

**Lake St. Clair Coastal Habitat Project Management Team Meeting  
February 11, 2004  
Great Lakes Commission  
Ann Arbor, Michigan**

**Attendees**

<b>Name</b>	<b>Agency</b>	<b>E-mail</b>
Bob Haas	Michigan DNR	<a href="mailto:haasrc@michigan.gov">haasrc@michigan.gov</a>
Dave Kenaga	Michigan DEQ	<a href="mailto:kenagadl@michigan.gov">kenagadl@michigan.gov</a>
Ernie Kafcas	Michigan DNR – Wildlife	<a href="mailto:kafcase@michigan.gov">kafcase@michigan.gov</a>
Andrea Kline	The Nature Conservancy	<a href="mailto:akline@tnc.org">akline@tnc.org</a>
Jeff Adkins	NOAA Coastal Services Center	<a href="mailto:jeffery.adkins@noaa.gov">jeffery.adkins@noaa.gov</a>
Alyssa Olson Callahan	PSGS/NOAA CSC	<a href="mailto:alyssa.olson-callahan@noaa.gov">alyssa.olson-callahan@noaa.gov</a>
Tameka Dandridge	U.S. FWS	<a href="mailto:Tameka_dandridge@fws.gov">Tameka_dandridge@fws.gov</a>
Suzan Campbell	Great Lakes Commission	<a href="mailto:scampbell@glc.org">scampbell@glc.org</a>
Roger Eberhardt	Michigan DEQ – Office of the Great Lakes	<a href="mailto:eberharr@michigan.gov">eberharr@michigan.gov</a>
Mark Richardson	Macomb Co. Prosecutors Office	<a href="mailto:mark.richardson@macombcountymi.gov">mark.richardson@macombcountymi.gov</a>
Dave White	Walpole Island First Nation	<a href="mailto:dave.white@wifn.org">dave.white@wifn.org</a>
Matt Doss	Great Lakes Commission	<a href="mailto:mdoss@glc.org">mdoss@glc.org</a>
Tom Rayburn	Great Lakes Commission	<a href="mailto:tray@glc.org">tray@glc.org</a>
Jahn Paskus	Michigan Natural Features Inventory	<a href="mailto:paskusj@michigan.gov">paskusj@michigan.gov</a>
Victoria Pebbles	Great Lakes Commission	<a href="mailto:vpebbles@glc.org">vpebbles@glc.org</a>
Bill Parkus	SEMCOG	<a href="mailto:parkus@semcog.org">parkus@semcog.org</a>
Dora Passino-Reader	U.S. Geological Survey	<a href="mailto:dora_reader@usgs.gov">dora_reader@usgs.gov</a>
Rose Ellison	U.S. EPA	<a href="mailto:ellison.rose@epa.gov">ellison.rose@epa.gov</a>
Amy Mangus	SEMCOG	<a href="mailto:mangus@semcog.org">mangus@semcog.org</a>
Brian Potter	Ontario MNR	<a href="mailto:brian.potter@mnr.gov.on.ca">brian.potter@mnr.gov.on.ca</a>

**Review of Project Milestones**

Victoria Pebbles of the Great Lakes Commission (GLC) provided an update in reference to specific milestones as outlined in the project work plan, including:

- The Potential Conservation Area data layer is well under development with the U.S. side completed and the Canadian side currently being compiled
- The Integrated Coastal Management Tool is in its first release for review and comment
- Significant portions of the Draft Coastal Habitat Conservation and Restoration Plan have been prepared and submitted for initial review

- The Project Management Team has been meeting regularly and has provided strong input and direction to the process

### **Update on the Lake St. Clair Management Plan**

Matt Doss, GLC, presented background and an update on the Lake St. Clair/St. Clair River Management Plan. The effort was executed in response to 1999 U.S. legislation mandated the U.S. Army Corps of Engineer (Corps) prepare the Plan. In 2000, the Corps began work with the GLC to begin the study. The work was done within the context of the existing Four Agency Letter of Agreement between the Canadian and U.S. federal governments, the Province of Ontario, and the State of Michigan. The Plan's focus is to identify the source and cause of environmental degradation in the Lake St. Clair basin. The final draft was delivered to the Corps in October 2003 and it should be submitted to the U.S. Congress within the next month or two. The document included a comprehensive suite of recommendations for the U.S. side of the basin. The Management Plan was initiated in tandem with an effort to inventory monitoring programs within the Lake St. Clair basin. The Lake St. Clair Coastal Habitat project responds directly to the recommendations in Management Plan's chapter on habitat and biodiversity.

