



ILLINOIS MARINE  
TRANSPORTATION SYSTEM

# Appendix A

## Neighbor State Dredging Review



Illinois Department of Transportation

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## ACRONYMS/ABBREVIATIONS

AOC	Areas of Concern
BUDM	Beneficial Use of Dredge Materials
DNR	Department of Natural Resources
CWA	Clean Water Act
EPA	Environmental Protection Agency
HAP	Harbor Assistance Program
HMT	Harbor Maintenance Tax
HMTF	Harbor Maintenance Trust Fund
IDEM	Indiana Department of Environmental Management
IDNR	Illinois Department of Natural Resources
IDOT	Illinois Department of Transportation
IEPA	Illinois Environmental Protection Agency
IMTS	Illinois Maritime Transportation System
OMB	White House Office of Management and Budget
PCA	Pollution Control Agency
PDAP	Port Development Assistance Program
RHA	Rivers & Harbors Act
RLSA	Rivers, Lakes, and Streams Act
USACE	U.S. Army Corps of Engineers



## EXECUTIVE SUMMARY

Dredging is an important topic to the State of Illinois; without adequate and timely dredging, shippers/carriers and the maritime industry overall can face significant economic losses (and the sheer inability to deliver goods) due to impassable channels.

As the Illinois Department of Transportation (IDOT) develops Illinois Marine Transportation System (IMTS) Plan, understanding federal and state regulations related to dredging is vital. It is also important to understand the impacts and unintended consequences of these regulations so the IMTS Plan can make recommendations toward mitigation. Several key dredging-related issues include:

- Federal and state requirements are burdensome to comply with in terms of cost and time.
- There is a lack of consistency in regulations as applied at the state-level.
- There is no reliable source of funding for dredging at the federal level, and the funding that is available is overprescribed and underutilized.
- Most states do not have dedicated funds to perform dredging in their own borders.
- “Lessons learned” are yet being collected for the disposal and reuse of dredged materials, and true best practices to comply with regulations are not formally established.

A review of neighbor state dredging regulations was conducted to aid IDOT in understanding how other states regulate, permit, fund, and dispose of dredged material. While IDOT may not be in a position to implement changes to state dredging regulations or processes, IDOT is in a position to provide advice and recommendations on next step actions to Illinois Department of Natural Resources (IDNR), Illinois Environmental Protection Agency (IEPA) and other state stakeholders on how to better position the state to ensure its businesses are on a level playing field with potential neighbor-state competitors.

The key findings from the research for IDOT consideration are summarized in the following figure and include:

- **Permitting/ Regulatory Authority.** While all states are governed by the same regulations at the federal level, it is truly the regulations of each state that govern the playing field. In Illinois, both IDNR and IEPA are involved in permitting and regulating dredging activity in the state. Both Indiana and Minnesota have similar structures, but neighbor states of Iowa, Kentucky, Missouri, and Wisconsin all only have one state agency overseeing these activities – and in most cases, it is the DNR. This structure influences state dredging considerations.
- **Placement of Dredged Material.** Federal regulations for all states are the same: “Contained Disposal” is required if the dredged material is deemed contaminated or silty, or “Open Water Disposal” is allowed if the dredged material is clean and smooth sand (per a § 401 water quality certification). However, each state also has its own clean water standards, and the state water quality standard may be more strict than the federal § 401 water quality certification. This state standard may also only apply if the project sponsor is an entity other than a federal agency, namely the USACE. This is the case in Illinois, where a federal dredging project may be governed by federal water quality standards and allow for open water disposal, but the same project advanced by a local sponsor would be required to follow State of Illinois standards, which are more strict and may deem the dredged material contaminated and not allowable for open water disposal. While stricter water quality standards are positive for the surrounding population that depends on the water supply, this disconnect between federal and state regulations places an undue burden on non-federal dredging projects.



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- **Challenges of Using Dredged Material.** Neither “contained disposal” nor “open water disposal” provide benefits beyond simply removing materials to ensure proper channel depth. There are, however, many other potential uses for dredged materials that can build and support natural infrastructure, such as building beaches and revitalizing shoreline. The USACE encourages and aims to ensure as much excavated sediment from dredging is used for natural infrastructure, but there are challenges to making use of this dredged material. In Illinois, much of the dredged soil is of unsuitable quality for reuse. In Indiana, while beneficial use of dredge materials (BUDM) is encouraged, the high cost of reuse has led stakeholders to lean toward contained disposal facilities as a preference. And, in Kentucky, there is active BUDM, but the state has absolved itself of responsibility and indicated that the sponsor will assume liability for any contamination issues that arise from the use.
- **Beneficial Use Best Practices.** Few best practices exist regarding the use/reuse of dredged material. The USACE is conducting 10 pilot studies across the US (including in IL and its neighbor states), representing a variety of dredging conditions, to help establish best practices in BUDM. In Missouri, Greater St. Louis was also part of an early USACE study on reuse, but there has not been much activity in the state since the study. One of the most active states in BUDM and one leading in terms of best practices is Minnesota. In the state, BUDM is considered for each dredging project and an innovative numeric system is used to assess water quality levels for each project, and then the action for dredged materials based on the “score.” In some cases, this could result in beneficial use, but it could also mean contained disposal or open water disposal.
- **Funding for Dredging.** While there is funding for dredging at the federal level, it is insufficient to address the dredging backlog. Several neighbor states do provide annual or bi-annual funding for dredging projects within their borders as part of broader maritime investment programs, including Kentucky, Minnesota, and Wisconsin. Other states only provide funding during emergency situations. In Illinois, there is no dedicated funding for dredging.

Based on these findings, suggested next step actions for IDOT and maritime system stakeholders include:

- **Definition of “Contaminated” Dredged Material.** Illinois appears to have more stringent water quality standards and a definition for “contaminated” dredged material that goes beyond the federal definition. Having high standards is a good thing, but it may also lead to unnecessary costs. An “exception” should be explored by Illinois and federal stakeholders related to the water quality standard and the meaning of “contamination” so that if “open water disposal is allowed by one stakeholder, then it is allowed by the other (and vice versa).
- **Dredged Materials Management.** Illinois should continue to explore how dredged materials in Illinois are managed and maintained over time. Missouri has an aggressive dredged materials management program that enables the state to do more open water disposal than may be possible absent the oversight. Review of Illinois’ procedures, and revisions to these, may allow for increased opportunities for open water disposal on non-federal projects.
- **BUDM Best Practices.** Illinois has over 1,000 miles of navigable waters and has the geographic and community diversity to serve as a testing ground for BUDM. While an Illinois challenge is that some dredged soil is of unsuitable quality for reuse, as technology changes, Illinois should be a leader in how to make use of undesirable material – potentially as part of the BUDM study being led by IDOT. In the interim, the state should get involved in and monitor the activities of the pilot study that is being conducted by USACE in Illinois.





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- **Dedicated Maritime Transportation System Funding.** Illinois does not currently provide dedicated funding to the maritime system. As IDOT explores establishment of an annual, dedicated program, consideration should be given in the project criteria to allow for state-sponsored dredging.



