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**Illinois Coastal Management Program
Issue Paper – TAG L**

Lake Calumet and Calumet River Area

A. General Description

The Lake Calumet and Calumet River area is highly urbanized. The economy was once completely dominated by manufacturing, particularly the steel industry. The large mills are now gone, totally demolished and sitting idle as “brownfields”. However some steel-related and other heavy industries remain in the area. They transfer coal, lime, slag and other products to and from the Indiana mills. Large industrial structures still line the 8-mile length of the Calumet River, from its mouth on Lake Michigan to Lake Calumet. Historic, beautifully-designed steel bridges cross over the river at several points.

Working class neighborhoods surround the lake and river. They include South Chicago, South Deering, East Side, Pullman, and Hegewisch. Together these five neighborhoods hold nearly 100,000 people. Other nearby neighborhoods include West Pullman, Roseland, Calumet Park and Riverdale.

The Calumet area contains very important natural areas. Remnant prairie and wetland systems exist throughout the area on public and private lands. Some are recognized statewide for their high levels of native plant and animal species. Many are recognized by the state as Illinois Natural Area Inventory Sites.

This unique mixture of industrial and natural lands gives the Calumet region a remarkable landscape. It is a landscape of extremes, of remarkably valuable habitats amidst vast spent fields of industry. It offers enormous potential for community revitalization in a post-industrial era. Local residents and planners are now struggling to conceptualize this landscape and shape it for the future.

Calumet River

Originally the Calumet River drained an area in excess of 700 square miles. It meandered across northwestern Indiana and part of southern Cook County before heading back into Indiana and draining into Lake Michigan. Several artificial additions were made to the river system since the early 1800s, one of which was an outlet channel that was created between the river and Lake Michigan. This made two rivers. The Little Calumet flowed westward across the region and into Lake Michigan at South Chicago. The Grand Calumet flowed eastward into the Calumet Lagoons in Gary.

Another major alteration occurred in 1922 with reversal of the flow of a lower portion of the Little Calumet. This caused the entire system to flow predominantly toward the Illinois River. Then the O’Brien Lock/Dam was built in 1960 to control the water level in the Calumet-Sag channel (below the dam) and reverse the flow of water to Lake Michigan (above the dam). This left the main stem – the Calumet River – with a predominant flow into Lake Michigan. However, the Little Calumet below the dam continues in a predominant flow westward into the Cal-Sag Channel.

During times when the lock/dam is closed, it is the effective divide between the Lake Michigan and the Illinois River drainage systems. Under certain low flow conditions, water will be diverted south through the O'Brien Lock/Dam, establishing a flow gradient that can draw water south from the Calumet River, Lake Calumet and Lake Michigan (as well as Wolf Lake, an inland lake linked to the Calumet River by Indian Creek). The flow under these conditions has very low velocity, and water in the Calumet River channel can flow in both the north and south directions in different sections of the river and/or at different times. Prevailing winds can have great effects on flow rates and direction. In extreme floods, the gates of the dam are opened to reduce flooding and the Little Calumet River reverses flow and flows northward into Lake Michigan. Therefore, improving these inland waters can have a direct improvement on the quality of water entering Lake Michigan.

The Calumet River, considered a tributary to Lake Michigan, now drains an area of 16.8 square miles. The river is approximately 8 miles in length, extending from upstream of the O'Brien Lock and Dam to Calumet Harbor on Lake Michigan. It has an average width of 450 feet. The average depth of the channel is 27 feet, but the actual navigation depths may vary due to the fluctuations in the level of Lake Michigan.

The Calumet River is a deep draft shipping channel and a thoroughfare for commercial navigation. The channel banks consist of vertical or near-vertical sheet-pile, concrete walls and riprap. Very little riparian vegetation exists along the Calumet River, except in the vicinity of the landfills located north of the banks.

Some limited recreational activities occur on and along the river including fishing and power boating. Canoes are rarely brought into the river, although the river is a preferred site for experienced paddlers because of its intriguing industrial setting. The river contains various species of fish, including shad, carp, emerald shiner and bluntnose minnow. Common game fish include green sunfish, pumpkinseed, bluegill, smallmouth bass and largemouth bass.

Lake Calumet

Lake Calumet is approximately 15 miles south of downtown Chicago. It contains 442 acres of open water. Its primary use today is commercial navigation. Lake Calumet is connected to Lake Michigan by the Calumet River. It is connected through the O'Brien Lock and Dam to the Cal Sag Channel, the Illinois River and the entire North American inland commercial navigation system.

