**STATEMENT OF JAMES WEAKLEY, PRESIDENT,
LAKE CARRIERS' ASSOCIATION, BEFORE THE
SUBCOMMITTEE ON THE INTERIOR, ENERGY AND ENVIRONMENT OF THE
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM
10:00 a.m., March 6, 2018**

**"Examining the U.S. Army Corps of Engineers"**

Good morning. Thank you for the opportunity to speak to you today. I am Jim Weakley, President of the Lake Carriers' Association (LCA). We represent 13 American companies that operate 45 U.S.-flag vessels on the Great Lakes and carry the raw materials that drive the nation's economy: iron ore and flux stone for the steel industry, aggregate and cement for the construction industry, coal for power generation, as well as sand and grain. Collectively, our members can transport more than 100 million tons of dry-bulk cargo per year and employ more than 1,600 men and women, all of whom are U.S. citizens or legally admitted aliens, and provide annual wages and benefits of approximately $125 million. In turn, the cargos our members carry generate and sustain more than 103,000 jobs in the eight Great Lakes states and have an annual economic impact of more than $20 billion.

I would like to provide a brief overview of the Great Lakes Navigation System (GLNS), its different market segments, and how we work with the U.S. Army Corps of Engineers (USACE) to maintain the waterway. Then, I'll focus the majority of my testimony on the Soo Locks, our 10-year struggle to fix a fatal flaw in a USACE study, and describe how the USACE is exploiting a lack of policy guidance to undervalue system redundancy for what they admit is the "Achilles heel of American manufacturing."

***The GLNS***

The GLNS enables maritime commerce on America's Fourth Sea Coast. The five Great Lakes are tied together by three connecting channels (the St. Marys River, the Detroit/St. Clair River system, and the Welland Canal) and the so-called "Achilles Heel of North American Manufacturing," the USACE navigation locks at Sault Ste. Marie, Michigan (Soo). The St. Lawrence Seaway is the umbilical cord that connects the GLNS and its 68 U.S. ports and 35 Canadian ports to global trade. The Great Lakes are a bi-national system supporting both domestic and international trade. For example, the navigation channel crosses the U.S./Canadian border 17 times in the Detroit/St. Clair River portion of the system alone. If measured as a single region, the eight Great Lakes states and two Canadian provinces represent the world's third-largest economy.

Although there is a great desire to move international *container* traffic through the GLNS, the majority of the cargo moved today is bulk. The international ocean going fleet vessels, sometimes referred to as "salties," primarily bring steel into the Great Lakes region and take grain out. Approximately 225 salties call annually on both sides of the border moving 10 million tons of cargo annually.

"Lakers," the vessels LCA represents, are ships and barges specifically designed for the Great Lakes trade. Most are self-unloading dry-cargo vessels, although some lack the self-unloading equipment and others move liquid bulk material. Both the United States and Canada reserve their domestic waterborne movements of cargo for "coastwise qualified" vessels. Our nation's Jones Act vessels are American-owned, American-built, and American-crewed. In 2017, U.S.-flag lakers transported approximately 84 million tons of iron ore, coal, limestone, cement, salt, sand, and grain in domestic moves (between two U.S. points) under the Jones Act, and they carried 2 million tons of cargo between U.S. and Canadian ports. In 2014, Canadian-flag lakers transported 69 million tons of cargo. About half of that total moved domestically (between two points in Canada), including Canadian points on the Great Lakes, the Canadian Arctic or its east coast, and about half between U.S. Great Lakes ports and Canadian ports.

***History of Soo Locks***

In 1855, the State of Michigan opened the first Soo lock to allow ships to navigate the 21-foot height differential between Lake Superior and Lake Huron. Between then and 1969, a new lock was built there every 19 years on average. There are currently four locks at the Soo: the Davis (opened in 1914), the Sabin (opened in 1919), the 800-foot long MacArthur (opened in 1943-designed and built in 13 months), and the 1,200-foot long Poe (opened in 1969). The Davis and Sabin are no longer operational. In 1986, the Congress authorized a new 1,200-foot long lock at the Soo to provide lock redundancy and system resiliency. The new lock would be built in the footprint of the Davis and Sabin and would be the first new lock built there in more than 50 years. Currently, 90% of the tonnage transiting the Soo Locks has to transit the Poe Lock because the MacArthur Lock is too small for the larger, modern vessels that carry iron ore. The completion of the new lock would restore the same level of resiliency that existed in 1919 by providing two locks of the same size.