Figure ES-1: Summary of Findings

	Illinois	Indiana	Iowa	Kentucky	Minnesota	Missouri	Wisconsin
<b>Permitting / Regulatory Auth. – Federal</b>	Under the Clean Water Act and Rivers & Harbors Act, the USACE has regulatory authority over all waters of the U.S.						
<b>Permitting / Regulatory Auth. – State</b>	(1) Illinois DNR (Office of Water Resources) (2) Illinois EPA	(1) Indiana DNR (2) Indiana Dept. of Enviro. Mgmt. (IDEM)	(1) Iowa DNR	(1) Kentucky Energy and Environment Cabinet (Division of Water)	(1) Minnesota DNR (2) Minnesota Pollution Control Agency (PCA)	(1) Missouri DNR	(1) Wisconsin DNR
<b>Allowed Placement of Dredged Material – Federal</b>	Contained Disposal – If the dredged material is deemed contaminated or silty. Open Water Disposal – If the dredged material is clean and smooth sand (per a § 401 water quality certification).						
<b>Allowed Placement of Dredged Material – State</b>	As above. But material that may be “contaminated” as uniquely defined in IL must be contained.	As above.	As above.	As above.	As above. But BUDM is always considered.	As above. But management practices allow for more open water disposal.	As above.
<b>Beneficial Use / Reuse of Materials – Federal</b>	USACE aim is to ensure as much excavated sediment from dredging is used for natural infrastructure. Conducting 10 pilot studies across the US to establish “best practices” for beneficial use/reuse of dredged materials.						
<b>Beneficial Use / Reuse of Materials – State</b>	Allows for BUDM, but seeking innovative approaches. <sup>1</sup>	Limited BUDM due to cost of reuse. Preference for contained disposal.	N/A	Active BUDM, but likely not a best practice. Sponsor assumes liability (as/when it is ID’d).	Innovative numeric management to assess water quality levels and best use.	Greater St. Louis was part of a USACE study on reuse; however limited reuse has occurred.	Allows for BUDM if state water quality test passed.
<b>Funding – Federal</b>	USACE O&M Funding (Authorized ~every 2 years through the Water Resources Development Act) Harbor Maintenance Trust Fund (HMTF), funded through Harbor Maintenance Tax (HMT) collections, and appropriated by Congress						
<b>Funding – State</b>	N/A	N/A – Indiana DNR has provided emergency funding	N/A – Iowa has provided emergency funding (inland lake)	Yes – Kentucky Riverport Improvement Program	Yes - Port Development Assistance Program	N/A – Missouri has provided emergency funding	Yes – (1) Harbor Assistance Program (2) Recreational Boating Facilities Grants (inland lakes)

<sup>1</sup> IDOT has a BUDM Study currently underway. Expected to be complete by August 2021, the study will provide IDOT formal recommendations and guidance on how to reuse non-hazardous dredged material in their projects.





## A.1 INTRODUCTION

### Key Chapter Takeaway

Dredging is an important topic both nationally and for the State of Illinois; without adequate and timely dredging, shippers/carriers and the maritime industry overall can face significant economic losses (and the sheer inability to deliver goods) due to impassable channels. While the federal government provides a unifying structure for all states, each has the ability to introduce their own regulations and processes and, unfortunately, in some cases this creates unintended consequences – including cost and time burdens.

In Illinois, in addition to the USACE, dredging is permitted/regulated by IDNR and IEPA. A focus of these agencies is to ensure that, depending on water and soil quality, dredged materials are either contained, disposed in open water, or reused in a beneficial way. While this is a positive focus, there is a disconnect/inconsistency between how this approach is applied on federal and non-federal dredging projects.

The State of Illinois does not generate revenue, nor has a dedicated funding source, for dredging either lakes or rivers that abut the State. A majority of funding for USACE-conducted dredging in Illinois comes from the federally administered Harbor Maintenance Trust Fund (HMTF) by way of the Harbor Maintenance Tax (HMT), and from the Inland Waterway Trust Fund (IWTF) by way of the Inland Waterway User Fee. Non-federal dredging sponsors must seek funding elsewhere through their own budget (e.g., a revenue generating port authority) or alternative financing.

### A.1.1 SUMMARY

Dredging is the act of removing sediments and debris from the bottoms of lakes, rivers, harbors, and other bodies of water. It is vital to the Nation’s waterway system because it combats the natural process of sand and silt washing downstream – known as “sedimentation” – which continuously fills water channels. Without adequate and timely dredging, shippers and the maritime industry could potentially face significant economic losses. For example, in 2011, Congress reduced the Mississippi River dredging budget by \$20 million, which led to solely a 0.3-meter (one foot) draft capability for commerce passing through the river. This resulted in an average of \$250,000 to \$800,000 loss of transported cargo per ship.<sup>2</sup>

Dredging has become an important topic nationwide because each state has its own separate regulations and when the USACE conducts dredging in states, they comply with their own regulations. In addition, permitting for dredging, the disposal and beneficial reuse of dredged material, and how funding for dredging is allocated are common topics of discussion at both the State and Federal level. Key issues include:

- Federal and state requirements are burdensome to comply with in terms of cost and time.
- There is a lack of consistency in regulations as applied at the state-level.
- There is no reliable source of funding for dredging at the federal level, and the funding that is available is overprescribed and underutilized.
- Most states do not have dedicated funds to perform dredging in their own borders.

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<sup>2</sup> Wetta, Robert B. and Hanson, William H. “How Does Dredging Effect the Economy?”  
[https://www.westerndredging.org/phocadownload/ConferencePresentations/2011\\_Nashville/Session3A-DredgingAndTheEconomy/1%20-%20Wetta,%20Hanson%20-%20How%20Does%20Dredging%20Effect%20the%20Economy.pdf](https://www.westerndredging.org/phocadownload/ConferencePresentations/2011_Nashville/Session3A-DredgingAndTheEconomy/1%20-%20Wetta,%20Hanson%20-%20How%20Does%20Dredging%20Effect%20the%20Economy.pdf)





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- “Lessons learned” are yet being collected for the disposal and reuse of dredged materials, and true best practices to comply with regulations are not formally established.

As IDOT develops the IMTS Plan, understanding federal and state regulations related to dredging is vital. It is also important to understand the impacts and unintended consequences of these regulations so the IMTS Plan can make recommendations toward mitigation.

The following sections provide definitions and a baseline review of the federal role related to:

- Permitting/Regulations for Dredging
- Beneficial Use and Reuse of Dredged Material
- Funding for Dredging

Appendix A provides a summary of these governing regulations with hyperlinks for future reference. Section 1.2 provides an overview of Illinois’ context related to dredging.

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### A.1.1.1 PERMITTING/REGULATIONS

In the U.S., under the Clean Water Act (CWA) and Rivers & Harbors Act (RHA), the US Army Corps of Engineers (USACE) has regulatory authority over all waters of the United States. As a result, they are the primary federal permitting and construction oversight body for dredging in navigable waters of the United States. If a project sponsor wants to dredge in a waterway that is not considered a “navigation channel” by the USACE, they must receive a federal § 404 CWA permit by applying with the USACE.<sup>3</sup>

Given the USACE’s deep involvement in this process, a large portion of dredging construction and project management services are conducted directly by the USACE. Occasionally, States will perform dredging, but it is carefully performed with guidance and consultation from the USACE.

However, States play a critical role in ensuring the process is clean, safe, and environmentally friendly. If a project sponsor wants to dispose of their dredged material in open water, they are required to obtain a State § 401 water quality certification from the State in which the disposal takes place.<sup>4</sup> Generally, these permits are managed by the corresponding State’s Department of Natural Resources (DNR) or Environmental Protection Agency (EPA). The U.S. EPA provides guidance as it pertains to each State’s § 401 permitting process. But, ultimately, a State § 401 water quality certification approves in-water disposal of excavated sediment with the determination that the material will not contaminate the body of water.

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### A.1.1.2 BENEFICIAL USE AND REUSE OF DREDGED MATERIAL

Before any entity or project sponsor performs any form of dredging, they must communicate with the USACE and the State where the dredged material will be placed. Generally, if the dredged material is deemed contaminated or silty, it is placed in an upland confined disposal facility. Subsequently, if the dredged material is clean and of-standard quality sand (per a § 401 water quality certification) then it is placed back into the water away from the shore.

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<sup>3</sup> U.S. Army Corps of Engineers. “Obtain a Permit,” January 2020. <https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Obtain-a-Permit/>

<sup>4</sup> 16 U.S.C. 1456(c)(1)(a).





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However, many states in the Midwest and around the country have discovered and implemented ways to reuse and beneficially use clean dredged material. Examples of this include placing the sediment along the shoreline for restoration purposes, in the middle of highway projects, under school fields, among other locations.

In addition, the USACE has taken key steps in ensuring as much excavated sediment from dredging is used for natural infrastructure. Specifically, the U.S. Congress passed the Water Resources Development Act of 2016 (WRDA '16) and the Water Resources Development Act of 2018 (WRDA '18) two years later. Both of these pieces of legislation authorized 10 pilot projects intended to utilize BUDM. WRDA '16's round of projects was chosen in late-2018.<sup>5</sup> One of the projects is a public beach protection pilot on four Illinois coastal communities.

### A.1.1.3 FUNDING

As previously mentioned, without dredging, users and beneficiaries of maritime transportation are subject to major economic loss. Thus, it is important for dredging to be properly funded. From a Federal viewpoint, dredging funding stems from the authorization and appropriations process of WRDA – a funding authorization bill passed by Congress every two years. WRDA provides funding to the USACE's Operations & Maintenance (O&M) budget, which is specifically dispersed for dredging projects around the country via both the HMTF and the IWTF. In 2019, \$965 million in HMTF funding and \$5 million in IWTF funding was appropriated directly to the USACE.