Lake Calumet was originally only about 6 to 10 feet deep. During the late 1800s the area around Lake Calumet was promoted as an attractive place to set up industry. The manufacturers that built plants and mills in the region were soon dumping so much waste into the lake that by 1882 over 30 acres of land had been artificially added to the lake's natural shoreline.

Today the southern portion of the lake consists of primarily deep-draft channels, while the northern portion of the lake is shallow (2-6 feet) with a clay bottom. Most remaining industry and shipping activity occurs in the southern portion of the lake. Southwest of the lake, on the western side of I-94, is a considerable area of wastewater lagoons that is part of the Metropolitan Water Reclamation District's (MWRD) Calumet treatment facility.

Lake Calumet is a dominant hydrologic feature of the Calumet Region. It is the only inland lake hydrologically connected to Lake Michigan via the Calumet River. Lake Calumet provides migratory bird habitat as well as feeding and spawning habitat fish species. Sections of the Lake Calumet shoreline have limited wetland systems that are dominated by canary reed grass (*Phragmites* sp.), and cat-tail (*typha* sp). Lake Calumet currently hosts a number of Illinois state endangered bird species, including the black-crowned night heron, the little blue heron, and the yellow-headed blackbird. The surrounding area is a stopover for migrating bird species from across North America.

Lake Calumet has very little instream structure and emergent aquatic plants for fish habitat and foraging. Some of the slip channels on the eastern side of the lake contain rip-rap and debris material along the banks. Although the lake has limited fish habitat, it has the potential through restoration efforts to provide diverse aquatic habitat for fish and wildlife. Aquatic habitat could be created to support many Lake Michigan fish species, as well as many warm water game species. Lake Calumet already provides abundant habitat to support bird species, including waterfowl and gulls.

Lake Calumet is generally off limits to shoreline fishing. However, boat fishing can be conducted on the lake. Boat access is gained via the Calumet River from Lake Michigan, or from public and private boat launches on the other side of the O'Brien Lock/Dam.

Lake Calumet and the Calumet River are surrounded by intensively used industrial lands. Many are abandoned brownfields, while others remain in active use. The area is also a major site for landfills, sewage, and waste incineration. Significant sites, most of which are privately owned, on or near the shores of the lake and river (but not necessarily included within the ICMP Boundary) include the following:

- Dominion Energy Plant, a significant source of mercury and particulate matter;
- Former LTV coke plant;
- Former Acme coke plant;
- Former Republic Steel site;
- Former USX South Works site;
- Former Wisconsin Steel site;
- People's Gas cleanup site, which used to receive waste gas from Acme coke plant;
- PVS Chemical company, a sulfuric acid plant;
- Waste Management CID landfill, the last active landfill in the city of Chicago;
- Waste Management gas to energy facility on 130th Street;
- MWRD sewage treatment plant on 130th Street;
- MWRD sewage sludge drying facility in the Lake Calumet wetlands;
- Cluster Sites where a group of hazardous waste disposal sites exists;
- Paxton landfill in the toxic "cluster sites" landfill area;
- Land and Lakes landfill;
- Chemical Waste Management toxic incinerator, closed in 1991;
- Calumet River industries, such as:
 - Beemsterboer, a coal transfer station
 - KCBX Terminals, a coal transfer station
 - Holcim (US), a slag/cement grinder
 - SH Bell Company
 - Carmeuse Natural Chemicals, a lime kiln
- Two scrap metal companies.

B. Issues of Concern

The general areas of concern requiring close attention are the following:

- a) Industrialization - The City of Chicago has taken a number of steps to promote industrial development in order to rebuild the job base within the Calumet area and to make use of brownfields. Communities and organizations need to continue to work with industry in promoting development in keeping with the sensitivity of the environment. A moratorium on new or horizontally expanded landfills in the city of Chicago, in effect since 1984. Many people believe that this should continue.
- b) Protection of Natural Areas should be a priority in the Lake Calumet area for coastal wetland bird species. Attention towards improvement of these areas or acquisition of such areas for preservation is needed.
- c) Public Access and Trails - Many believe that public recreational access to Lake Calumet and the Calumet River should be improved. Improving and providing for appropriate and safe access points and trail connections are desirable.
- d) Water Quality Improvements - High bacterial counts due to natural sources may prevent Lake Calumet from becoming a whole-body contact recreation water body. Data collected by IEPA in summer of 2004 indicate that E. coli levels (>126 cfu) were highest in areas of active gull and waterfowl use and lowest in areas of non-waterfowl use. Water quality improvements to Lake Calumet and to the inland waterways needs are needed.

