

Great Lakes

Policy Issues on Dredged Material Management

Tony Friona

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Federal Standard (regulation, not policy)

Federal Standard established in 1988 by USACE per promulgated regulation 33 CFR 335-337 –
Three requirements for dredged material management alternative selected by USACE:

1. Compliance with environmental standards established by Clean Water Act Section 404(b)(1) Guideline process promulgated by USEPA (“environmentally acceptable”)
 - Follows formal Federal (USEPA/USACE) guidance specific to proposed dredged material discharges
 - Also requires compliance with applicable state water quality standards after consideration of dilution and dispersion
2. Least-cost
3. Consistent with sound engineering practices



Federal Standard is not a new concept

- Emerged due to changes to the 1977 CWA (Section 401(c) rescinded so that the Federal agencies had to start serving as applicants for 401 WQCs)
- 25 Jul 1978 HQ memo established federal standard principles and required that the field defer dredging when there are unresolved state issues
- Nov 1978 HQ memo confirmed state and federal roles
- 12 Jan 1990 HQ memo “Project proponency for Civil Works Undertakings”

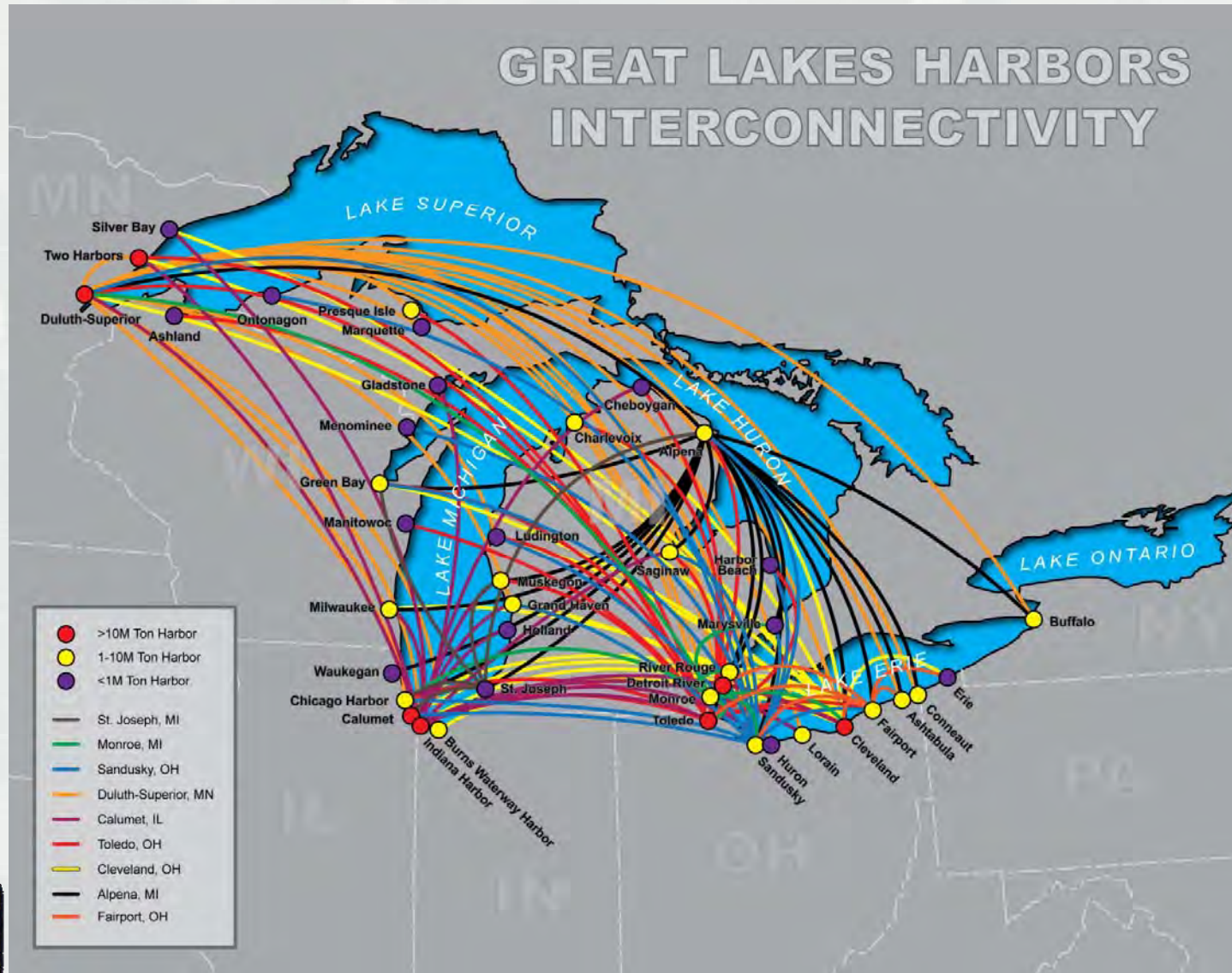


Federal Standard Consistency

- Various checkpoints:
 - LRD memo dated 26 Aug 2013 –preliminary conceptual determination of the Federal Standard reviewed by Corps vertical team
 - DMMP or IDMMP w/ full Federal Standard determination reviewed by Corps vertical team
 - Regular coordination between Great Lakes districts
- Consistency ensures Federal dredging funds are equitably distributed across the harbors and states
- Physical makeup of dredged material across the Great Lakes can vary significantly – In general:
 - Upper lakes – Suitable “sandy” material more often dredged and placed in shallow water (nearshore zone) as a widely recognized beneficial use that is least-cost
 - Lower lakes – Suitable “muddier” material (i.e. Cleveland and Toledo) more often dredged and placed in deep water because it is least-cost; beneficial use of such material is rarely least-cost and usually expensive



Great Lakes Navigation System



Dredging Requirements at Leading USACE GL Harbors

Harbor	Tonnage (CY2012)	Annual Dredging (CY)
Duluth-Superior, MN & WI	34,672,105	110,000
Two Harbor, MN	16,210,087	900
Indiana Harbor, IN	13,164,061	100,000
Calumet Harbor, IN	11,968,000	60,000
Cleveland, OH	11,313,415	225,000
Toledo, OH	9,638,552	800,000
Burns Waterway Harbor, IN	8,382,871	1,500
Presque Isle, MI	7,741,142	1,700
St. Clair River, MI	6,752,523	13,000
Ashtabula, OH	4,539,879	50,000