The HMTF collects the Harbor Maintenance Tax (HMT), which is imposed on domestic shippers and importers using coastal or inland ports in the United States to help pay for dredging around the country. Essentially, the HMT is a 0.125 percent ad valorem (according to value) tax on imported cargo – thus, shippers pay \$1.25 per \$1,000 shipping value. It is maintained by the U.S. Department of the Treasury and appropriated money by Congress. In the past 5-10 years, Congress has not been appropriating the full amount of money flowing into the HMTF, which has led to a severe dredging backlog and frustration among the payers of the HMT. During our consultation with the USACE, Detroit District, they stated there is currently a dredging backlog in the Great Lakes of 10.5 million cubic yards. Thus, many Members of Congress have been working to take the HMTF “off-budget” – meaning the HMT would flow directly into the USACE O&M budget – but such efforts have failed.

The IWTF is a U.S. Treasury Fund that collects the Inland Waterway User Fee (IWUF), which is a tax on commercial barge fuel purchased by commercial towing companies using federally designated waterways. IWTF dollars are solely used for 50% of the Nation's construction and major rehabilitation projects on the inland waterway system. Below is a map of the waterways that are subject to an IWUF.

A few of Illinois' neighboring States provide funding for dredging in their State (not including Illinois), but generally, Illinois and its neighbor states rely on federal funding for dredging. Section 2 of this report will highlight these States that provide funding.

### A.1.2 ILLINOIS' MARITIME CONTEXT

As the nation's 7<sup>th</sup> largest maritime State and 3<sup>rd</sup> biggest domestic shipper (by tonnage),<sup>6</sup> Illinois has the ability to be a national model for innovative ways to fund dredging and disposal of dredged material. Ultimately, Illinois

<sup>5</sup> National Archives, Federal Register. U.S. Army Corps of Engineers. “Announcement of the Selection of the Ten Pilot Projects Pursuant to Section 1122 of the Water Resources Development Act of 2016, Beneficial Use of Dredged Material,” December 2018. <https://www.federalregister.gov/documents/2018/12/28/2018-28306/announcement-of-the-selection-of-the-ten-pilot-projects-pursuant-to-section-1122-of-the-water>

<sup>6</sup> U.S. Army Corps of Engineers. “Waterborne Commerce of the United States,” “Part 5 – National Summaries” 2016. [https://waterwayscouncil.org/file/128/part5\\_2016\\_web.pdf](https://waterwayscouncil.org/file/128/part5_2016_web.pdf)





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does not provide any regular funding for dredging activities; and while there have been a few instances where the State has used dredged sediment for beneficial use (further described below), it is not consistently considered statewide. In addition, when the USACE performs dredging in the State, they are allowed to place excavated material wherever they desire – as long as it is clean. However, non-USACE dredging project sponsors – mostly conducting dredging at inland river ports – are subject to costlier and stricter disposal regulations in Illinois. This results in lessening their competitiveness in and out-of-state.

### Highlighting IDOT’s Ongoing Beneficial Use of Dredged Material Study for the IMTS

IDOT is leading a study in coordination with the USACE Rock Island District, U.S. Army Engineer Research and Development Center, IEPA, IDNR, University of Illinois at Urbana-Champaign, and Southern Illinois University to identify potential reuses of non-hazardous dredged material from IDOT projects. Specifically, the study will determine:

- Current innovative BUDM practices used by other U.S. states and internationally;
- The origin, amount, type, location, presence of contamination, distribution, and frequency/volume of dredged material in Illinois;
- Existing limitations in Illinois for the reuse of dredged material and potential for removing such limitations;
- How to best promote the reuse and BUDM in Illinois by compiling a list of possible “best practices” that comply with current Federal and State regulations (which could potentially include beach nourishment, habitat restoration/creation, shore protection, recreation, agricultural, mine reclamation, construction, and solid waste management).

Expected to be complete by August 2021, the study will provide IDOT formal recommendations and guidance on how to reuse non-hazardous dredged material in their projects.

The IDNR – Office of Water Resources, the IEPA, and USACE oversee dredging permitting in Illinois. Harbor dredging is strictly conducted by the public or private port body. Mississippi River and Illinois River dredging projects are 100% federally operated and maintained whereas the Ohio River, Grant Calumet River, Kaskaskia River, and other rivers in Illinois are occasionally dredged by non-Federal entities. To simplify the permitting approval process, the State of Illinois uses a joint application reviewed by the USACE and IDNR.<sup>7</sup> The permitting process is dependent upon the project’s proposed plan for the disposal of its dredged material.

Subsequently, IEPA approves permits for § 401 certifications in which they determine the chemical and physical components of the material to be excavated to understand the potential for water pollution. Project sponsors must provide this information to both the IEPA and IDNR.

For dredging projects where the USACE is not actively involved in the construction and funding process given its non-navigable waters status, the USACE requires a federal § 404 CWA permit to undergo the dredging.<sup>8</sup> It confirms the USACE has actively determined that the project sponsor has an acceptable plan for digging and the dredged sediment will not significantly contaminate the water.

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<sup>7</sup> Illinois Department of Natural Resources, Water Resources. “Permit Application and Instructions,” January 2020. <https://www.dnr.illinois.gov/WaterResources/Pages/PermitApplicationandInstructions.aspx>

<sup>8</sup> Environmental Protection Agency. “Permit Program under CWA Section 404 - Overview,” January 2020. <https://www.epa.gov/cwa-404/permit-program-under-cwa-section-404>





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In addition to the abovementioned requirements, the Rivers, Lakes, and Streams Act (RLSA) permits the Illinois DNR to regulate the disposal of dredged material into Lake Michigan. The IDNR will only approve of disposal in Lake Michigan if the IEPA makes a final determination that the deposited material meets the chemical and physical components outlined in Illinois Pollution Control Board and Environmental Protection Act regulations.

<sup>9</sup>

Following the passage of the RLSA, IDNR released further specific guidance known as “Regulation for Public Waters.”<sup>10</sup> Per these rules, dredged material may only be disposed of in public waters for beach replenishment; bank, shore, and bluff protection; dams; establishing shorelines, spurring dikes and wing dams; emergency projects; or projects authorized by the Federal Government and/or State Legislature.

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### A.1.2.1 BENEFICIAL USE AND REUSE OF DREDGED MATERIAL

The State of Illinois allows USACE and other dredging project sponsors to use dredged material for natural infrastructure and other beneficial uses. Generally, if the excavated material is clean, coarse sand then it can be used as natural infrastructure. In the event of reusable dredged sand, the local community will communicate the most beneficial place to dispose of the material.

For example, dredged material from the Waukegan Harbor is often used by the USACE for local beach nourishment and is continuously a national model of natural infrastructure success.<sup>11</sup>

As part of the abovementioned WRDA '16 beneficial reuse pilot project, the Waukegan Harbor was chosen as a recipient of funds.<sup>12</sup> As a result, the materials dredged in the harbor will be used to provide public beach protection to the Illinois coastal communities of Evanston, Glencoe, Lake Bluff, and North Chicago.

There are ongoing discussions and research on BUDM in Illinois, but none have been implemented as of yet. In 2015, the Rock Island District explored using dredged material in the Illinois River to place on tollways and mix with other materials for use in construction projects.<sup>13</sup> Ultimately, a lack of funding for further research and potential execution stalled considerations.

If dredged material is not used for natural infrastructure or beneficial use in Illinois, it is due to the material being contaminated, exhaustion of reuse options, or no consideration of beneficial use. As a result, it is placed in a confined storage facility or in the open lake depending upon its chemical and physical components. According to the USACE, other major harbors in Illinois – the Port of Chicago and Calumet Harbor – have silty, thick dredged material that is only suitable for disposal in a confined storage facility upland from the waterways.

In addition to the Port of Chicago and Calumet Harbor, inland river dredged material tends to be silty and not suitable for BUDM. However, it is not necessarily contaminated. During our consultation with America’s Central

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<sup>9</sup> 615 ILL. COMP. STAT. ANN. 5/18.