C. Management Considerations

- a) Industrialization – Community groups and civic organizations led early planning efforts for the renewal of the Calumet area. They became active as the area de-industrialized during the 1980s and 90s. The Southeast Environmental Task Force, the Calumet Ecological Park Association, Openlands Project and other civic organizations joined together to assess the landscape, make maps and envision the future.

More recently, government agencies have produced important plans for the region. These plans cover three main areas of the Calumet Region: the city of Chicago; south suburbs; northwest Indiana. Important plans touching specifically upon Lake Calumet and the Calumet River include the following:

Calumet Area Land Use Plan (2002)
Calumet Design Guidelines (2004)
Calumet Open Space Reserve Plan (pending)
Calumet Area Ecological Management Strategy, Phase I Sites (2002)

- b) Protection of Natural Areas – The city is now concentrating on sites around Lake Calumet. These restorations will someday surround the lake with extensive open lands. They will be high-quality natural areas tied together by multi-use trails for the benefit of local residents and visitors to the Calumet region. These include the following high-priority sites:

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- Hegewisch Marsh is in the later stages of site planning. More surface sampling is required, and the site will undergo a phased remediation. The city now owns a large part of the site, and is trying to purchase one area from Norfolk Southern Railroad. When acquired, this will be remediated and become home of the new Ford Calumet Environmental Center.
- Van Vlissingen Prairie is still in the site planning process. The city, working with consultants, will define ecological priorities during 2006 and perhaps begin rehabilitation of the site in the following year. When complete, the site may be turned over to the Chicago Park District and the Illinois Department of Natural Resources.
- Hegewisch Marsh and Van Vlissingen Prairie may become subject to the new Ecotox Protocol, currently under development by the city. This protocol sets down guidelines to protect the health of humans and entire ecosystems.

Other sites that the city is working on include:

- Indian Ridge Marsh, which the city is seeking to purchase through the tax-reactivation program;
- Heron Pond, also being acquired through the tax-reactivation program;
- West Shore of Lake Calumet, which the city would like to transfer to the Forest Preserve District of Cook County;
- Big Marsh, currently owned by Waste Management, is undergoing remediation.

Now the City of Chicago planning and environment departments are providing strong leadership for recovery of natural lands. Their work is guided by the *Calumet Open Space Reserve Plan* and the *Ecological Management Strategy (EMS)*.

- c) Public Access and Trails – Lake Calumet is within the Illinois International Port District. Community-based organizations are advocating for the western shore of Lake Calumet to be opened to public recreational use. They argue that the lake no longer supports enough active industrial uses to preclude public access. The Port District has expressed public safety concerns with the inability of deep-draft commercial ships and barges being able to see small watercraft and the difficulty or inability to maneuver or stop their vessels very quickly. The transport vessels create large drafts which can endanger small watercraft. The Port District believes that there are limited refuge points for small watercraft within the lake area. In addition, homeland security concerns are a concern.

So much work remains to be done to plan for these sites, to create the appropriate protocols for remediation, and to devise new recreational programs, and to build a system of multi-use trails that unites these areas and maximizes their value. The Coastal Management Program, when in place, could provide tremendous help in support of this work.

- d) Water Quality Improvements – In early 2003, the IEPA contracted a Use Attainability Analysis (UAA) study for the Chicago Waterway System which includes the Lake Calumet and Calumet River. It drew upon an extensive public outreach to local municipal authorities, industrial discharges and other interest groups, and a stakeholder advisory group. The UAA process is the first step in determining to what extent, if any, upgrades in standards are appropriate. It tests existing and potential waterway uses against six factors to judge whether CWA goals are achievable. If one or more of six specific factors applies, then there are justifiable reasons the goals can not reasonably be met. Two of the factors center on naturally occurring conditions, such as high bacteria from waterfowl or circumstances of low or no flow, and three of the factors concern irreversible human caused changes and conditions, such as sheet piling walls along the Chicago River banks and artificial hydraulic features, such as dams, locks and channelized river segments. The sixth factor centers on economics. A detailed engineering analysis will provide the cost and feasibilities of the various management options, with eliminating combined sewer overflows and disinfection of treated wastewater discharges expected to be two of the most costly.
(Source: <http://www.epa.state.il.us/environmental-progress/v30/n4/chicago-waterways.html>)

D. ICMP Opportunities

The Chicago Plan Commission adopted the Calumet Area Land Use Plan in 2002.
<http://www.csu.edu/cerc/documents/calumetarealanduseplan.pdf>

While the Land Use Plan was being completed, work began on the Calumet Open Space Reserve Plan, a document detailing the 4,000 acres of natural areas and wetlands. The Calumet Open Space Reserve Plan is the unified open space network for the Calumet area, particularly as it addresses natural areas protection, trail connections and public access along the inland waterways.