***GLNS and Soo Lock Economic Importance***

LCA members are the linchpin of what has been called "one of the nation's most economically vital systems, the iron mining—integrated steel production—manufacturing supply chain…"[1] In general, iron ore, the primary raw material for steel, is transported by our ships from mines in Minnesota and the Upper Peninsula of Michigan to steel mills in Indiana, Ohio, Michigan, and Pennsylvania. So crucial is that waterborne supply chain that the Department of Homeland Security (DHS) has warned that an interruption of domestic shipping services through

[1] "The Perils of Efficiency: An Analysis of an Unexpected Closure of the Poe Lock and its Impact," Department of Homeland Security (October 2015), at 1. While this report is focused on the impact of a failure of the Poe Lock, through which vessels that are part of this supply chain must pass, the analysis also demonstrates the significant impact of shipping on the Great Lakes economy and beyond. Attachment 1 contains a summary of the study.

the Poe Lock would have "catastrophic impacts on the regional and National economy,"[2] including the interruption of steel production and the plunging of the North American economy into a "severe recession."[3]

The DHS study estimated that 11 million Americans would become unemployed if shipping through the Poe Lock was interrupted for a six-month period beginning at the start of the shipping season. According to DHS, the State of Michigan's unemployment would reach 22%, exceeding its peak unemployment rate of 15% during the Great Recession of 2008. This is a direct result of interrupting the manufacturing made possible by the 60 million tons of key raw materials transiting the Poe Lock on an annual basis.

However, this is a national problem. In fact, the unemployment spikes in the event of an interruption in Great Lakes shipping will ripple through the United States, a result of the far-reaching impacts of the automobile manufacturing and general steel industries. Three States, Michigan (944,000), Texas (865,000), and Ohio (826,000), would experience job losses in excess of 800,000 people. The DHS study also determined that nearly 100% of North American appliance, auto, construction equipment, farm equipment, mining equipment, and railcar manufacturing would cease. The $1.1 trillion decrease in gross domestic product would result in widespread bankruptcies and a likely recession. DHS concluded that, "In terms of an impact to the North American economy, it is hard to conceive of a single asset more consequential than the Poe Lock."[4] The USACE, which operates the Soo Locks, has taken security measures to ensure the protection of the locks.

The USACE does its best to maintain the two operational locks despite extreme winter weather. The risk of a lock outage as a result of an accident, mechanical failure or terrorist attack, however, is a matter of great concern not just for our industry, but also for our nation. The jobs of 11 million Americans depend on the flow of iron ore between Lake Superior and the lower Great Lakes.

***This Hearing***

This hearing examines how the USACE can improve communications and interactions with stakeholders regarding its work and projects.

We have had good results with the USACE on some issues. For example, in the previous decade we were facing a dredging crisis. We were simultaneously being squeezed by drought-induced low water and a lack of funding for maintenance dredging of Great Lakes navigation channels. The combination of both trends did not bode well for the future of Great Lakes shipping. We began communicating our concerns with the three USACE district offices that cover the Great Lakes. We recognized that was only the first step and eventually engaged with the division and headquarters offices. The combination of these communications and congressional intervention (when WRDA 2014 designated the USACE navigation projects in the Great Lakes as the GLNS, directed the USACE to maintain them as an integrated system, and

[2] *Id.* at 29.
[3] *Id.* at iii.
[4] *Id.* at 55.

provided a GLNS allocation from the Harbor Maintenance Trust Fund) stabilized our Great Lakes dredging crisis.