<sup>10</sup> ILL. ADMIN. CODE tit. 17, § 3704.70.

<sup>11</sup> U.S. Army Corps of Engineers, Chicago District. “Waukegan Harbor Dredging,” January 2020.

<https://www.lrc.usace.army.mil/Missions/Civil-Works-Projects/Waukegan-Harbor-Dredging/>

<sup>12</sup> U.S. Army Corps of Engineers, Chicago District. “USACE Announces Four Illinois Coastal Communities as Recipient of Beneficial Use of Dredged Material Pilot Project,” Feb 2019.

<https://www.lrc.usace.army.mil/Media/News-Releases/Article/1765241/usace-announces-four-illinois-coastal-communities-as-recipient-of-beneficial-us/>

<sup>13</sup> U.S. Army Corps of Engineers. “Chicago Area Waterway System Dredged Material Management Plan & Environmental Assessment,” June 2015.

<https://www.lrc.usace.army.mil/Portals/36/docs/projects/calumetharbor/CAWS%20DMMP%20-%20App%20D%20-%20Geotechnical%20Analysis.pdf>





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Port, they mentioned that the State of Illinois generally requires dredged material excavated at their Port (when not conducted by the USACE) to be placed upland, which is especially costly compared to in-water disposal. In addition, residual water from non-USACE dredging at America's Central Port is mandated by the State of Illinois to be disposed of upstream and at a drinking water level quality. This is also very costly for them. Given America's Central Port's location on both the borders of Illinois and Missouri, they have insight into how both States regulate dredging. On the Missouri side of the river, project sponsors are allowed to dump clean dredged material into open water, which compared to the abovementioned requirement in Illinois, is far less costly. As a result, America's Central Port – and other inland river ports in Illinois bordering Missouri – could potentially be less competitive than out-of-state competitors. Subsequently, whenever the USACE performs dredging at America's Central Port or other inland waterway ports, they dump the dredged material back into open water. This creates a disconnect between what USACE and non-Federal sponsors are required to do with dredged material.

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### A.1.2.2 FUNDING

The State of Illinois does not generate revenue, nor has a dedicated funding source, for dredging either lakes or rivers that abut the State. A majority of funding for dredging in Illinois comes from the federally administered HMTF and IWTF. Generally, agencies in Illinois believe these user-fee programs should cover all of the dredging projects in the state, as it is a true user-fee system and the USACE performs much of the dredging in Illinois. However, for non-federally administered dredging projects, Illinois currently provides no funding assistance for them.





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### A.2 ILLINOIS NEIGHBOR STATES

#### Key Chapter Takeaways

Just their maritime system infrastructure, each of Illinois' neighbor states has their own unique approach to dredging. It is important for IDOT to understand how these states regulate, permit, fund, and dispose of dredged material, so that they can bring awareness to Illinois' system stakeholders and work collaboratively to level the playing field with potential competitors. Some key findings from the neighbor state dredging review include:

- **Indiana.** Although through regulatory code changes and guidance, Indiana is seeking to incentivize projects to reuse sediment to revitalize shorelines, the cost is high and stakeholders continue to prefer contained disposal to control project costs.
- **Iowa.** In Iowa, not being on the Great Lakes, most maritime dredging is conducted on smaller, inland river ports or is merely environmental in-nature (i.e. habitat restoration and cleanup) where the water is polluted or has water level problems.
- **Kentucky.** Kentucky is one of the more lenient states as it pertains to the disposal of dredged material. However, this does not necessarily result in increased utilization of excavated sediment for beneficial use.
- **Minnesota.** Minnesota is one of the most progressive and forward-thinking states as it relates to the reuse and BUDM. The State carefully exercises environmental caution through extensive permitting while also being innovative with natural infrastructure solutions.
- **Missouri.** Missouri is especially vigilant in regards to managing the amount of disposed dredged material and other solid waste in landfills and other above-water dumping sites in the state. As a result, a large portion of their excavated sediment from dredging is placed back into the water away from the respective harbor.
- **Wisconsin.** Wisconsin is the only neighbor state that has a long history of investing its own finances in dredging and harbor maintenance with two different grant programs. Consequently, permitting standards for dredging are more rigorous in comparison to other surrounding states.

#### A.2.1 INTRODUCTION

As IDOT develops the IMTS Plan, understanding how Illinois' neighbor states regulate, permit, fund, and dispose of dredged material is vital, so that IDOT can recommend changes to its own state processes and ensure Illinois and its businesses are on a level playing field with potential competitors.

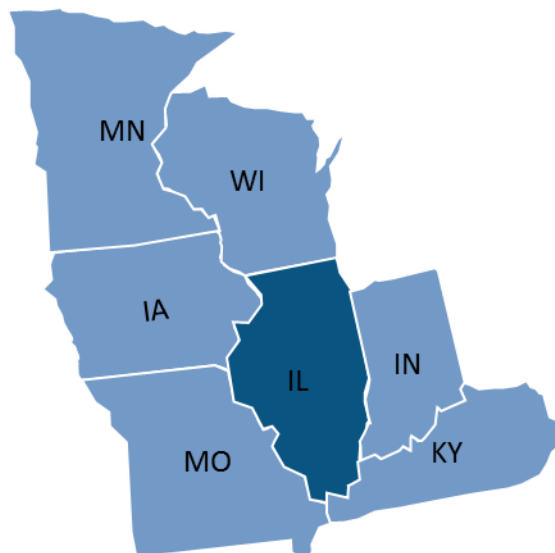
As shown in Figure 1, Illinois' neighbor states include Indiana, Iowa, Kentucky, Minnesota, Missouri, and Wisconsin. And while, technically, Minnesota does not directly border Illinois, Minnesota's innovative dredging solutions are relevant to improving Illinois' processes.





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Figure 1: Neighbor State Map



In order to sufficiently and accurately conduct this neighbor state dredging review, desk research on all neighbor state-specific regulations was conducted (regulations are provided with hyperlinks in Appendix A), as well as consultations with relevant stakeholders in each state (list of agencies consulted is provided in Appendix B). The following sections provide the findings from this review, as well as an indication of the potential impact and/or insight this can bring to Illinois.

### A.2.2 INDIANA

#### A.2.2.1 PERMITTING/REGULATIONS

In Indiana, the USACE, the Indiana DNR, and the Indiana Department of Environmental Management (IDEM) all have authority over dredging permitting.

In addition to a federal § 404 CWA permit, the Indiana Sands and Gravel Permits Act requires a general permit from the Indiana DNR.<sup>14</sup> If a permittee intends to excavate sand from the bed or under the bed of Lake Michigan waters, the Indiana DNR mandates that the sand may solely be placed on the beach of Lake Michigan – not anywhere else. Exceptions to this rule include: 1) if the dredged material is considered toxic as outlined in Indiana code or 2) if the dredging being completed is less than 10 cubic yards and finished within a 30-day period. If the dredged material is deemed toxic the IDEM mandates disposal in a permitted solid waste facility. The Indiana DNR is additionally authorized to impose a “royalty fee” for the removal of dredged material from Lake Michigan. If the excavated sediment is placed in a landfill as defined by Indiana law or used for beach replenishment, the royalty fee may be waived.<sup>15</sup>

The IDEM Office of Land Quality has some authority over dredging projects in Indiana. They will always issue a § 401 state water quality permit before any discharge of dredged material in open water.

<sup>14</sup> IND. CODE ANN. § 14-29-3.

<sup>15</sup> 312 IND. ADMIN. CODE 6-5-8.







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Subsequently, they provide oversight when the dredged material is considered contaminated as IDEM regulates the disposal of solid and hazardous waste. Uncontaminated dirt and sand are exempt from solid waste regulation in Indiana. As a result, the IDEM will recuse themselves from the regulatory authority and such sediments are not restricted and available for any use.

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### A.2.2.2 BENEFICIAL USE AND REUSE OF DREDGED MATERIAL

Indiana focuses its BUDM efforts on beach replenishment and nourishments projects and encourages the use of dredged material for beach nourishment.<sup>16</sup> When a dredging project sponsor or “local” in Indiana intends to use its excavated material for natural infrastructure on a beach, the Indiana DNR inspects the dredge site and the dredged material receiving site during the permit approval process. Depending on the results of their site visits, the Indiana DNR will either approve the beneficial use proposal or suggest alternatives prior to formally issuing a general permit.

