similar databases for outreach and research activities
 - Enhance GLIN as regional portal for data
 - Develop and coordinate a binational working group to implement and promote data analysis, modeling, visualization tools, and data sharing agreements
 - Develop core set of data layers across the Great Lakes basin
 - b Partnerships**
 - Engage key organizations (federal, state, provincial, tribal, local) who are responsible for managing data to develop a Great Lakes regional partnership, in order to create relationships and networks to help organizations develop consistent principles and practices for geospatial data management across the region
 - Provide funding and coordination for these partnerships to help reduce duplication of funding and data collection.

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- Develop web-based meetings and regional conferences and workshops to share work, showcase successes, and strengthen partnerships
- Utilize the Regional Data Exchange (RDX) as an opportunity to talk about data sharing agreements
- Utilize conferences (e.g. RDX) to bridge the gap between data collectors and resource managers, especially in regards to product development
- Develop and coordinate a communications work group to deliver scientific and technical information to the other user groups.

C. Technical Assistance within DIID

1. Technical Assistance as a need in DIID includes

- a Training and Education
- b Product Development

2. Why is Technical Assistance a need?

- a Local staff expertise varies across the region
- b Its not necessarily a lack of data and information, but how to make data accessible and in a format that people can use to aid in decision-making

3. How could these needs be met?

a Training and Education

- Provide regional training at Great Lakes resource conferences (e.g RDX), workshops, etc. on data and information management topics
- Develop a Great Lakes Ecosystem Education Program to focus on Great Lakes resource management and data collection and analysis
- Determine how existing NOAA products can be geared toward local user training and education – Geosmart program is a funding program to help LGU with GIS capabilities and enforcement of standards, Metadata Bob (metadata training)
- Create tools and layers available at the local level and in a format consistent with the capabilities and expertise at that level, provided at a low cost through community colleges and U-Extensions
- Metadata training at a regional location
- GIS (ArcHydro) training for user groups, based on their capabilities
- GIS training for managers

b Product Development

- Create and make available high resolution bathymetric and benthic habitat map of Great Lakes including a focus on near shore environment
- Wind energy – need deep water off shore issues (bathymetry, habitat, etc.) may be prevalent too as need arises for wind energy use – turbines in shallow water, but off shore.

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- Provide funding and mapping assistance for hi-resolution aerial photography with updates every five years.
- Create LIDAR coverage of the Great Lakes in order to monitor erosion and shoreline recession
- Develop a suite of easily available mapping layers to aid local governments in planning decisions (i.e. "landviewer")
- Develop databases and provide technical assistance to help states track performance measures mandated by the Center
- How will the Center play a role in the re-design of GLIN – IOOS will drive much of this, but education outreach is necessary
- Adopt and utilize Midwest Spatial Decision Support Tools Partnership (<http://www.epa.gov/waterspace/>) as a model to deliver web-based tools to local decision-makers

D. Observing and Monitoring within DIID

1. **Observing and Monitoring in DIID as a need includes**
 - a Enhancing Observing Systems (Focus on Coastal Community Development and Ports & Navigation for observing and monitoring systems)
 - b Regional Monitoring Coordination (Focus on physical near-shore environment)
2. **Why is Observing and Monitoring a need?**
 - a Need for better coordination, integration and enhancement of observing systems on a lake-wide and regional scale
 - b Inventories of monitoring programs are underway, but are not comprehensive and are not guaranteed to be maintained
 - c Inconsistencies among various jurisdictions of comprehensive basin-wide programs.
 - d State mandates for monitoring differ
3. **How could these needs be met?**
 - a **Enhancing Observing Systems**
 - Increase data collection efforts for gauging stations and off-shore buoys, as well as terrestrial and atmospheric observations.
 - Implement and fully fund the Great Lakes Observing System (GLOS) to provide integrated observations and monitoring.
 - Make adequate funds available to support a Great Lakes Research Office to integrate research activities
 - b **Regional Monitoring Coordination**
 - Add information to the Great Lakes Monitoring Inventory for Canadian programs, site specific monitoring, funding sources, and descriptive program information and circulate the Inventory throughout the monitoring community to ensure accuracy.
 - Encourage both local and regional participation at planned monitoring coordination meetings

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- Utilize Lake Committees and LaMPs to organize and support binational Great Lakes monitoring coordination
- Look at successes of key programs and their applicability throughout the region (e.g. DuluthStreams.org website)
- Attract funding specifically for the Great Lakes Region with a unified voice.

E. Who is the targeted audience for DIID?

1. REGIONAL/NATIONAL GROUPS

- a GLERL
- b Army Corps of Engineers
- c USGS
- d USEPA
- e USF&WS

2. LAKEWIDE/STATE GROUPS

- a Lake Basin efforts
- b LAMP
- c State data managers
- d State GIS coordination bodies
- e Lake Erie Millenium Network
- f Regional Planning Commissions
- g Researchers