Our communications with the USACE regarding the Soo Lock, however, have been less successful. Our experience with the 1986 congressionally authorized project to build a second 1,200-foot lock project has been a frustrating decade-long struggle. That lock has not yet been completed due to a significant flawed assumption in the USACE's calculation of the benefit-to-cost ratio (BCR) for the new lock: that rail could move any cargo stranded by a Poe Lock outage. Once we learned of this flawed assumption, we immediately pointed it out to the USACE. We were met with strong resistance and an emphatic denial of what was an easily verifiable claim by us. Apparently, the USACE had not encountered a situation where railroad transportation as the next least-cost transportation alternative to a navigation lock did not already exist. The USACE refused to acknowledge the flaw and recalculate the BCR. It wasn't until Senator Carl Levin (D-MI) and Congressman Dan Benishek (R-MI) intervened that the USACE finally agreed to develop an "Economic Reevaluation Report" (ERR) to update the new lock's BCR. Fortuitously, the DHS conducted its separate study that confirmed the lack of rail connectivity to move the iron ore from mine to mill.

The ERR is intended to take a fresh look at the flawed assumptions in the previous BCR. We have had small successes in the process along the way. The USACE now acknowledges that the steel mills (with some minor exceptions) are not capable of receiving raw materials by rail. We have convinced the USACE to use feedback from the steel industry and others in the USACE's long-term forecast of commodity movements through the Soo Locks. We also worked together to assume more reasonable stockpiling capacity at the mills and iron ore receiving docks. Based on conversations with USACE officials, however, we now know that they are using different flawed assumptions that will again undervalue the project. The small successes described above will not overcome the impacts of the new flawed assumptions and methodologies that the USACE recently told us they intend to incorporate in the ERR.

***2018 ERR Flaws***

Estimating the cost of alternative transportation

The biggest challenge in the ongoing ERR is how to deal with the lack of *existing* alternative transportation. The USACE admitted to us that their Principles and Guidelines and policy documents provide no specific guidance on what to do if an alternative transportation mode doesn't exist. For navigation projects, the USACE compares the transportation costs of the "with-project" condition (including the construction cost of the new lock) with the transportation cost of the next least-cost alternative (which is normally rail) in a "without-project" condition. The difference between the two costs is the "benefit" used in the BCR. For the Soo Lock project's "without-project" condition, the USACE assumes that the private sector would build new rail connections from the iron ore mines to Escanaba, Michigan (which is located on Lake Michigan and not Lake Superior), and refurbish and rebuild the shuttered iron ore loading dock and loading yard in Escanaba. This would effectively provide a route to transport iron ore around the Soo Locks during a Poe Lock outage. The ore could then be loaded onto large lakers at Escanaba (assuming enough of them are not trapped above the Soo Locks) and transported to

the steel mills. USACE economists told us that the estimated the cost of building this alternative rail infrastructure is between $4billion to $10 billion, depending on the annual capacity required. This is consistent with the findings of a USACE contractor, who in 2016 estimated this cost at $6.5 billion for an annual capacity of almost 18 million tons of iron ore.

Six weeks ago, the USACE told us that they are using the cost of approximately $2 billion to construct this rail alternative in the BCR calculation. This is clearly far less than what would be required to build this alternative rail transportation mode. The USACE told us that their assumptions for the "without-project" condition include first building a conveyor system on their Soo Lock property to move some of the cargo from large lakers stranded above a closed Poe Lock to large lakers stranded below the closed lock. Then, an additional amount of iron ore would be available below the Soo Locks by the steel industry expanding existing, and building new, stockpiles at their mills. Then, the USACE modeled the frequency and duration of Poe Lock outages in a "Monte Carlo simulation" to estimate the probabilities of such outages under a range of scenarios, some of which require transporting no cargo by railroad (using the conveyor system and stockpiles instead) and some of which require transporting large amounts of cargo by railroad (because greater amounts need to be transported than can be provided through the conveyor and stockpiles). Finally, the USACE averaged all of the railroad construction costs over all of these scenarios and came up with $2 billion. *This is less than the minimum amount the USACE economists told us would be needed to complete even minimal rail alternative infrastructure.*