Great Lakes Harbors

Current Dredged Material Placement Methods

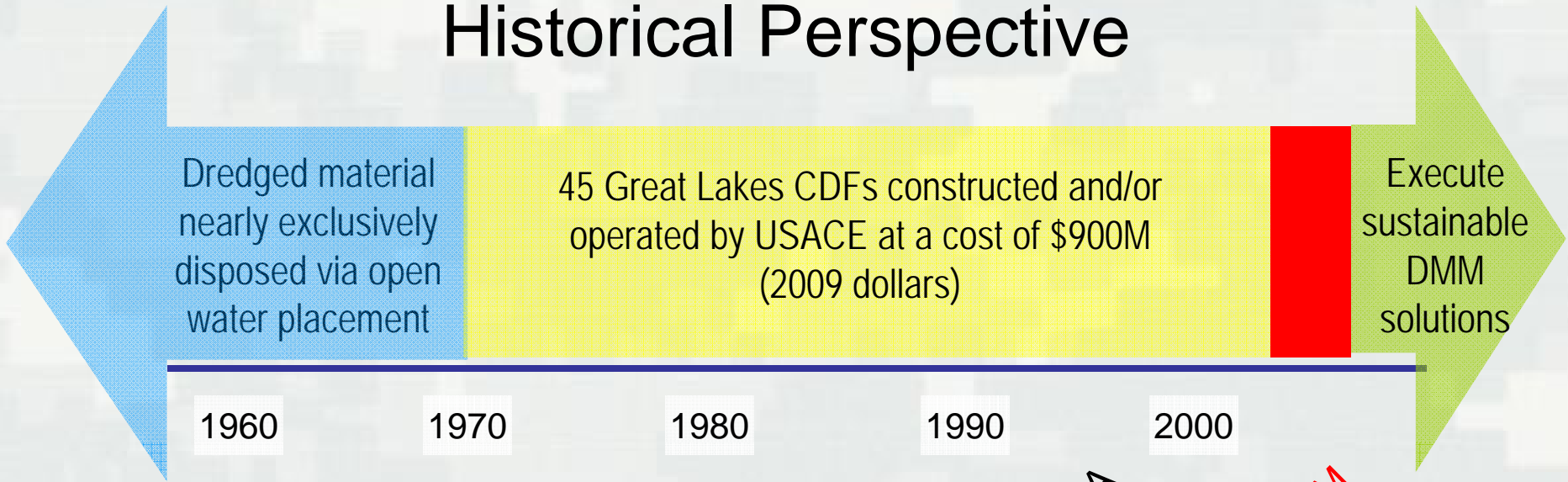


Confined Disposal Historic Perspective

- 1960s – Contamination levels in dredged material gained attention
- 1969 – Cuyahoga River catches fire and draws National attention (13th fire since 1868)
- 1970 – Great Lakes CDF System was authorized in the 1970 Rivers and Harbors Act P.L 91-611. Congress envisioned a short-lived need (i.e. 10 Years)
- 1972 – Federal Water Pollution Control Act Amendments (later known as Clean Water Act)
- 1977 – Section 404 of CWA Lays Out Authority Delegated to USACE to Regulate Discharges of Dredged Material Into Waters of U.S. and Section 401 requires certifications from states that discharges meet water quality standards
- 1978 – Federal Standard is established
- 1988 – 33 CFR Parts 335-337 promulgated establishing the Federal standard for operation and maintenance of USACE civil works projects that involve the discharge of dredged or fill material
- 1992 – USEPA promulgated regulations allowing states to adopt narrative water quality goals/standards based on numeric water quality criteria
- 2013 – USACE testing data verifies material in Cleveland harbor meets federal standard guidelines for open lake placement
- 2014 – Vast majority of the 45 GL CDFs are either full or near-capacity. Great Lakes Dredging Need is about 4M CY every year