Ultimately, using dredged material for natural infrastructure in Indiana is more expensive than merely placing it in a confined sediment facility. Thus, they tend to utilize cost-saving measures resulting in the State being one of the low-use natural infrastructure States bordering Illinois. However, Indiana is attempting to change this through its Sand Nourishment Fund.<sup>17</sup> This Fund allows dredging project sponsors to apply for funding through their local representative to offset the higher cost of beach replenishment and incentivize utilizing dredged sediment for it.

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### A.2.2.3 FUNDING

Indiana does not provide any state funding for maritime transportation-related dredging and believes the HMTF should cover maritime dredging activity. Occasionally, the Indiana DNR will provide limited funding for emergency environmental dredging projects (i.e. Areas of Concern (AOC), habitat restoration, or storm damage cleanup).

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### A.2.2.4 KEY TAKEAWAY FOR ILLINOIS

Indiana has a history of disposing of dredged material in confined facilities. Although through regulatory code changes and guidance, they are seeking to incentivize projects to place their sediment to revitalize shorelines. By using Indiana as a guide, the State of Illinois could potentially provide financial and/or tax incentives for natural infrastructure – especially at ports in the Southern part of the State on the inland waterway system.

## A.2.3 IOWA

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### A.2.3.1 PERMITTING/REGULATIONS

The USACE and Iowa DNR oversee all dredging permitting in the State of Iowa. Dredging permittees in Iowa must obtain a federal § 404 CWA permit and a state § 401 water quality certification through the

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<sup>16</sup> Indiana Department of Natural Resources. “Beach Nourishment,” January 2020  
<https://www.in.gov/dnr/water/3662.htm>

<sup>17</sup> IC-14-25-12





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Iowa DNR.<sup>18</sup> Similar to Illinois and Wisconsin (as mentioned in Section 2.7), Iowa provides permittees with a joint application to streamline the consideration and approval process.<sup>19</sup>

When applying for a § 401 water quality certification, the Iowa DNR requires applicants to: report whether they intend to discharge dredged material into waters of the United States and if so, the reason for that decision; define the physical and chemical components of the excavated sediment; describe the surface area of the filled dredged material and their plans to avoid and minimize harmful impact to waters of the United States; and commit to providing liability compensation in case of detrimental contamination to the waterways.

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### A.2.3.2 BENEFICIAL USE AND REUSE OF DREDGED MATERIAL

In Iowa, most maritime dredging is conducted on smaller, inland river ports or is merely environmental in-nature (i.e. habitat restoration and cleanup) where the water is polluted or has water level problems. Dredged material is either disposed of in open water or in confined sediment facilities. However, Iowa is currently undergoing the process of limiting and potentially banning open water disposal of dredged material, but there is no formal policy yet.

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### A.2.3.3 FUNDING

Iowa does not dedicate any state funding to maritime transportation-related dredging projects. Occasionally, Iowa will provide emergency funding for dredging in the event of natural disasters and extreme water conditions that endanger habitats. For example, in 2002, the State awarded funding to Storm Lake, Iowa to dredge Storm Lake, which ultimately became a 15-year project with multiple rounds of financing.<sup>20</sup> In this case, the lake was especially silty and shallow resulting in an unpleasant appearance, death of fish in the lake, and a major decrease in recreational activity.

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### A.2.3.4 KEY TAKEAWAY FOR ILLINOIS

Iowa prioritizes recreational harbors. Therefore, such harbors tend to be in excellent condition for boating charters, marinas, fishing, and other recreational activities that take place there. In Illinois, recreational boating provides \$3.5 billion of economic impact, 12,252 jobs and 646 businesses to the State alone.<sup>21</sup> As a result, there is an economic benefit for the State of Illinois to provide dredging assistance to recreational ports and harbors.

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<sup>18</sup> Iowa Department of Natural Resources. "Wetlands Permitting (Section 401)," January 2020.

<https://www.iowadnr.gov/Environmental-Protection/Water-Quality/Wetlands-Permitting>

<sup>19</sup> Iowa Department of Natural Resources. "Form 36 (Joint Application) Instructions," January 2020.

[https://www.iowadnr.gov/Portals/idnr/uploads/water/floodplain/fp\\_form36instructions.pdf](https://www.iowadnr.gov/Portals/idnr/uploads/water/floodplain/fp_form36instructions.pdf)

<sup>20</sup> Wan, Justin. Sioux City Journal. "After 15 Years, Dredging of Storm Lake Ends," December 2017.

[https://siouxcityjournal.com/news/state-and-regional/iowa/after-years-dredging-of-storm-lake-ends/article\\_fa963eb5-f4c4-5157-8233-c786709120e2.html](https://siouxcityjournal.com/news/state-and-regional/iowa/after-years-dredging-of-storm-lake-ends/article_fa963eb5-f4c4-5157-8233-c786709120e2.html)

<sup>21</sup> National Marine Manufacturers Association. "Economic Impact Infographics by State," 2018.

<https://www.nmma.org/statistics/publications/economic-impact-infographics>





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### A.2.4 KENTUCKY

#### A.2.4.1 PERMITTING/REGULATIONS

In Kentucky, USACE and the Kentucky Energy and Environment Cabinet Division of Water administer the dredging permitting process. All dredging projects in navigable waterways require a federal § 404 CWA permit from USACE.

If the dredging project sponsor intends to discharge dredged material into waters of the United States, they must obtain a § 401 water quality certification from the Kentucky Energy and Environment Cabinet Division of Water.<sup>22</sup> This permit essentially affirms that the excavated sediments meet the water quality standards regulated by the State.<sup>23</sup>

#### A.2.4.2 BENEFICIAL USE AND REUSE OF DREDGED MATERIAL

Kentucky allows solid wastes to be reused without obtaining a written permit as a “permit-by-rule.”<sup>24</sup> Essentially, this means that the reuse of solid waste does not need a formal permit, but the project must not violate Kentucky’s regulated Environmental Performance Standards or present a threat to human or environmental health.<sup>25</sup>

The Kentucky Energy and Environment Cabinet Division of Waste Management oversees the state’s beneficial reuse of solid waste. Their staff is available to provide regulatory assistance to potential reuse of dredged material and whether it is likely to meet the abovementioned Environmental Performance Standards.<sup>26</sup>

Often, dredging project sponsors in Kentucky who intend to utilize their excavated sediment for BUDM reuse ask for written approval from Kentucky Energy and Environment Cabinet Division of Waste Management. In this case, the applicant can fill out a “DEP 7098: Application for a Permit-By-Rule for Beneficial Reuse of Solid Waste” form.

Although beneficial reuse is a permit-by-rule activity in Kentucky, the project sponsor is completely liable for any release of a reportable quantity of pollutants or contaminants in accordance with the Environmental Emergency provisions of Kentucky State law.

#### A.2.4.3 FUNDING

The Kentucky Transportation Cabinet dedicates funding for dredging or maintenance of access for public Riverport authorities in Kentucky. This funding is provided through the Kentucky Riverport Improvement Program, which was created in 2013 and uses funds from Kentucky’s General Fund.<sup>27</sup> For FY19-20, the

<sup>22</sup> Kentucky Energy and Environment Cabinet. “§401 Water Quality Certification,” January 2020. <https://eec.ky.gov/Environmental-Protection/Water/PermitCert/WQ401Cert/Pages/default.aspx>

<sup>23</sup> 401 KAR 10:031. Surface Water Standards

<sup>24</sup> 401 KAR 47:150 Section 1

<sup>25</sup> 401 KAR 47:030

<sup>26</sup> Kentucky Energy and Environment Cabinet. “Beneficial Reuse of Solid Waste,” January 2020. <https://eec.ky.gov/Environmental-Protection/Waste/solid-waste/i-need-information/Pages/beneficial-reuse.aspx>

<sup>27</sup> Kentucky Transportation Cabinet, Department of Highways, Division of Planning. “FY 2020 Kentucky Riverport Improvement (KRI) Projects,” 2019.





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Kentucky Transportation Cabinet is authorized to award \$500,000 worth of grants for this program. The only eligible applicants are public River Authorities with an actively operating riverport in Kentucky.