Mark Richardson, Macomb County Prosecutor's Office, noted that the Plan included little in land use planning laws to address the impacts of impervious materials. There is a need to document the impacts of urban sprawl on habitat to provide "evidence of linkages". Doss replied that implementation of the Plan will be at many levels, but there may not always be a legal requirement for jurisdictions to implement, only the authority. The Corps and GLC will be preparing an implementation matrix to accompany the Plan. NOAA CSC staff offered that a project in southern California is examining impacts on habitat from urban runoff may be used as a model to document impacts around Lake St. Clair.

A technical writing team has been established in Canada to develop recommendations for the Canadian portion of the lake. Both Canada and the U.S. are establishing separate watershed teams to prioritize and implement the Plan's recommendations.

### **C-CAP Products and Application**

Alyssa Olson Callahan, Perot Systems Governmental Services/National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center (CSC), presented a brief on the status of the NOAA CSC Coastal Change Analysis Program (C-CAP) data. C-CAP is a standardized database on landcover and habitat change, primarily for coastal regions of the U.S. derived from Landsat imagery. Data resolution is 30-meter pixels or roughly ¼ acre. Data is collected and analyzed for change in five-year cycles. For this project, the C-CAP years are 1995 and 2000 landcover data. This is the first cycle of data collection for NOAA CSC in the project area. On the U.S. side of the border data was collected for each year in three seasons (Fall, Summer, and Spring). On the Canadian side data was collected on during two seasons for each year. C-CAP generates classifications for large areas providing a good place to begin analysis.

Data was presented for the entire project area and also the smaller portion of Macomb County. General trends for the entire study area showed a small gain in the grassland, emergent wetland, low-intensity development and high-intensity development categories. Specific interpretation of the data at this scale is difficult and limited with only one cycle to observe. However, an increase in emergent wetland in this period could be tied to the high water regime in the Great Lakes in and around 1995 and the low water regime in and around 2000. The increase in development over this same period is supported by an actual housing boom in the area at this time. However, the increase in grassland may be tied to “agricultural lands confusion”. Fallow farm fields may be labeled grassland, for instance. Former farm fields awaiting development may be labeled bare or grasslands. Again, C-CAP is not a minute study but a way to track the general evolution of habitat change over a period of time to assist local, regional and national organizations in tracking and managing change.

In the Macomb County portion of the study example, a major class loss from 1995 to 2000 was cultivated land (-64 percent) and deciduous forests (-14.7 percent). The major class increase was grassland (41.1 percent), high-intensity development (25.9 percent) and low-intensity development (13.3 percent). Again, agricultural lands confusion may play a part. Local verification of the findings, as needed to support planning, is critical to the effective usage of the data.

Brian Potter, Ontario Ministry of Natural Resources (MNR), stated that they are currently collaborating with Ducks Unlimited Canada on producing a product similar to C-CAP for Southern Ontario. Instead of 30-meter landcover pixels they are using 25-meter and are refining the data with 5-meter resolution aerial photography. The completion of this work is currently stalled due to lack of funding. It was noted that once completed, this data could be imported into the ICM Tool for a refined analysis where data is available.

C-CAP analysis results will be integrated throughout the draft habitat plan under appropriate habitat sections, and a detailed discussion of C-CAP Products and Applications will appear in Section V of the Draft Plan.

For the PowerPoint presented by NOAA CSC, please refer to the project website at: <http://www.glc.org/habitat/activities.html>

### **GIS Ecological Modeling: Preliminary Results of Potential Conservation Areas**

John Paskus, Michigan Natural Features Inventory (MNFI), provided an update on MNFI’s modeling efforts to date to delineate Potential Conservation Areas (PCAs) within the study area. The model is based upon three elements: a frequency map, a probability map and ecological value. The frequency map plots the number of element occurrences (EOs) by section, quarter section and quarter-quarter section. An EO is a cataloguing of species, natural communities or other natural features of interest to this project. The probability map looks at the last observed date of an EO, the level of precision in the data and the existing habitat. The ecological value combines probability and frequency and adds qualitative information. This work has mostly been completed for the U.S. side of the study area. On the Canadian side, MNFI is working with

their sister organization, NatureServe, to distill and rectify the disparity of data (*i.e.*, in the U.S. there are 213 EO records and in Canada 3,774 records). The disparity is mainly due to the difference in record keeping techniques on each side. In Canada, each time data is gathered a new record is generated; in the U.S. existing records are mostly modified unless a new EO is encountered. In addition, EO types are not identical of each side of the border (*i.e.*, Canada tracks the Great Blue Heron, the U.S. does not) but these differences will be maintained for each side in the generation of PCAs.

