NEPA Public Meeting
Chicago Area Waterway System (CAWS)
Dredged Material Management Plan (DMMP)
Chicago, IL

Chicago District, May 2019
NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

Process to ensure that the government considers impacts to the human environment when making decisions

Public involvement
- NEPA allows public to participate and influence the decision
- Critical to ensure that all potential impacts are considered

Transparency and documentation for review and posterity
- Full disclosure and consideration of environmental information in agency decision-making
- Agencies must inform the public of potential impacts and alternatives and involve the public in decision-making
AGENDA

• Study Overview and Background
• Existing and Future Conditions
• Plan Formulation and Analysis
• Plan Evaluation and Selection
• Opportunities to Provide Input
STUDY OVERVIEW

Federal Navigation Authorities:

Calumet Harbor and River

Cal-Sag Channel

Non-Federal Sponsor:
- City of Chicago, as represented by Chicago Department of Transportation (CDOT)
The Chicago Area Waterway System (CAWS) is composed of:

1. Chicago River
2. Chicago Harbor
3. South Branch of the Chicago River
4. Chicago Sanitary and Ship Canal (CSSC)
5. Calumet-Saganashkee (Cal-Sag) Channel
6. Calumet River
7. Calumet Harbor

NOTE: Channels shown in color are projected to require dredging over the next 20 years. Calumet Harbor & River is a single federal navigation project, shown separate here for clarity.
WHY DREDGING IS NEEDED

Shallow-draft barges and towboat

*Shoaling reduces efficiencies of commercial navigation

Deep-draft vessels

*Shoaling requires some vessels to light load when authorized depths cannot be maintained
BENEFITS OF DREDGING

• Unique connection between Great Lakes and Mississippi River navigation systems
• Chicago is the 2nd busiest port in the Great Lakes (2017)
• Calumet Harbor and River: 7.5 M tons annually (2015-2017)
• Cal-Sag Channel: 4.8 M tons annually (2015-2017)
• These waterway movements support Chicago’s regional economy:
  • Generate revenues for multiple industries: waterways, port services, warehousing, transportation, and fuel providers
  • Supports ~1,800 jobs annually
  • Supports ~$460 M in industry revenues annually
PROJECTED DREDGING NEEDS

• Calumet Harbor & River and Cal-Sag Channel

• 1,030,000 cubic yards (cy) over 20 years
  • Calumet Harbor       500,000 cy
  • Calumet River        500,000 cy
  • Cal-Sag              30,000 cy

• Assume 50,000 cy/year
  • ½ Harbor; ½ River

• Small amount reserved for Cal-Sag Channel
  • No current plans for dredging
  • Not dredged since 70s
QUALITY OF SEDIMENT AFFECTS MANAGEMENT

1. Very Clean, Sandy = Open Water or on the Beach
2. Clean Fine, Clay or Silt = Some Beneficial Uses
   - On land as fill
   - In water as habitat (wetlands)
   - Calumet Harbor Sediment
3. Contains Pollution = Other Management Technique
   - Private management (landfill), treatment, confined disposal
   - Calumet River & Cal-Sag Channel Sediment

<table>
<thead>
<tr>
<th>Open-water placement</th>
<th>Beneficial use</th>
<th>Confined disposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct placement into water</td>
<td>Parks</td>
<td>Material safely enclosed</td>
</tr>
<tr>
<td></td>
<td>Roadbeds</td>
<td></td>
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<td></td>
<td>Urban Redevelopment</td>
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<td></td>
<td>Ecosystem Restoration</td>
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Chicago Area Confined Disposal Facility
### MANAGEMENT MEASURES AND SCREENING

<table>
<thead>
<tr>
<th>Measures</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td>No Action</td>
<td>Considered</td>
</tr>
<tr>
<td>Open Water Placement</td>
<td>Considered</td>
</tr>
<tr>
<td>Beneficial Use</td>
<td>Considered</td>
</tr>
<tr>
<td>Source Reduction</td>
<td>Considered</td>
</tr>
<tr>
<td>Minimizing Dredging Requirements</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Private Management (landfill)</td>
<td>Not Feasible</td>
</tr>
<tr>
<td>Sediment Treatment/Remediation</td>
<td>Not Feasible</td>
</tr>
<tr>
<td>Confined Disposal</td>
<td>Considered</td>
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Bottom line: only feasible management measures are being considered in detail in the study report.
BENEFICIAL USE OF DREDGED MATERIAL