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### A.2.4.4 KEY TAKEAWAY FROM ILLINOIS

The Kentucky Transportation Cabinet understands the benefit of providing funding for dredging activities to commercially active ports in the State. As IDOT's involvement in maritime transportation planning in Illinois grows, they could potentially consider providing funding directly from their own department. Minnesota and Wisconsin also administer their own individual dredging funding assistance programs through their Departments of Transportation (as described below in Section 2.5 and 2.7).

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## A.2.5 MINNESOTA

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### A.2.5.1 PERMITTING/REGULATIONS

In Minnesota, the USACE, the Minnesota DNR and Minnesota Pollution Control Agency (PCA) oversee the dredging permitting process. All dredging projects in the state require a federal § 404 CWA permit from the USACE and a Public Waters Work permit from the Minnesota DNR.<sup>28</sup>

When applying for a Public Waters Work permit, the permittee must provide a chemical and physical characterization of the sediment to be excavated from the proposed site.

In addition, if a federal permit is needed for dredging that will result in the disposal of dredged material into waters of the United States, a § 401 water quality certification is needed from the Minnesota PCA.<sup>29</sup>

Occasionally, a State Disposal System permit from the Minnesota PCA is required for storing, treating, disposing, or reusing dredged materials on certain pieces of land in Minnesota.<sup>30</sup> If the project meets the disposal and location criteria for a State Disposal System permit, a permit is only required for volumes greater than 3,000 cubic yards stored or reused. If the disposal of the excavated sediments will be going into a landfill with a Minnesota PCA permit that covers the management of the material – no permit is needed.

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### A.2.5.2 BENEFICIAL USE AND REUSE OF DREDGED MATERIAL

When dredging projects are being considered and planned in Minnesota, the utilization of dredged sediment is actively included in the process. Recently, clean excavated material in Minnesota has been reused for habitat improvement, island creation and expansion, and other municipal projects as a cheaper fill option.

Prior to the decision of how and whether to reuse dredged material, the Minnesota PCA categorizes the sediments – in comparison to their established Soil Reference Values – and assigns a numeric

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[https://transportation.ky.gov/MultimodalFreight/Documents/FY%2020%20Kentucky%20Riverport%20Improvement%20\(KRI\)%20Guidance%20Document.pdf](https://transportation.ky.gov/MultimodalFreight/Documents/FY%2020%20Kentucky%20Riverport%20Improvement%20(KRI)%20Guidance%20Document.pdf)

<sup>28</sup> Minnesota Department of Natural Resources. "Public Waters Work Permit Program," January 2020.

[https://www.dnr.state.mn.us/waters/watermgmt\\_section/pwpermits/index.html](https://www.dnr.state.mn.us/waters/watermgmt_section/pwpermits/index.html)

<sup>29</sup> Minnesota Pollution Control Agency. "Clean Water Act Section 401 Water Quality Certifications," January 2020. <https://www.pca.state.mn.us/water/clean-water-act-section-401-water-quality-certifications>

<sup>30</sup> Minnesota Pollution Control Agency. "Dredged Materials Management," January 2020.

<https://www.pca.state.mn.us/water/dredged-materials-management>





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management level depending on the results.<sup>31</sup> If the numeric level is of acceptable water quality, the Minnesota PCA and the project sponsor will always seek ways to utilize the dredged material in a beneficial way.

Additionally, Minnesota has been testing whether dredged material is suitable for mine land reclamation. Particularly, studies are being implemented in Minnesota's Iron Range Region to determine whether excavated sediment can be used for the reestablishment of the ecosystem after mining has been completed.<sup>32</sup>

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### A.2.5.3 FUNDING

Minnesota provides funding for maritime transportation-related dredging projects through the "Port Development Assistance Program" (PDAP). PDAP is managed by the Minnesota DOT. The program is intended to provide 80% state funding in combination with a 20% local match for: dredging of waterways, dock wall construction, building new terminal technologies, improving rail access to port areas, and upgrading plumbing and electrical needs to comply with safety codes. Since funds are appropriated by the Legislature, funding levels vary from year-to-year. The most recent appropriation was \$5.3 million in 2018, with historical allocations ranging between \$0 and \$3 million per year.

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### A.2.5.4 KEY TAKEAWAY FOR ILLINOIS

From a dredged material disposal perspective, Illinois has the opportunity to utilize Minnesota's innovative best practices. Minnesota's use of a numeric dredged material testing system allows the state to ensure that all sediment is minimally considered for natural infrastructure and beneficial reuse while also making sure there will be no negative environmental impact. Additionally, Illinois can become more creative – similar to Minnesota – in determining areas to place dredged sediment (i.e. old mine land, habitats, islands). IDOT's ongoing study on innovative uses of dredged material is considering these utilization methods.

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## A.2.6 MISSOURI

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### A.2.6.1 PERMITTING/REGULATIONS

In Missouri, USACE and the Missouri DNR regulate dredging permitting. A federal § 404 CWA permit is required to dredge in the state's navigable waters of the United States.

If the project will require placement of dredged material in open water, the permittee must additionally obtain a § 401 water quality certification from the Missouri DNR, which confirms the potential dredged sediment meets state water contamination standards. During our conversation with America's Central Port, they mentioned that Missouri previously allowed other States to dump clean sediment in their waterways, but has recently cracked down on this practice. Given that in-state dredging projects are

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<sup>31</sup> Minnesota Pollution Control Agency. "Best Management Practices for the Management of Dredged Material," March 2014. <https://www.pca.state.mn.us/sites/default/files/wq-gen2-02.pdf>

<sup>32</sup> Sea Grant, University of Wisconsin. "Beneficial Use of Dredged Material." <https://www.seagrant.wisc.edu/our-work/focus-areas/coastal-processes-and-engineering/coastal-processes/beneficial-use-of-dredged-material/>





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required to secure a permit for open water disposal, it was deemed unfair by the Missouri DNR to merely allow out-of-state disposal.

In addition to the fundamental permits, the Clean Water Commission of the Missouri DNR mandates a state “MOG698” permit in the event any dredged material will be placed in a landfill or contained storage facility owned by a city, city utility, local unit of government, or homeowner’s association in the state.<sup>33</sup> The goal of this permit is to track, manage, and limit the amount of dredged sediment being disposed of on land. This permit must be obtained prior to dredging but does not actually authorize the excavation itself.

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### A.2.6.2 BENEFICIAL USE AND REUSE OF DREDGED MATERIAL

The Missouri DNR publicly acknowledges that dredged material can be beneficially used for projects involving habitat restoration, mine reclamation, agriculture, and landfill generation. Particularly, in coordination with the USACE, Missouri has looked at utilizing dredged material in the St. Louis Area on the Illinois, Missouri, and Upper Mississippi River Junctions.<sup>34</sup> However, while there has been research conducted on BUDM in the Mississippi River and Missouri River watersheds, limited dredged material has been used in Missouri for purposes of natural infrastructure or reuse.

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### A.2.6.3 FUNDING

Besides for emergency dredging (i.e. following a natural disaster/inclement weather or unsafe conditions for wildlife), Missouri does not formally provide funding for dredging – especially for commercial activity. Missouri has been an active proponent of federal funding in the form of the HMTF and other sources.

In 2019, Governor Mike Parson called on the White House Office of Management and Budget (OMB) and the USACE to dedicate federal funding for dredging the Lower Mississippi River watershed in Missouri from 45 feet to 50 feet.<sup>35</sup> For this proposed project, project sponsors are seeking 75% federal funding with a commitment of 25% from “non-federal sources.” To date, the United Soybean Board has approved \$2 million and the State of Louisiana has devoted \$7.5 million. Missouri has not invested any money in the project.

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### A.2.6.4 KEY TAKEAWAY FOR ILLINOIS

A vast majority of Missouri’s dredging projects place their dredged sediment back into open water (the river). The state sees this as a way to limit the amount of excavated material dumped in confined disposal facilities while also providing cost-saving options for river dredging project sponsors. Illinois has a large number of ports and harbors along the inland river system that generally are prohibited from open water placement resulting in the disposal of dredged material in confined facilities. Disposing of dredged material in confined facilities is costly for Illinois inland river ports and harbors who believe their dredged

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<sup>33</sup> Missouri Department of Natural Resources, Missouri Clean Water Commission. “Missouri State Operating Permit, General Permit.” <https://dnr.mo.gov/env/wpp/permits/issued/docs/G690000.pdf>

<sup>34</sup> U.S. Army Corps of Engineers. “Dredging and Dredged Material Management,” July 2015. [https://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM\\_1110-2-5025.pdf](https://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM_1110-2-5025.pdf)

<sup>35</sup> Shurr, Alisha. The Missouri Times. “Parsons Backs Dredging of Lower Mississippi River,” October 2019. <https://themissouritimes.com/65417/parson-backs-dredging-of-lower-mississippi-river/>







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material is clean enough for in-water placement. Therefore, Illinois could potentially consider learning more about how Missouri is saving its riverports money by being more lenient with open water disposal.