The generated PCAs are based on ecological principles, total size, size of core area, the presence or absence of a stream corridor, connectivity (to other natural features), restoration potential of surrounding lands, and the total number of EOs. Preliminary results for the U.S. side show a total of 305 sites, with a total acreage of 47,917, average size of 157 acres, and the largest single PCA of 8,975 acres. These show a high frequency in Algonac/St. John's Marsh area and Belle Isle; a high probability in St. Clair Flats area, Algonac State Park, Metro Beach and Belle Isle; and a high biodiversity value in the St. Clair Flats area and Belle Isle. Outstanding work and issues for the finalization of the PCA delineation include:

- there are some discrepancies between C-CAP data and aerial photo interpretation (Macomb County);
- MNFI still needs a few Canadian datasets;
- a "Quality Vegetation" index could be added for Michigan;
- possibly add parcel fragmentation for Michigan (data is available for Macomb County and the ICM Tool can also provide this layer).

The group stated that aquatics data could be added to increase value of the overall product and extend the scope of the work beyond the shoreline. Dave White, Walpole Island First Nation (WIFN), stated they have data on mussel beds. Ernie Kafcas and Bob Haas, Michigan Department of Natural Resources (MDNR), said they have data on wintering areas for migratory waterfowl that could be used. Available aquatic data from PMT and the Advisory Committee should be forwarded to MNFI for analysis and inclusion as applicable.

Section VI(B), Priority Sites for Conservation and Restoration, will focus on MNFI's work on the PCA compilation.

For the PowerPoint presented by MNFI, please refer to the project website at:

<http://www.glc.org/habitat/activities.html>

### **Final Web Site and Online Data Delivery**

Pebbles gave a quick update on the final project web page design. Invasive species have been added under the category of "Stressors". Kevin Walters, GLC, is preparing abstracts of some of the most common aquatic invasives that will be posted to the site. In addition, the GLC is collecting data on aquatic invasive species for another project with the Michigan Great Lakes Protection Fund and this data will be included with the mapping component of the web site as well as the ICM Tool. The species for which data is being gathered includes: eurasian Watermilfoil, zebra mussel, round goby, ruffe, purple loosestrife, sea lamprey, and spiny water flea.

The GLC is finalizing their agreement with Ontario's Ministry of Natural Resources (OMNR) for the exchange of georeferenced data. This data is critical to the MNFI's PCA analysis, the ICM Tool and the online data delivery. It is expected that OMNR will be transferring approximately 50 gigs of data. The GLC will assess the data once received in-house.<sup>1</sup>

The draft final product website is online at: <http://www.glc.org/habitat/habitat.html>

## **Draft Conservation and Restoration Plan**

Preliminary drafts of Sections I (Introduction and Background) and II (Characteristics of the Lake St. Clair Ecosystem) of the Draft Coastal Habitat Conservation and Restoration Plan were distributed electronically to the PMT in advance of this meeting. PMT members were asked to review this document and provide comment.

A key point of clarification voiced by the PMT was that this Draft Plan needs to clarify the difference between habitat utilization and exploitation. Utilization implies that habitats have some anthropogenic value and such uses are supported in a sustainable manner. Exploitation implies uses that are not sustainable and result in degradation and eventual loss of habitat.

Discussion focused on the incomplete Section VI, Long-term Habitat Conservation and Restoration Objectives for Coastal Lake St. Clair, of the Draft Plan. Rose Ellison, U.S. Environmental Protection Agency (EPA) asked how these objectives will be delineated and what sort of implementation process might be recommended in the Plan. What will be the focus of the recommendations: the local jurisdictional level versus the 10-mile buffered study area or the entire watershed? Will this include specific language to update Master Plans? Local needs or individual jurisdiction and resource manager's needs should drive the ultimate content and implementation strategy of Section VI. *The draft habitat Plan will not provide specific language for updating master plans, but rather a framework to improve local decisionmaking with respect to habitat conservation and restoration, primarily within the 10-mile buffer area. Such decisionmaking may include updating master plans, modifying local zoning ordinances and other formal and informal decisionmaking mechanisms. To the extent that the same habitat types and stressors exist elsewhere in the watershed, it will facilitate decisionmaking throughout the entire Lake St. Clair watershed.* The PMT agreed that implementing recommendations would be facilitated by a outlining what constitutes a "healthy ecosystem" upfront in the Plan. Dave Kenaga, Michigan Department of Environmental Quality (MDEQ), suggested the addition of a subsection concerning the Michigan coastal vegetation removal legislation with the section on stressors in the Draft Plan.