Over 200 species of birds are known to migrate through or nest in the Calumet area every year. Aquatic life is also surprisingly abundant, especially considering that many of the bodies of water are degraded, dredged or filled. Lake Calumet itself, for example, has over 20 species of fish. The Reserve Plan provides a vision for natural area preservation, rehabilitation, recreation, trail connections, and is a blueprint for local government action.

Concurrent with the Reserve Plan, the City of Chicago developed the Calumet Design Guidelines, which were adopted in March of 2004. The Guidelines address the private property in the area that is to be redeveloped for industry. The goal of the Guidelines is to articulate, describe and illustrate the City of Chicago's requirements for sustainable site design in the Calumet area. The document provides background information on soils, hydrology and ecology and provides guidance on the practical implementation of the Guidelines. The Guidelines are directed at those charged with creating and implementing a site design either for a new enterprise or for the expansion of an existing business.
(Source: http://www.asla.org/awards/2005/05winners/entry_104.html)

Many opportunities for trails, open spaces and water access points exist in the vicinity of Lake Calumet and the Calumet River. Plans for important multi-use trails promise to make the area a crossroads of recreational activities. The Burnham Greenway, a north-south trail,

will link the south suburbs to the Chicago lakefront. The Calumet-Sag trail will open east-west movement from Indiana all the way to Lemont, where the trail will join the I&M Canal National Heritage Corridor. When complete, these two multi-use trails will serve as main spines linking together many bike routes, greenways and natural areas. They will intersect somewhere around the South Shore station in Hegewisch or in Burnham.

Many potential public open spaces exist near or on the river and lake. They offer opportunities to improve and strengthen the regional open space network. Trail spurs lead to special points of interest. Neighborhood open spaces raise quality of life and add value to local communities. Water access points allow local residents to enjoy the Calumet waterways.

Trail Spurs:

- 1) 126th Street/Carondolet south to Hyde Lake Marsh wildlife viewing platforms.
- 2) 130th Street/Torrence south to the Ford Calumet Environmental Center. This would allow riders going along the south side of 130th Street to enter Hegewisch Marsh. It would supplement a new bicycle and pedestrian bridge crossing Torrence on the north side of 130th Street.

Neighborhood Open space sites (listed from north to south):

- 1) Houston/Baltimore vacant lots, which are important for the South Deering/Vets Park community. These lots offer the only open space east of Commercial Ave. between 95th and 100th streets, and contain abundant wildlife. They serve as a buffer between Calumet River industries on the west banks of the river (including a scrap metal processor and natural gas peaker plant), and the Skyway.
- 2) Trumbull Park/103rd – 109th Streets, where a large open area continues south of Van Vlissingen Prairie and offers potential high-value open space for South Deering neighborhood.
- 3) Steelworker Statue, a gift proposed by International Truck and Engine Corp. for former Wisconsin Steel site at 106th and Torrence.
- 4) “Bean’s Park” along the Burnham Greenway (106th-108th Sts. east side of path) is threatened by a parking lot.
- 5) ComEd stateline right-of-way, east of Ave. A on the Ill/Ind border, is all open field.
- 6) Shedd Property between 118th and 120th Streets, west of Eggers Woods FP and the Burnham Greenway and east of Avenue O. This property offers a possible site for an ATV park, to relieve current ATV invasions of Eggers Woods and the Greenway. It might also offer a good site for a drive-in movie theater.

Waterfront access/river parks (listed in two groups):

- 1) Riverfront sites (listed from north to south):
 - a. 92nd Street and Sanitation office - site of access to Calumet River; will require a detailed plan for submission to the alderman. The upcoming Hwy 41 relocation will impact planning for this site.
 - b. 95th/Holcim - site of access to Calumet River (see detailed write-up).
 - c. Wisconsin Steel site (International Truck and Engine is current owner), on west shore of river at 112th to 114th Streets, offers potential for a public access easement to view the Hulett's and Calumet River. SETF should meet

- with Gail Walker of EnviroCom, the PR firm representing Int'l Truck, to discuss entering negotiations for easement with any buyer of the property.
- d. Mouth of Indian Creek north of the wetland restoration, to which the city (per Kathy Dickhut) might provide public access from the Plastec parking lot (now part of the Chicago Manufacturing Campus).
 - e. MWRD SEPA Station at 126th/Torrence, which appears on city's land use plan as public open space. It offers good canoe and fishing access. The property is usually gated, and SETF must talk with Kathy and MWRD about its status. The site should become a part of the Task Force's interpretive stops.

2) Water trails access points:

- a. Hegewisch Marsh/South Shore rail bridge for canoe and kayak launch.
- b. Grand Calumet/Torrance Ave. bridge for canoe and kayak launch.