While this Monte Carlo averaging approach makes sense for projects with existing railroad infrastructure (existing capacity only has to be rented as needed, not built), it makes no sense for nonexistent infrastructure (if you don't build it all, it is not available when needed). If the cost to build a new railroad to move the maximum amount of cargo needed to be transported for all of the scenarios is not invested, that capacity will never exist to transport that amount of cargo when it is needed. *We believe the USACE should include in the "without-project" condition the cost to build the rail capacity needed to transport the maximum amount of iron ore needed to be moved by rail identified in all of the Monte Carlo scenarios over the lifetime of the lock project (50 years).* The USACE's including in the BCR calculation the cost to build 30% of the needed railroad capacity doesn't mean the steel industry will have all of the needed railroad capacity 30% of the time. It means that the steel industry will have none of the needed capacity 100% of the time (because $2 billion can't complete the rail connection). That is why the averaging calculation the USACE uses for existing alternative rail transportation doesn't work for nonexistent alternative rail transportation. If the USACE calculated the new lock's required dimensions based on averaging the size of vessels using the Poe Lock, it would result in a lock too small to handle the largest vessels. Why do that for the rail connection? It makes no sense.

<u>Poe Lock outage risk before new lock construction</u>

Developing the new BCR requires comparing the transportation costs of the "with-project" condition (building a new lock) and the "without-project" condition (without a new lock using the next least-cost transportation alternatives). For the Soo ERR, the USACE told us that they include building the conveyor system, the stockpiles, and the rail connection in *both* the "with-project" (new lock) and the "without-project" (no new lock) conditions; but cost averaging

the rail connection in the "with-project" condition over a shorter period of time. The effect of this assumption is to increase the with-project condition cost relative to the "without-project" condition cost and thereby decrease the BCR.

We understand that building the alternative rail infrastructure would take ten years and it also would take ten years to build the new Soo Lock. The USACE, however, is assuming that the conveyor system, the stockpiles, and the rail connection will be built by 2019, a physical impossibility. The USACE claims this assumption is necessary to provide transportation for any cargo that would be stranded by a Poe Lock outage during the ten year construction period of the new lock. This makes no sense, as the steel industry has always accepted a very small risk of a Poe Lock outage since it was built. Since the new lock project was approved by Congress in 1986, the steel manufacturing and laker industries have assumed that the lock would be built and this growing risk of a Poe Lock outage would be mitigated by having a second Poe-sized lock. That would allow the Poe Lock to be taken out of service for rehabilitation without stranding any large lakers.

While the steel manufacturing industry already mitigates this currently small risk of a Poe Lock outage by stockpiling some iron ore below the Soo Locks, the railroad industry would never build $6 billion worth of infrastructure as an alternative to the Poe Lock while the USACE begins building a new lock that would render that rail connection irrelevant. We believe that the USACE ERR should assume in both the "with-project" condition and the "without-project" condition that the steel manufacturing industry would take only the reasonable step of increasing iron ore stockpiles during the project construction period. Anything more than that makes no sense and serves only as a biased attempt to drive the BCR for this project down by adding unnecessary costs to the "with-project" condition.

Conveyor system loading rate

Although it has less of an impact on the BCR than the above two flaws, the third flawed USACE assumption in the ERR is the alternative conveyor system's iron ore transfer speed. The USACE believes that they can connect a stranded vessel above the Soo Locks by a Poe Lock closure with one below by 5,000 feet (nearly a mile) of conveyor belt and safely load from one vessel to the other at a rate of 2,000 tons per hour *because they found they could buy a conveyor system that goes that fast*. We have pointed out that the limiting factor is not the size of the conveyor motors or size of the belt. It isn't even the unloading capacity of the vessel stranded above the locks. It is the ability of the vessel being loaded to safely receive the cargo.

We have pointed out to the USACE an incident when a laker went aground and another laker was brought alongside to receive its cargo. It took 26 hours to unload 24,000 tons, which yields a transfer rate of less than 1,000 tons per hour. Our actual experience demonstrates a transfer rate of less than half what the USACE claims is possible, without the added complicating factor of separating the ships by almost a mile of conveyor belt. I am not aware of this being done anywhere in the world. The effect of this flawed assumption is that it allows the USACE to assume that more iron ore can be moved using the less-expensive conveyor system and less moved using the more expensive rail alternative, thus driving down the transportation cost of the "without-project" condition and reducing the BCR.