It was noted by the group that Lake St. Clair communities on the U.S. side of the border are not necessarily known for their preservation or proactive approach towards habitat management. PMT members stressed that for effective implementation of the Draft Plan, several elements were key:

- prescriptive actions based on the concept of sustainable use;
- appropriate tools based on legal authorities;

---

<sup>1</sup> OMNR georeferenced data was received at the GLC on February 27, 2004.

- demonstrated value of preserving habitat; and
- an overall philosophy or vision to guide individual action and coordinated efforts.

Pebbles asked that each PMT member review Section I and II and provide comment back to her within the next few weeks.

### **Integrated Coastal Tool Workshop**

The Integrated Coastal Management (ICM) Tool held its first partner review workshop in the afternoon of February 11. Alyssa Olson Callahan (PSGS/NOAA CSC) gave a presentation covering the concept of the tool, development timeline, Alpha 1 functionality, and showed two movie demonstrations. The workshop participants then broke out into groups to solve three example problems using the ICM tool. The group then reconvened to give feedback on the Alpha 1 tool, and discuss the timing of the next review opportunity.

The tool is currently scheduled for completion in August, 2004 with two additional opportunities for review. The Alpha 1 tool is a functional tool, but does not have all of the designed components of the final tool. Available in the Alpha 1 are the terrestrial statistics, output queries, maps and report output options.

A set of example problems, covering potential conservation and restoration questions, were given to each group. One example was to find areas of deciduous forest that are near other areas of deciduous forest, such that, planting deciduous trees may serve to link these areas and reduce forest fragmentation.

Comments were received on ways to improve the tool, such as changing the query naming convention to from code to plain English, changing the order of map layers in the output window. Many participants felt that the learning curve for the interface was very steep. Help files were not available as part of the Alpha 1 tool and many workshop participants were looking for help when unsure about how to proceed in the tool. Many comments were received on the need for those files to be built and available for the Alpha 2 review.

The workshop participants commented that the ICM tool is on its way to becoming a useful tool for Lake St. Clair. Several participants expressed an interest in hosting an Alpha 2 workshop.

### **Summary of Actions and Next Steps**

1. GLC staff will begin analyzing and including appropriate Canadian base data once received from OMNR.
2. PMT members will provide comments on Sections I and II of the Preliminary Draft Coastal Habitat Conservation and Restoration Plan to GLC staff by March 15, 2004. Additional comments on the direction and content of other sections are welcomed as well.

3. PMT and Advisory Committee members with georeferenced data – or data that can be mapped – on aquatic features should forward this to the GLC for distribution and inclusion with the PCA analysis, ICM Tool and online map interface.
4. GLC staff will keep the PMT advised on the Corps progress with the Lake St. Clair/St. Clair River Management Plan as it goes from review draft to final document submitted to Congress.
5. The comments received from the PMT in regards to Section VI of the Draft Plan will be taken into account as the Plan is further developed.
6. If groups would like to host a presentation and training on the ICM Tool as it is further developed, they should contact Alyssa Olson Callahan. The ICM Tool will be coming out in two more draft versions before the final is due for release in August 2004.
7. The PSGS/ NOAA CSC development team is currently exploring help options. Help files for the ICM tool will contain graphic examples, instructions for each tab input page within the interface, recommend next steps, video tutorials, a set of example problems to facilitate problem set up.
8. The PSGS/NOAA CSC development team is also exploring ways of improving the usability of the interface.
9. Bill Parkus of SEMGOC has expressed interest in hosting a workshop, as well as, Tameka Dandridge of US FWS.
10. Workshops for the ICM Alpha 2 tool will be held in April/May, the locations and audience are flexible depending on the host(s). The goal of the workshops is two fold, first, collect as much feedback as possible, and second, to reach as many potential users as possible prior to the release of the tool.