Historical Perspective



1970 - River and Harbor Act and Flood Control Act of 1970 (PL 91-611) passed

1988 - Federal Standard defined

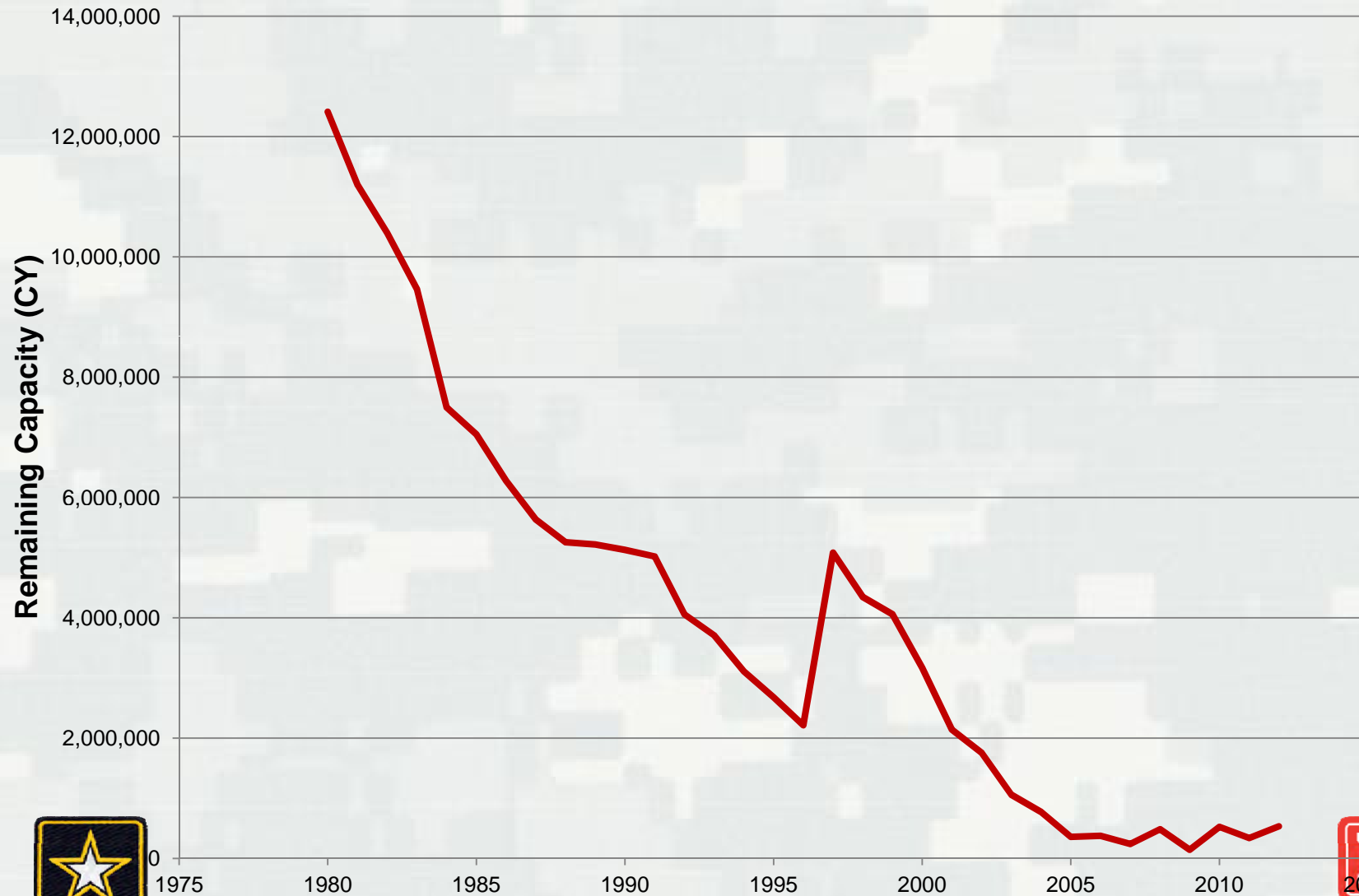
1996 - Section 201 of the 1996 WRDA requires cost-sharing

Current CRITICAL situation. DMM strategies must be developed.