• Calumet Harbor material is suitable for beneficial use

• Corps policy requires dredged material be put to beneficial use to the greatest extent practicable

• The Corps and the City of Chicago are working together to develop a plan for beneficial use

• There is a continuing demand in the project area for clean fill material for multiple uses
CONFINED DISPOSAL

• Calumet River and Cal-Sag Channel material is not suitable for beneficial use

• Confined Disposal is the only viable and safe management measure for contaminated sediment from Calumet River and the Cal-Sag Channel

• This is based on a comparison of effectiveness, scale, environmental concerns, and cost
Public Outreach Resulted in these Actions:

- Submit letter of support for Calumet master planning effort
  - CMAP grant application successful

- Re-evaluation of measures
  - Additional sites
  - Beneficial use
  - Private Management (Landfill)
  - Treatment alternatives

- Conduct an EIS rather than an EA
  - Based on public concerns

- Extended public comment period
  - From 45 to 60 days
Key Site Criteria:

- **Size** – provide required capacity
- **Natural Resources** – avoid quality habitat
- **Current Use** – prefer under-utilized land
- **Env. Conditions** – avoid likely response actions
- **Operability** – practical to build and fill
- **Waterway Access** – efficient handling and transportation
- **Upland Site** – beneficial use opportunity

5 sites appear to meet all of the above criteria
Final Array of Alternatives

- No Action
- Vertical Expansion of Existing Chicago Area CDF
- Former KCBX North Terminal
- Former Wisconsin Steel Site
- 116th Street and Burley Avenue
- Former LTV Steel Site

Detailed design, cost, and environmental analysis is used to identify the Tentatively Selected Plan (TSP)
## ECONOMIC EVALUATION OF ALTERNATIVE PLANS

<table>
<thead>
<tr>
<th></th>
<th>LTV</th>
<th>Wisconsin Steel</th>
<th>KCBX</th>
<th>116th and Burley</th>
<th>Vertical Expansion</th>
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</thead>
<tbody>
<tr>
<td><strong>Average Annual Benefits</strong></td>
<td>$10,900,000</td>
<td>$10,900,000</td>
<td>$10,900,000</td>
<td>$10,900,000</td>
<td>$11,072,000</td>
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<tr>
<td><strong>Average Annual Costs</strong></td>
<td>$5,124,000</td>
<td>$5,557,000</td>
<td>$4,980,000</td>
<td>$5,144,000</td>
<td>$5,074,000</td>
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<tr>
<td><strong>Lifecycle Cost</strong></td>
<td>$92,138,000</td>
<td>$98,090,000</td>
<td>$90,111,000</td>
<td>$91,983,000</td>
<td>$90,970,000</td>
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<tr>
<td><strong>BCR</strong></td>
<td>2.1</td>
<td>2.0</td>
<td>2.2</td>
<td>2.1</td>
<td>2.2</td>
</tr>
</tbody>
</table>

- LTV, 116th & Burley, KCBX, and Vert. Expansion preliminary cost estimates are within 2%
- Consider addition criteria/risks in selecting between seemingly equivalent alternatives
TRADEOFFS ANALYSIS + SELECTION OF A TSP

Vertical Expansion has less risk

- Furthest away from homes
- Addresses many concerns heard during public outreach
- Lower real estate risks
  - Little monetary value
  - Publically owned
  - Will not change future end use as open space
- Lower existing contamination risks
  - Same as current use
  - Operated safely since 1984

The Tentatively Selected Plan is the Vertical Expansion Alternative
### Natural Resources
- Geology & topography
- Hydrology & hydraulics
- Water quality
- Air quality
- Contamination (HTRW)

### Biological Resources
- Flora & fauna (plants & animals)
- T&E species
- T&E critical habitat
- Other high quality habitat
- Wetlands
- Floodplains

### Social/Cultural Resources
- Environmental justice
- Historic structures
- Tribal resources
- Recreation & aesthetics
- Noise
- Public health and safety

### Economic Resources
- Traffic and transportation
- Waterborne commerce
- Local economic development
- Regional economic development
- Jobs
**TSP CONCEPTUAL DESIGN**

- **Step 1:** Berms constructed from clean Calumet Harbor sediment. Vegetation planted for erosion control.
- **Step 2:** Sediment not suitable for beneficial use would be confined.