### A.2.7 WISCONSIN

#### A.2.7.1 PERMITTING/REGULATIONS

In Wisconsin, the USACE and Wisconsin DNR manages the dredging permitting processes in the state. Similar to every other state, dredging activities in Wisconsin's navigable waterways require a federal § 404 CWA permit. Project sponsors must apply for a § 401 water quality certification permit for open water dredged material disposal with the Wisconsin DNR, as well. In an effort to streamline the permitting process, the USACE and the Wisconsin DNR allow permittees to utilize a joint permit application.<sup>36</sup>

Under Wisconsin State Statute, without an applicable permit from the Wisconsin DNR, no excavated material is to be deposited where no bulkhead line has been established or beyond a lawfully established bulkhead line.<sup>37</sup> As part of the permitting process, they require permit applicants to collect and analyze data on the dredging project's sediments prior to submitting their application. For projects where upland disposal of dredged material is planned, the results of these sediment samplings are to be compared to the state's waste disposal standards. The Wisconsin DNR provides pertinent guidance to permittees in relation to the data analysis necessary to adequately meet their requirements.

#### A.2.7.2 BENEFICIAL USE AND REUSE OF DREDGED MATERIAL

Generally, the Wisconsin DNR formally promotes and encourages the reuse of dredged material with the goal of minimizing environmental harm resulting from a dredging project.<sup>38</sup> Often times, below water excavated material is also used in local municipal construction projects (i.e. soccer fields, school, and public playgrounds) as long as it passes a water quality test through the Wisconsin DNR's "Solid Waste Program."<sup>39</sup>

As part of the previously mentioned beneficial use pilot project stemming from the passage of WRDA 2016, a project in Wisconsin was chosen for federal sponsorship.<sup>40</sup> This project – known as the Mississippi River Upper Pool 4, Pierce County Islands and Head of Lake Pepin Blackwater Complex – will use clean

<sup>36</sup> Wisconsin Department of Natural Resources. "Water Resources Application for Project Permits, Form 3500-053," January 2020.

<http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/Website%20Organization/WI%20Joint%20Application%202014.pdf>

<sup>37</sup> WIS. STAT. ANN. § 30.12.

<sup>38</sup> WIS. ADMIN. CODE NR § 347.01

<sup>39</sup> Wisconsin Department of Natural Resources. "Solid Waste Management in Wisconsin," January 2020. <https://dnr.wi.gov/topic/Waste/Solid.html>

<sup>40</sup> U.S. Army Corps of Engineers, Chicago District. "USACE Announces Four Illinois Coastal Communities as Recipient of Beneficial Use of Dredged Material Pilot Project," Feb 2019.

<https://www.lrc.usace.army.mil/Media/News-Releases/Article/1765241/usace-announces-four-illinois-coastal-communities-as-recipient-of-beneficial-us/>







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dredged material to restore and create island/beach infrastructure, protect water banks, and improve shoreline habitat.<sup>41</sup>

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### A.2.7.3 FUNDING

Wisconsin provides funding towards maritime transportation-related dredging projects via the “Harbor Assistance Program” (HAP), which was created in 1979 and administered by the Wisconsin DOT. HAP has funded 114 projects and provided over \$147 million to harbor maintenance projects in the State as of 2018.<sup>42</sup> Program funding varies from year to year and is approved by the Legislature. HAP will cover up to 80 percent of a project’s cost. However, if USACE financing is also involved in the project, HAP will only cover up to 50 percent of the local share of eligible project costs.

In addition to HAP, Wisconsin has a smaller grant program known as “Recreational Boating Facilities Grants.”<sup>43</sup> This program – administered by the Wisconsin DNR – is intended for dredging on inland lakes that provide public access and house recreational boating.

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### A.2.7.4 KEY TAKEAWAY FOR ILLINOIS

The key lesson for Illinois is that Wisconsin’s HAP program has allowed the state to ensure all ports – big and small – are considered. Generally, the USACE will fund and conduct dredging at the larger commercial ports in Wisconsin, and the HAP complements this by funding dredging at smaller ports. By providing regular and dedicated funding for dredging, Illinois may assist small inland river ports and contribute to the reduction of the abovementioned Great Lakes’ dredging backlog. In addition, Illinois could consider implementing a statewide grant program similar to Wisconsin’s Recreational Boating Facilities Grant or a user-fee for recreational boating charters and users to address recreational harbors. Often times, recreational harbors are responsible for providing their own financing for dredging in the event the USACE or the State does not assist.

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<sup>41</sup> U.S. Army Corps of Engineers. “Pierce County Islands and the Head of Lake Pepin,” April 2018. [https://www.mvp.usace.army.mil/Portals/57/docs/Civil%20Works/Projects/UpperPool4/Public\\_meeting\\_Slides\\_UP4\\_April2018.pdf?ver=2018-04-05-120748-877](https://www.mvp.usace.army.mil/Portals/57/docs/Civil%20Works/Projects/UpperPool4/Public_meeting_Slides_UP4_April2018.pdf?ver=2018-04-05-120748-877)

<sup>42</sup> Wisconsin Department of Transportation. “Harbor Assistance Program (HAP) Program Grant Recipients (1980-2018),” 2018. <https://wisconsindot.gov/Documents/doing-bus/local-gov/astnce-pgms/aid/ports-map.pdf>

<sup>43</sup> Wisconsin Department of Natural Resources. “Recreational Boating Facilities Grants,” January 2020. <https://dnr.wi.gov/AID/RBF.html>





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### A.3 CONCLUSIONS

#### A.3.1 FINDINGS FROM NEIGHBOR STATE REVIEW

This review of neighbor state dredging regulations was conducted to aid IDOT in understanding how other states regulate, permit, fund, and dispose of dredged material. While IDOT may not be in a position to implement changes to state dredging regulations or processes, IDOT is in a position to provide advice and recommendations on next step actions to IDNR, ILEPA and other state stakeholders on how to better position the state to ensure its businesses are on a level playing field with potential neighbor-state competitors.

The key findings from the research for IDOT consideration are summarized in the following figure and include:

- **Permitting/ Regulatory Authority.** While all states are governed by the same regulations at the federal level, it is truly the regulations of each state that govern the playing field. In Illinois, both IDNR and ILEPA are involved in permitting and regulating dredging activity in the state. Both Indiana and Minnesota have similar structures, but neighbor states of Iowa, Kentucky, Missouri, and Wisconsin all only have one state agency overseeing these activities – and in most cases, it is the DNR. This structure influences state dredging considerations.
- **Placement of Dredged Material.** Federal regulations for all states are the same: “Contained Disposal” is required if the dredged material is deemed contaminated or silty, or “Open Water Disposal” is allowed if the dredged material is clean and smooth sand (per a § 401 water quality certification). However, each state also has its own clean water standards, and the state water quality standard may be more strict than the federal § 401 water quality certification. This state standard may also only apply if the project sponsor is an entity other than a federal agency, namely the USACE. This is the case in Illinois, where a federal dredging project may be governed by federal water quality standards and allow for open water disposal, but the same project advanced by a local sponsor would be required to follow State of Illinois standards, which are more strict and may deem the dredged material “contaminated” and not allowable for open water disposal. While stricter water quality standards are positive for the surrounding population that depends on the water supply, this disconnect between federal and state regulations places an undue burden on non-federal dredging projects.
- **Challenges of Using Dredged Material.** Neither “contained disposal” nor “open water disposal” provide benefits beyond simply removing materials to ensure proper channel depth. There are, however, many other potential uses for dredged materials that can build and support natural infrastructure, such as building beaches and revitalizing shoreline. The USACE encourages and aims to ensure as much excavated sediment from dredging is used for natural infrastructure, but there are challenges to making use of this dredged material. In Illinois, much of the dredged soil is of unsuitable quality for reuse. In Indiana, while BUDM is encouraged, the high cost of reuse has led stakeholders to lean toward contained disposal facilities as a preference. And, in Kentucky, there is active BUDM, but the state has absolved itself of responsibility and indicated that the sponsor will assume liability for any contamination issues that arise from the use.
- **Beneficial Use Best Practices.** Few best practices exist regarding the use/reuse of dredged material. The USACE is conducting 10 pilot studies across the US (including in IL and its neighbor





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states), representing a variety of dredging conditions, to help establish best practices in BUDM. In Missouri, Greater St. Louis was part of an early USACE study on reuse, but there has not been much activity in the state since the study. One of the most active states in BUDM and one leading in terms of best practices is Minnesota. In the state, BUDM is considered for each dredging project and an innovative numeric system is used to assess water quality levels for each project, and then the action for dredged materials based on the “score.” In some cases, this could result in beneficial use, but it could also mean contained disposal or open water disposal.