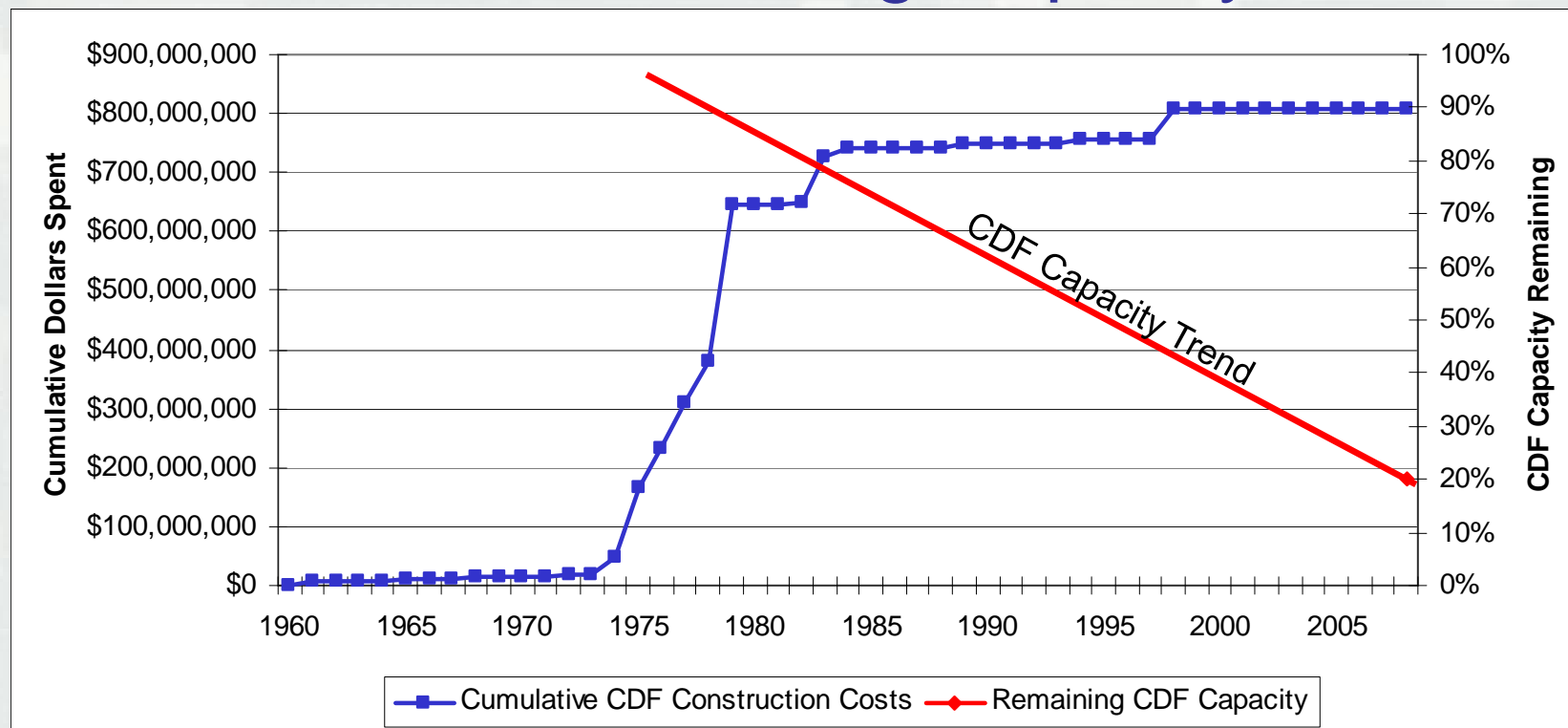


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Combined Capacity Trend of Five Critical Great Lakes CDFs