**Beneficial Use**
- **Berms** (with clay lining)
- **Cap** (2.5’ with 6” of topsoil)
- ID beneficial uses for remainder (key assumption)

**Contaminated Material Safely Confined in Facility Interior**
- **Two Stages** (~11’ each)
- Restrictions on Future Use to protect the cap
VERTICAL EXPANSION OF EXISTING CDF

- Calumet Harbor / mouth of Calumet River
- Existing CDF constructed in 1984
- Previously lake bottom
- Future use restricted to parkland or open space
**FACILITY DESIGN**

- **Dikes around facility**
  - **Purpose:** Contain sediment away from humans

- **Liner**
  - **Purpose:** Prevents groundwater seepage

- **Fencing and cover**
  - **Purpose:** Secures facility, keeps people out

- **Water treatment**
  - **Purpose:** Keeps contaminants from re-entering waterway

- **Vegetation, silt fencing**
  - **Purpose:** Prevent exposure of workers and residents to dust

- **Sampling and testing**
  - **Purpose:** Monitor sediment quality and successful confinement
TENTATIVELY SELECTED PLAN

What does this plan mean for the region?

- **SAFETY.** No significant adverse impacts identified in EIS
  - Operated safely since 1984
  - Design features on the proposed facility will continue to ensure safety

- **EFFICIENCY.** Shortest development time for new facility means fewer navigation impacts

- **ENVIRONMENTALLY RESPONSIBLE.**
  - Removes polluted sediment from the environment
  - As far away from homes as possible
  - Beneficial use of clean sediment

- **FUTURE PARK USE.** End state will be a lakefront park or open space

- **COST EFFECTIVE.** Responsible use of taxpayer dollars
# STUDY SCHEDULE

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>Begin Study</td>
<td>Fall 2013</td>
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<tr>
<td>3 Stakeholder Roundtable Meetings and 2 Public Workshops</td>
<td>Feb-June 2018</td>
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<tr>
<td>Tentatively Selected Plan Milestone</td>
<td>28 Feb 2019</td>
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<tr>
<td><strong>Draft Report Released – Start of Public and Agency Review</strong></td>
<td>03 May 2019</td>
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<tr>
<td><strong>Public and Agency Comments Due</strong></td>
<td>02 July 2019</td>
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<tr>
<td>Agency Decision Milestone*</td>
<td>Aug 2019</td>
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<tr>
<td>Transmittal of Draft Report for Final Review*</td>
<td>Nov 2019</td>
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<tr>
<td>Public Review of Draft Report and EIS*</td>
<td>Jan 2020</td>
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<tr>
<td>Final Dredged Material Management Plan Approved*</td>
<td>Apr 2020</td>
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<tr>
<td>Record of Decision (ROD) Signed*</td>
<td>TBD</td>
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* Estimated Dates
TENTATIVE IMPLEMENTATION SCHEDULE

Approved DMMP in FY20: Preconstruction Engineering and Design (PED)

Site Preparation

Dredge, Dry, and Stockpile

Construct Stage 1 Berms

2-Year Gap in Calumet River Dredging - Shoaling Occurs

Operation of Expanded Facility Begins in 2026

CONSTRUCTION

YEAR 1  YEAR 2  YEAR 3

Next Steps

Chicago Area Waterway System
Dredged Material Management Plan
WE WANT YOUR INPUT!

View the report at:

Provide feedback on the study:
Comment session (today)
Written comments (through June 16, 2019)

By mail to:
U.S. Army Corps of Engineers
231 S LaSalle St
Suite 1500
Chicago, IL 60604

Or by email to:
CELRC_Planning_Econ@usace.army.mil
**ENVIRONMENTAL ANALYSIS (EA)**
- No significant adverse impacts or controversy are anticipated
- Evaluates potential impacts of selected plan only
- 30-day public review
- Completed with a Finding of No Significant Impacts (FONSI)

**ENVIRONMENTAL IMPACT STATEMENT (EIS)**
- If potential significant effects to the human environment or controversy are anticipated
- More detailed analysis of effects of multiple alternatives
- More process (Notice of Intent in Federal Register, Public Scoping & Involvement)
- Minimum 45-day Public Review Notice of Availability in Federal Register
- Completed with Record of Decision (ROD)

**VS.**