3. LOCAL

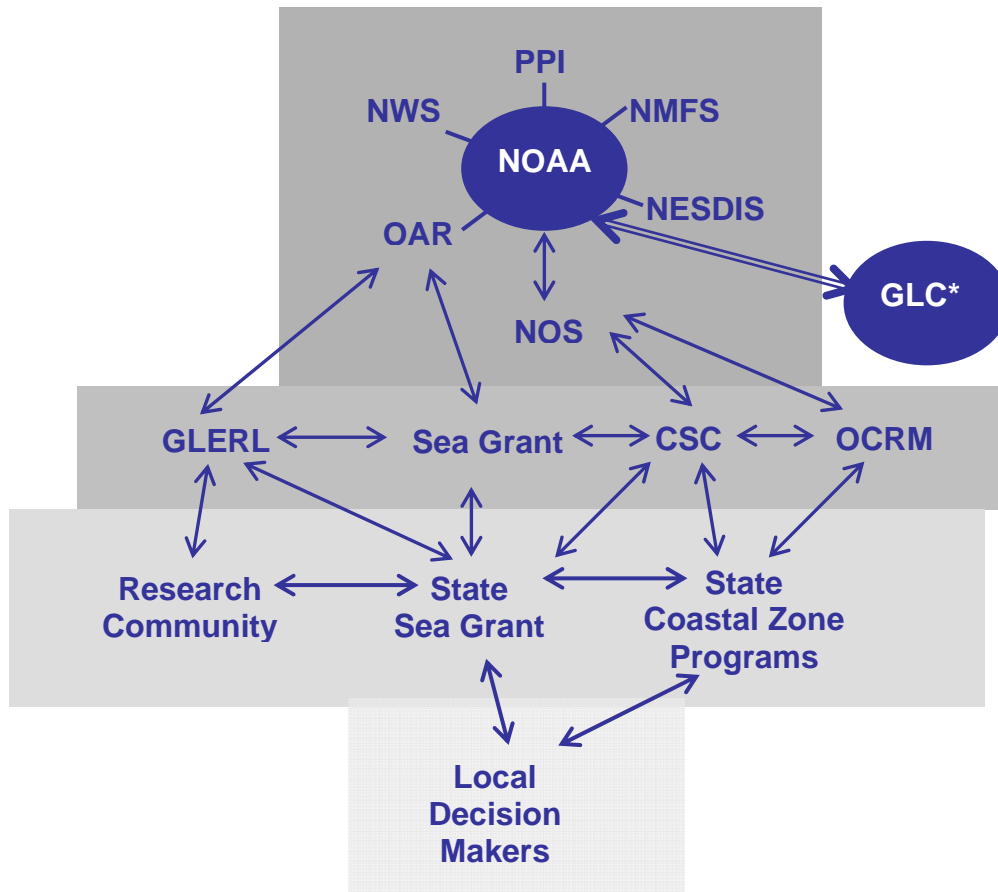
- a County Governments
- b Planners

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V. Discussion of the Roles of NOAA/ GLC / Other Organizations

The following organizational chart of various national, regional, state, and local organizations was created during the February 13-14 Planning Team meeting, in order to provide a visual of how various groups interact with each other and their relationship with NOAA as a resource of information. The thought behind the flow of information is that NOAA has technical capabilities and data available – The Center could act as a conduit (as an advocate within NOAA), tailoring that information and serving it to the statewide organizations (Coastal Management Programs and Sea Grant), who in turn can deliver that information to local decision-makers in a format they need.

The line of communication between NOAA and its' Center is a two way direction, where NOAA utilizes the Center (as an advocate for the state organizations) to deliver the technical support and meet funding needs of the states (and local decision-makers).



*The chart above more accurately reflects the NOAA network. The GLC, on the other hand, is different. GLC is more aligned with NOS in that it formally and regularly communicates directly with :

- GLERL (official observer to GLC)
 - Sea Grant Network
 - CSC
 - OCRM (official observer to GLC)

Great Lakes Needs Assessment Minutes from Planning Team Meetings February 13-14, 2006

NOAA's strengths that were identified as part of the discussion included:

- Remote Sensing capabilities
- GIS
- Human Dimension/Social needs
- The current structure could easily accommodate a Great Lakes Center as an extension arm of existing NOAA capabilities within the Great Lakes. However, connecting the Great Lakes to all the NOAA departments may be more difficult. The Center can assist with better connecting existing NOAA capabilities to Great Lakes needs and determine new capabilities that need to be developed.

As background the GLC has been coordinating policy development, advocacy and communications across the region for over 50 years. The GLC shares leadership on many issue areas with other regional entities, including the Council of Great Lakes Governors, Great Lakes Fishery Commission, International Joint Commission, the Great Lakes and St. Lawrence Cities Initiatives, the Northeast-Midwest Institute and the newly formed Great Lakes Interagency Task Force. All of these parties have been engaged in completion of the Great Lakes Regional Collaboration's Restoration Strategy, a multi-stakeholder initiative to define strategic needs for restoring and protecting the Great Lakes.

Several of the recommendations included in the final report of the Commission on U.S. Ocean Policy call for creation of "Regional Ocean Governance Councils," which would direct policy development, strategic planning and resource allocations for integrated observing systems. The report also called for existing institutions to carry out these mandates, whenever appropriate. The Gulf of Mexico Alliance is the first such council created, led by the Governors of the five states bordering the Gulf. At the present time, it is unclear whether the Council of Great Lakes Governors will assume a similar role, or if the GLC will support similar management responsibilities. The Great Lakes Compact, signed in 1955, provides the legislative authority for the GLC to do so.

According to Roger Gauthier, regardless of the evolution of these roles, the GLC will continue to apply its considerable expertise and leadership to issues of coastal community development, data integration and dissemination and be an advocate for maintaining sustainability of maritime trade on the lakes. A logical role for the GLC's would be as a facilitator in implementing recommendations that may arise from this Needs Assessment activity. The following GLC strengths were identified:

- Coordination
- Data Integration
- Communication, Information Sharing and Outreach
- Policy Analysis
- Advocacy