

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



**CHICAGO
AREA CDF**

Chicago District, 26 February 2021



**US Army Corps
of Engineers**



STUDY OVERVIEW



Chicago Area CDF is running out of space!

Calumet River & Cal-Sag Channel still **require confined disposal**

Need to identify **site for new facility**

Contentious study – community uncomfortable with contaminated material

BUDM - What about Calumet Harbor material?

Multiple Non-Federal Sponsors:

- City of Chicago, Dept. of Transportation
- Chicago Park District
- Illinois International Port District

Feasibility report & EIS/ROD signed 15 Sept 2020

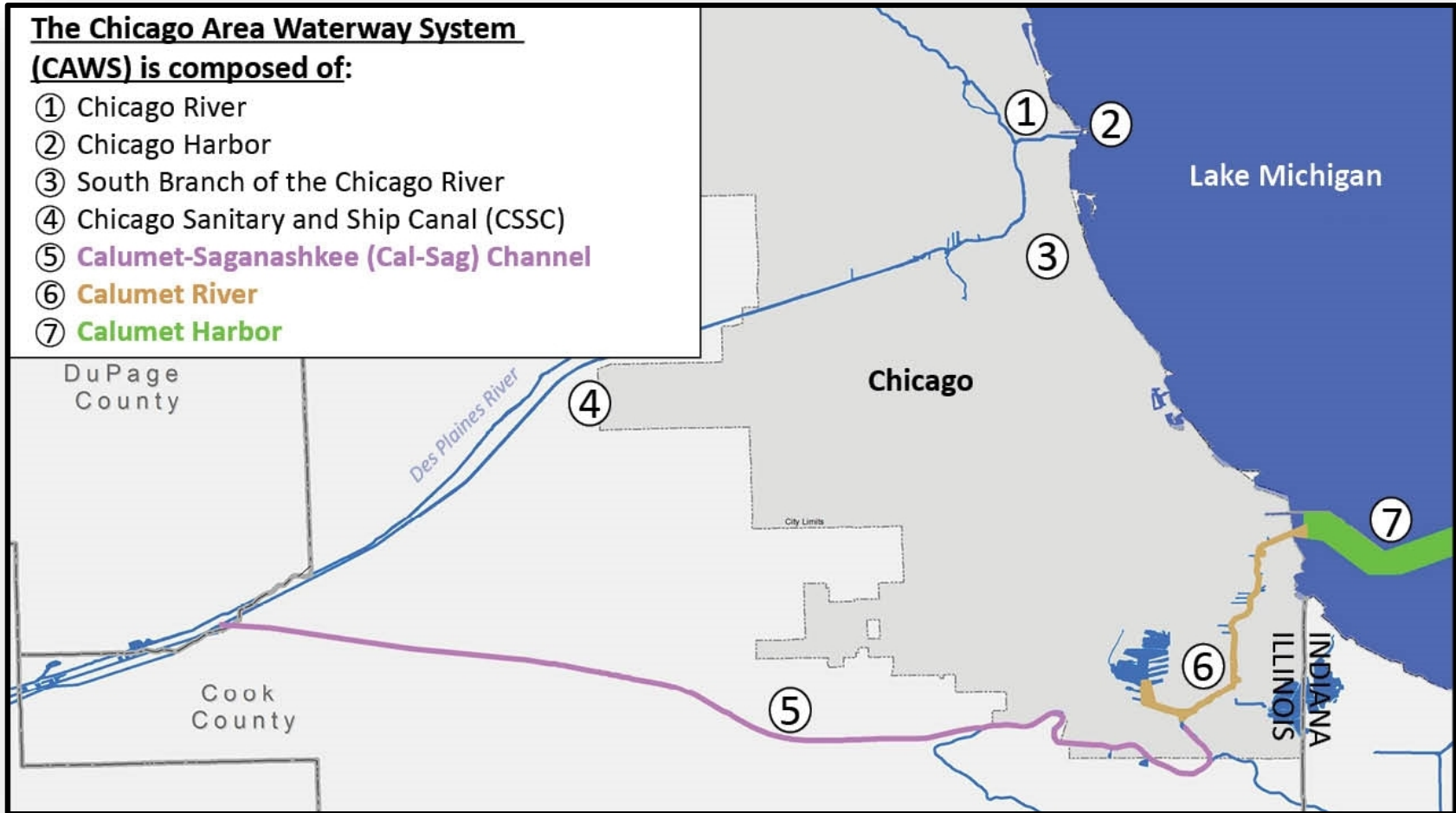
Fully funded federally; NFS cost share

CHICAGO AREA WATERWAY SYSTEM (CAWS)

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.