These sites offer multiple benefits for communities throughout the Calumet Region. They promise to enhance the Burnham Greenway as it traverses the East Side and Hegewisch neighborhoods. They will help to transform the greenway into a world class amenity. They give hope of finally opening Lake Calumet and the Calumet River to residents who have lived near them for so many years. These waterways will become places of recreation and enjoyment for local residents and visitors to the region.

Taken together, these many sites promise a unified open space network around Lake Calumet and the Calumet River. When claimed for public use they will greatly raise quality of life in surrounding communities. The Coastal Management Program could play a vital role in support of planning and program implementation.

E. Existing Authorities

Lake Calumet is within the Illinois International Port District. The Port District also operates Iroquois Landing terminal at Calumet Harbor on Lake Michigan. The terminal provides transloading services between barge and rail. Many maritime shipping service providers are clustered in this area.

The City of Chicago also plays a vital role in lake and river management. The city has established a large Tax Increment Finance (TIF) district along lands adjoining the lake and river. It intends to retain about 12,000 acres in industrial zoning and to create a heavy truck route to support industrial development. Industrial uses will therefore probably continue in the Calumet region for a long time to come.

Illinois Department of Natural Resources - William Powers Conservation Area

The IDNR manages this 580 acre of which 419 acres are water area (Wolf Lake).

U. S Army Corps of Engineers – Chicago District manages the Calumet Harbor and River Project

F. Existing Committees

Many government agencies and non-governmental organizations are active in the Calumet Region. They are seeking to remediate brownfields, rehabilitate natural areas, and raise quality of life. Active organizations include the following:

Calumet Stewardship Initiative (CSI)

To better coordinate the educational and stewardship programs offered by all providers including IDNR, Chicago Park District, Cook County Forest Preserve District and others, the Chicago Department of Environment initiated the CSI in 2001. The CSI aims to balance local economic, environmental and community objectives by working collaboratively with Calumet residents, businesses, industries and institutions. The CSI publishes a menu of events listing a wide range of educational and environmental stewardship opportunities for students, families, and adults. The CSI also coordinates the annual Calumet Stewardship Day. The Stewardship Day engages local students in hands-on environmental clean-up work and education.

Southeast Environmental Task Force (SETF)

SETF promotes pollution prevention, open space and environmental education. It pushed for the city's landfill moratorium. It plays a lead role in the Good Neighbor Dialogues with local industries for pollution prevention. SETF's Calumet Corridor Vision project helps local communities link natural and cultural sites with trails, bike paths, and interpretive features. The Calumet Corridor Vision is a unified open space concept. It is bi-state, multi-jurisdictional corresponding to the Calumet natural and cultural region. The Vision draws the Calumet region closer together by unifying its natural areas with new connections. This will open new opportunities for recreation, education, tourism and economic development. The Vision relies upon many plans to rehabilitate natural areas and link them together with greenways and multiuse trails.

Calumet Ecological Park Association (CEPA)

CEPA, founded in 1993, was the lead organization in efforts that resulted in the Calumet Ecological Park Feasibility Study conducted by the National Park Service in 1998. The study recognized the national heritage significance of the Calumet Region. The organization continues to support preservation of natural, cultural and historical areas in the region.

Calumet Heritage Partnership (CHP)

The Partnership is a diverse bi-state partnership of environmental, cultural and historical organizations, individuals, libraries, educational institutions, municipalities, and government agencies. Each partner is committed to celebrating, preserving and protecting the unique heritage of the Calumet region.

Currently, the Calumet Heritage Partnership is spearheading efforts to save the vestiges of Chicago's historic steel making structures, located in Southeast Chicago, the heart of Chicago's early steel industry. Attention is focused on the Acme Coke Plant site, along Torrence Avenue between the Calumet River and Lake Calumet. This site, which holds the last remaining steelmaking structures in the city of Chicago, may become the locale of a steel museum.

Lake Calumet Ecosystem Partnership (LCEP)

Organized concern for the preservation of natural resources in the Lake Calumet region

began in 1980, with the founding of the Lake Calumet Study Committee. It was joined by various organizations over the next two decades in struggles to prevent expansion of landfills and filling of wetlands. In 1998, a group of Calumet area organizations and government agencies came together to work for the preservation and enhancement of natural resources. In 1999, this group formed the Lake Calumet Ecosystem Partnership.

This LCEP Partnership focuses on:

- restoring the natural environment
- interpreting our history
- fostering a sustainable economy
- revitalizing our community
- protecting environmental health

Calumet Sustainable Growth Advisory Council

G. References

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