- **Funding for Dredging.** While there is funding for dredging at the federal level, it is insufficient to address the dredging backlog. Several neighbor states do provide annual or bi-annual funding for dredging projects within their borders as part of broader maritime investment programs, including Kentucky, Minnesota, and Wisconsin. Other states only provide funding during emergency situations. In Illinois, there is no dedicated funding for dredging.

### A.3.2 INITIAL RECOMMENDATIONS FOR ILLINOIS

Based on the findings, suggested next step actions for IDOT and maritime system stakeholders include:

- **Definition of “Contaminated” Dredged Material.** Illinois appears to have more stringent water quality standards and a definition for “contaminated” dredged material that goes beyond the federal definition. Having high standards is a good thing, but it may also lead to unnecessary costs. An “exception” should be explored by Illinois and federal stakeholders related to the water quality standard and the meaning of “contamination” so that if open water disposal is allowed by one stakeholder, then it is allowed by the other (and vice versa).
- **Dredged Materials Management.** Illinois should continue to explore how dredged materials in Illinois are managed and maintained over time. Missouri has an aggressive dredged materials management program that enables the state to do more open water disposal than may be possible absent the oversight. Review of Illinois’ procedures, and revisions to these, may allow for increased opportunities for open water disposal on non-federal projects.
- **BUDM Best Practices.** Illinois has over 1,000 miles of navigable waters and has the geographic and community diversity to serve as a testing ground for beneficial use. While an Illinois challenge is that some dredged soil is of unsuitable quality for reuse, as technology changes, Illinois should be a leader in how to make use of undesirable material – potentially as part of the ongoing BUDM study being led by IDOT. In the interim, the state should get involved in and monitor the activities of the pilot study that is being conducted by USACE in Illinois.
- **Dedicated Maritime Transportation System Funding.** Illinois does not currently provide dedicated funding to the maritime system. As IDOT explores establishment of an annual, dedicated program, consideration should be given in the project criteria to allow for state-sponsored dredging.





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Figure 2: Summary of Findings

	Illinois	Indiana	Iowa	Kentucky	Minnesota	Missouri	Wisconsin
<b>Permitting / Regulatory Auth. – Federal</b>	Under the Clean Water Act and Rivers & Harbors Act, the USACE has regulatory authority over all waters of the U.S.						
<b>Permitting / Regulatory Auth. – State</b>	(1) Illinois DNR (Office of Water Resources) (2) Illinois EPA	(1) Indiana DNR (2) Indiana Dept. of Enviro. Mgmt. (IDEM)	(1) Iowa DNR	(1) Kentucky Energy and Environment Cabinet (Division of Water)	(1) Minnesota DNR (2) Minnesota Pollution Control Agency (PCA)	(1) Missouri DNR	(1) Wisconsin DNR
<b>Allowed Placement of Dredged Material – Federal</b>	Contained Disposal – If the dredged material is deemed contaminated or silty. Open Water Disposal – If the dredged material is clean and smooth sand (per a § 401 water quality certification).						
<b>Allowed Placement of Dredged Material – State</b>	As above. But material that may be “contaminated” as uniquely defined in IL must be contained.	As above.	As above.	As above..	As above. But BUDM is always considered.	As above. But management practices allow for more open water disposal.	As above.
<b>Beneficial Use / Reuse of Materials – Federal</b>	USACE aim is to ensure as much excavated sediment from dredging is used for natural infrastructure. Conducting 10 pilot studies across the US to establish “best practices” for beneficial use/reuse of dredged materials.						
<b>Beneficial Use / Reuse of Materials – State</b>	Allows for BUDM, but seeking innovative approaches. <sup>44</sup>	Limited BUDM due to cost of reuse. Preference for contained disposal.	N/A	Active BUDM, but likely not a best practice. Sponsor assumes liability (as/when it is ID’d).	Innovative numeric management to assess water quality levels and best use.	Greater St. Louis was part of a USACE study on reuse; however limited reuse has occurred.	Allows for BUDM if state water quality test passed.
<b>Funding – Federal</b>	USACE O&M Funding (Authorized ~every 2 years through Water Resources Development Act) Harbor Maintenance Trust Fund (HMTF), funded through Harbor Maintenance Tax (HMT) collections, and appropriated by Congress						

<sup>44</sup> IDOT has a BUDM Study currently underway. Expected to be complete by August 2021, the study will provide IDOT formal recommendations and guidance on how to reuse non-hazardous dredged material in their projects.



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<b>Funding – State</b>	N/A	N/A – Indiana DNR has provided emergency funding	N/A – Iowa has provided emergency funding (inland lake)	Yes – Kentucky Riverport Improvement Program	Yes - Port Development Assistance Program	N/A – Missouri has provided emergency funding	Yes – (1) Harbor Assistance Program (2) Recreational Boating Facilities Grants (inland lakes)
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### A.4 STATE REGULATIONS

Body	Regulation
Federal	<a href="#">Clean Water Act - 16 U.S.C. 1456(c)(1)(a).</a>
Iowa	<a href="#">Water Quality 401 Permitting</a>
Illinois	<a href="#">Rivers, Lakes, and Streams Act - 615 ILL. COMP. STAT. ANN. 5/18.</a>
Illinois	<a href="#">Regulation of Public Waters - ILL. ADMIN. CODE tit. 17, § 3704.70.</a>
Indiana	<a href="#">Gravel Permits Act - IND. CODE ANN. § 14-29-3.</a>
Indiana	<a href="#">Natural Resources Navigable Waters Commission - 312 IND. ADMIN. CODE 6-5-8.</a>
Indiana	<a href="#">Sand Nourishment Fund: IC-14-25-12</a>
Kentucky	<a href="#">Surface Water Standards - 401 KAR 10:031.</a>
Kentucky	<a href="#">Special Types of Permits - 401 KAR 47:150 Section 1</a>
Kentucky	<a href="#">Environmental Performance Standards - 401 KAR 47:030</a>
Minnesota	<a href="#">Public Waters Work Permit Requirement</a>
Minnesota	<a href="#">State Water Quality Certification</a>
Missouri	<a href="#">Water Quality 401 Permitting</a>
Wisconsin	<a href="#">Structures and Deposits in Navigable Waters - WIS. STAT. ANN. § 30.12</a>
Wisconsin	<a href="#">Sediment Sampling - WIS. ADMIN. CODE NR § 347.01</a>





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## A.5 STAKEHOLDERS CONSULTED

State/Body	Organization
Federal	US Department of Transportation, Maritime Administration, Great Lakes Gateway Program US Environmental Protection Agency (EPA), Great Lakes National Program US Army Corps of Engineers Detroit District Chicago District Rock Island District
Illinois	America's Central Port Illinois Department of Natural Resources, Office of Water Resources Illinois Public Ports Association
Indiana	Indiana Department of Environmental Management, Office of Water Management Ports of Indiana
Iowa	Iowa Department of Natural Resources, Lake Restoration Program
Kentucky	Kentucky Association of Riverports Kentucky Energy and Environment Cabinet, Division of Water
Minnesota	Duluth-Superior Port Authority Minnesota Department of Natural Resources
Missouri	Missouri Department of Natural Resources
Wisconsin	Port of Green Bay Wisconsin Department of Natural Resources Wisconsin Port Association
Private	American Great Lakes Port Association Great Lakes Dredge & Dock Lake Carriers Association





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