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



MANAGEMENT MEASURES AND SCREENING

Measures	Status
No Action	Considered
Open Water Placement	Considered
Beneficial Use	Considered
Source Reduction	Considered
Minimizing Dredging Requirements	Ongoing
Private Management (landfill)	<i>Not Feasible</i>
Sediment Treatment/Remediation	<i>Not Feasible</i>
Confined Disposal	Considered



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
 - Confined disposal
 - Calumet River & Cal-Sag Channel Sediment

Open-water placement

Direct placement into water



Beneficial use



Parks

Roadbeds

Urban Redevelopment

Ecosystem Restoration

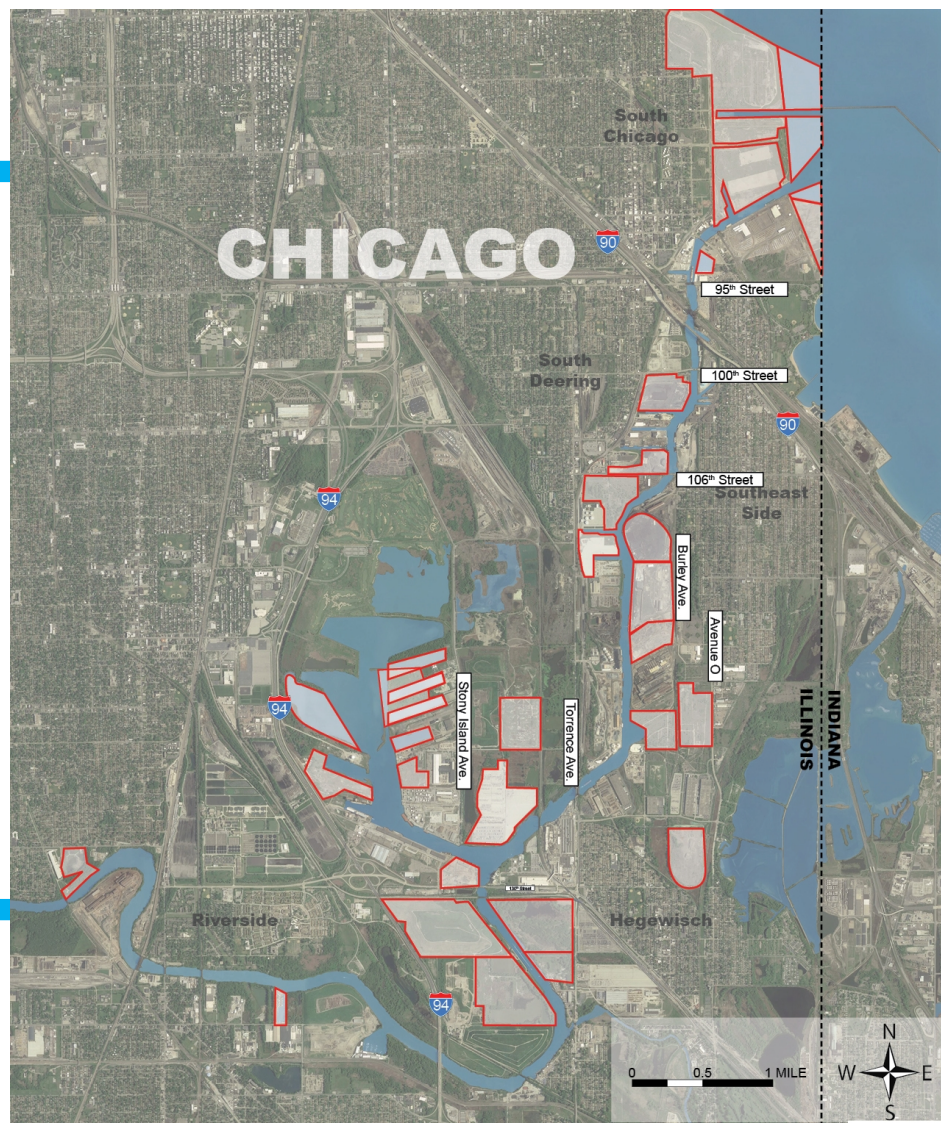
Confined disposal

Material safely enclosed



Chicago Area Confined Disposal Facility

CONFINED DISPOSAL SITE SELECTION



- 60+ sites considered

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



CONFINED DISPOSAL SITE SELECTION



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)

CONFINED DISPOSAL SITE SELECTION

Major Public Outreach Effort:

- Provided **letter of support** for Calumet master planning effort
- Convened **Key Stakeholder Group**
 - With **CPCX Support**
- Hosted **Public Workshops**
- Conducted an **EIS** rather than an EA
 - Based on public concerns
- Developed webtool to expand net of public comments/involvement
- Extended public comment period
 - From 45 to 60 days
- Hosted Public Meetings (NEPA)