Cumulative CDF Construction Costs vs. CDF Remaining Capacity

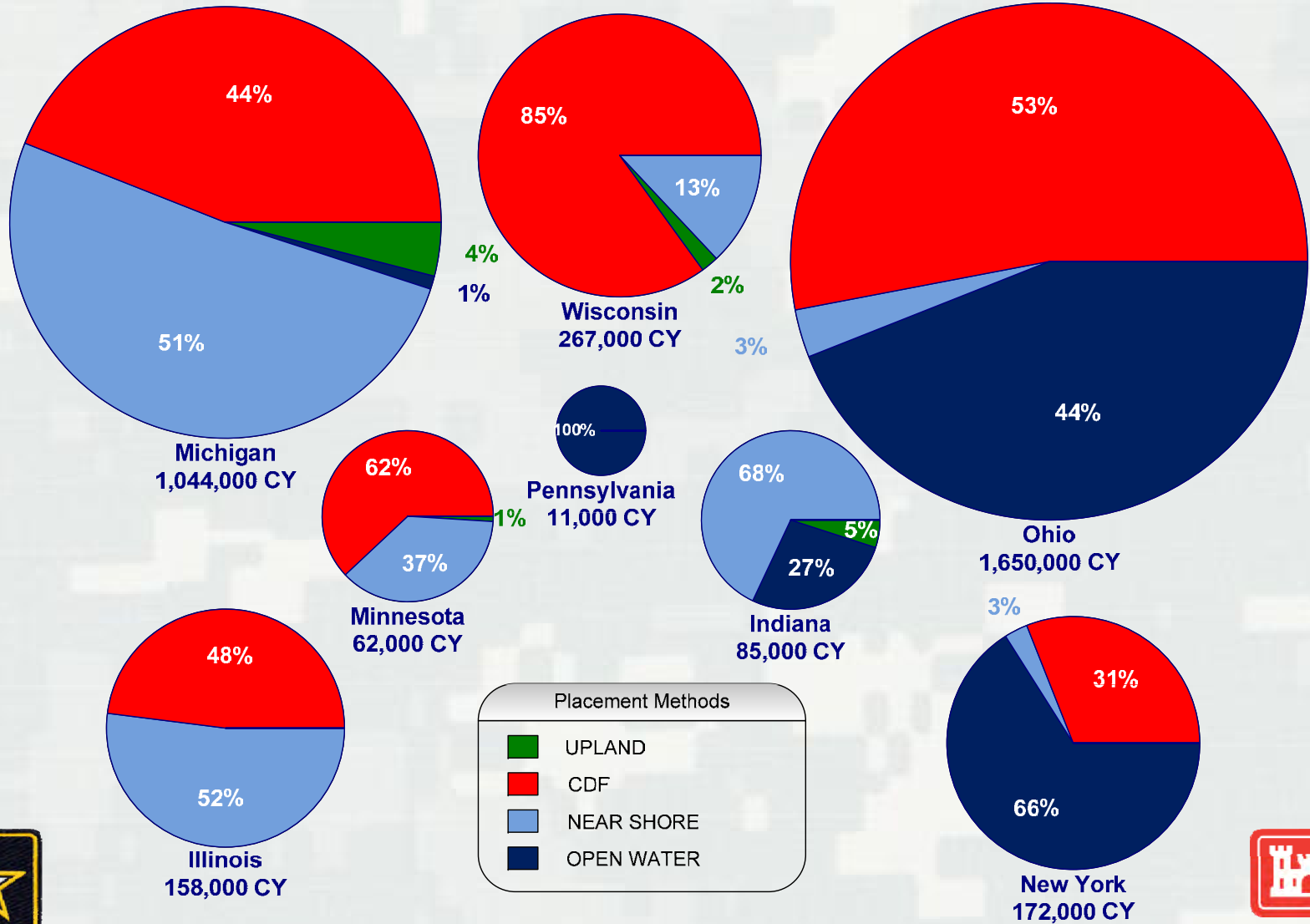


Deep-water disposal prior to 1970's



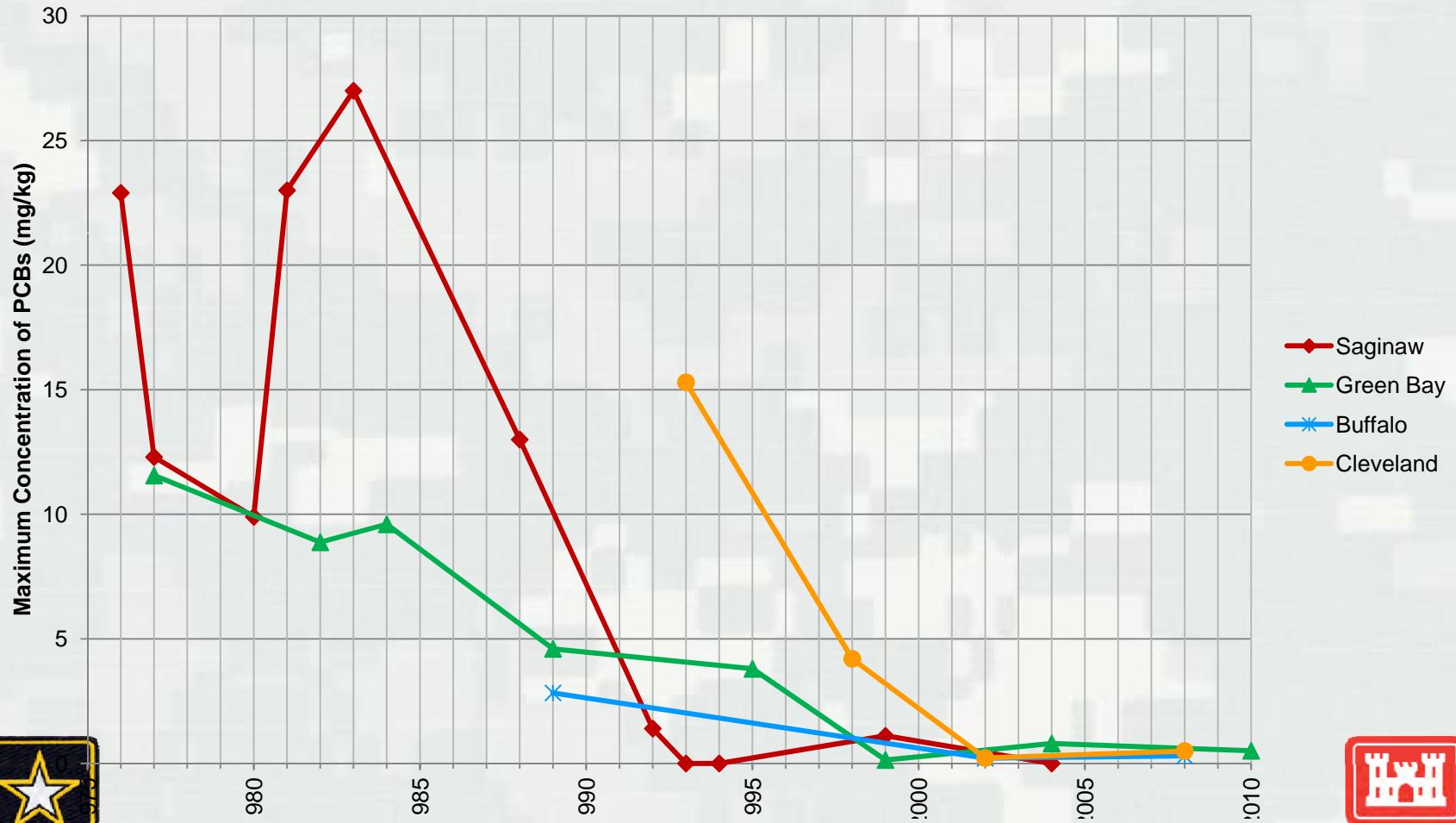
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Current Dredged Material Placement Methods by State



Evaluation of Harbor Conditions

Great Lakes Harbors Maximum Concentrations of PCBs



Beneficial Use of Dredged Material (Transition from CDFs to Open Water, Nearshore, etc.)

Ongoing

- Duluth-Superior – Testing completed in 2012 shows majority of material suitable for open lake; placed material in shallow embayment which creates habitat and is less expensive than open lake; port reclaims and sells coarse grain material from CDF.
- Green Bay – Testing completed ~2010 – suitable for open lake; transitioned in 2014 from CDF to Cat Island, a new facility built with Corps/local sponsor funds; also restores a barrier island chain and creates valuable habitat
- Many GL harbors – nearshore placement or beach nourishment; protects shoreline from erosion and supplements natural littoral drift

Possible future opportunities

- Fill for demolished homes in Detroit and Cleveland; road construction; daily land fill cover; brownfield restoration; mineland reclamation; shallow embayment habitat creation – can facilitate removal of AOC beneficial use impairment

Summary: USACE has been pursuing beneficial use for years with the cooperation and commitment of local sponsors. There are many success stories of cost effective and environmentally beneficial uses for this material.



Additional slides on DMM policy issues

Policy issue slides from Jan Miller's presentation at the annual 2014 GLDT Meeting are found at

<http://greatlakesdredging.net/news-events/meetings/>

(scroll down to [Framing the Issues: Laws, Regulations and Policies – Jan Miller](#))



Discussion