ECONOMIC EVALUATION OF ALTERNATIVE PLANS

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

- All alternatives are equivalent in terms of NED
- Allowed team to employ other considerations in decision-making



TRADEOFFS ANALYSIS + SELECTION OF A TSP

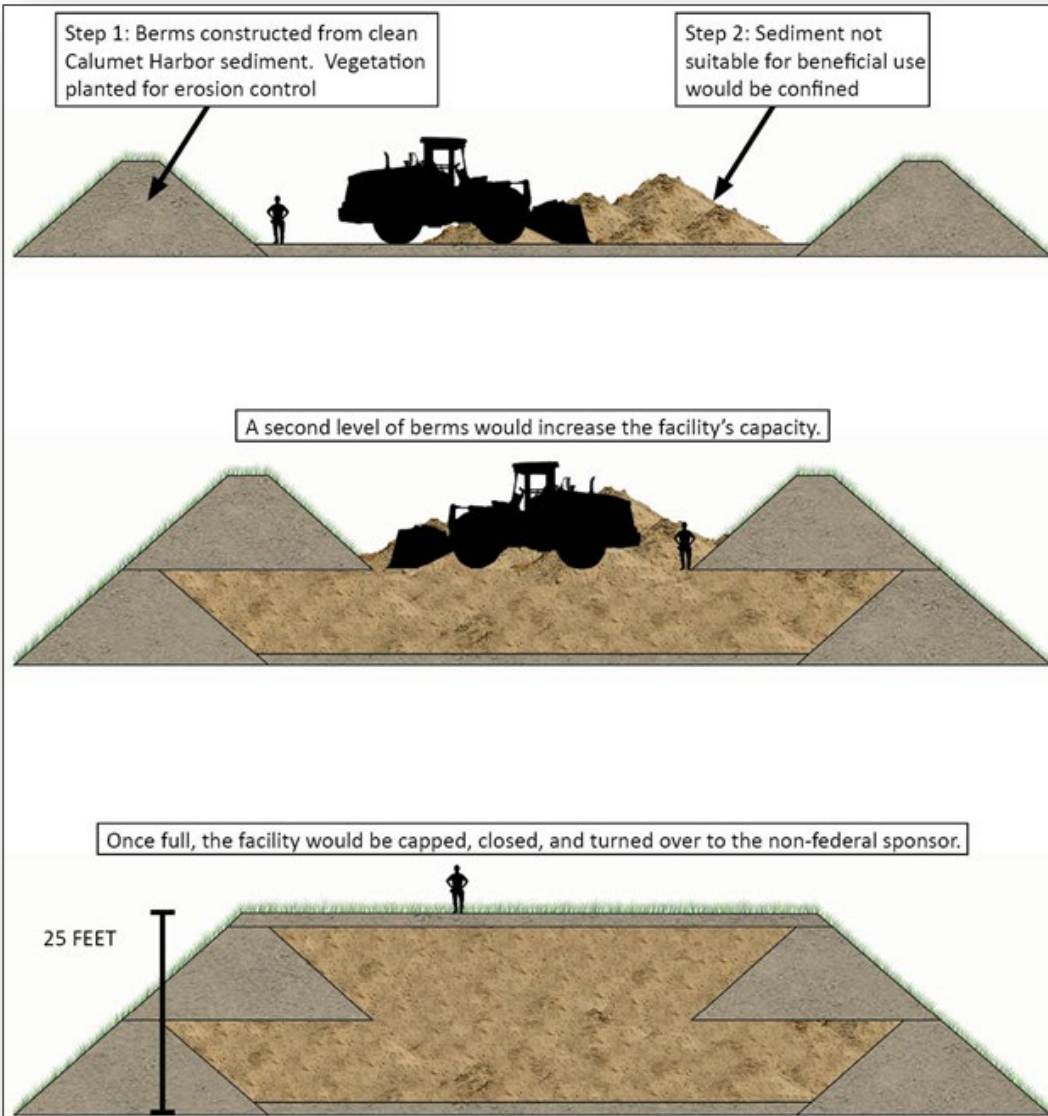
Vertical Expansion has less risk

- Addresses many concerns heard during public outreach
- Furthest away from homes
- 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



TSP CONCEPTUAL DESIGN



Chicago Area Waterway System
Dredged Material Management Plan

Plan Evaluation + Selection

Beneficial Use

- **Berms** (with clay lining)
- **Cap** (2.5' with 6" of topsoil)
- **Working with NFS** to develop plan for remainder
- **Soil engineering (MVP)** – Demand for fill material in Chicago area
- **BUDM included in Base Plan!**
- **Additional NEPA** required prior to implementation

Contaminated Material Safely Confined in Facility Interior

- **Two Stages** (~11' each)
- **Restrictions on Future Use** to protect the cap



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QUESTIONS?