***Conclusion***

These USACE assumptions defy common sense and will result in an inaccurate comparison of transportation costs, which are the basis for calculating the project's BCR. The USACE told us that *"there is no specific policy or guidance on how to calculate a least-cost rate in case of insufficient alternative capacity."* Given that there is no USACE policy requiring these flawed assumptions to be made, we do not understand why the USACE *is choosing to* reduce the "without-project" condition costs far below what would be required to actually provide the needed alternative transportation capacity over the project's lifetime *and choosing to* increase the "with-project" condition costs above what would be required to build a new lock. These fatal flaws will produce a BCR that is less than half of what it would be if common sense assumptions were used instead.

We continue to work hard to understand USACE policy and to communicate with them at all levels. We try to engage at the earliest possible moment. Better communication and Congressional intervention solved the dredging crisis. Improved communication with the USACE alone is not resolving the USACE's errors in calculating the Soo Lock project's BCR.

Despite our best efforts, the USACE has refused to calculate a BCR based on (1) "without-project" condition transportation costs that recover the *full cost* of building and operating the new alternative railroad capacity needed to transport *the maximum amount of cargo* that the USACE's analysis determined would potentially be stranded by non-availability of the Poe Lock over the project's life-time; and (2) common sense risk mitigation assumptions during the construction period of the new lock in the "with-project" condition. Instead, the USACE says it will include a narrative describing the importance of the Soo Lock project. However, this narrative will not appear in USACE and Office of Management and Budget tables that rank order project BCRs for funding decisions. Unfortunately, once again the USACE appears set on a course that will unfairly and arbitrarily minimize the Soo Lock project's BCR, grossly undercount the economic value of the project's transportation savings and national economic benefit and be a disservice to our national manufacturing economy that depends on iron ore. They are willing to risk the livelihoods of 11 million American workers with their flawed assumptions and reliance on a footnote.

Like DHS, we believe the strategic importance of the project deserves a better effort from the USACE. We also believe that the lack of policy guidance in the USACE's Principles and Guidelines should allow the USACE to include in its BCR calculation (and in the ERR) the reasonable assumptions we have advocated, and should not open the door for unreasonable and illogical assumptions. We ask for the Congress's assistance in pressing the USACE to include a more reasonable BCR calculation in the ERR.

Thank you for your interest and for the opportunity to provide my perspective. I will answer any questions you may have about these concerns.

Attachments:
(1) DHS handout "UNANTICIPATED CLOSURE OF THE POE LOCK"

James H. I. Weakley

Jim Weakley has served as President of Lake Carriers' Association since January 16, 2003. As chief spokesman for U.S.-flag Great Lakes carriers, he represents the industry on a wide range of issues affecting vessel operations. A 1984 graduate of the U.S. Coast Guard Academy, he sailed aboard the USCG Cutter MIDGETT as an Engineering Officer. Shoreside assignments included Pollution Response and Vessel Inspection, as well as Search and Rescue (SAR).

Mr. Weakley entered the private sector in 1993 when he joined The Interlake Steamship Company as Personnel Director. During his career with Interlake (one of the largest U.S.-flag carriers on the Great Lakes), he advanced to the position of Operations Manager. He remained in the Coast Guard Reserve and was recalled to active duty following the events of September 11, 2001 and became a founding member of the Maritime Security Division for the Ninth Coast Guard District. He retired from the Coast Guard as a Commander after 23 years of active and reserve service.

Mr. Weakley is a member of the Board of Directors of America's Maritime Partnership, the Washington, DC-based coalition that promotes Jones Act shipping in our nation's capital. He is also an officer of the Great Lakes Maritime Task Force, a regional labor/management coalition that focuses on Lakes issues. He serves as chairman of the Great Lakes Maritime Academy's Board of Visitors and is one of Ohio's Great Lakes Commissioners.

Mr. Weakley earned a Masters of Business Administration from the Executive Program at Case Western Reserve University in 1999.

With roots that trace back to 1880, Lake Carrier' Association is one of the oldest trade associations in the country. Today the Association represents 13 American corporations that operate 45 vessels. Major cargos include iron ore for the steel industry; coal for power generation; and limestone for the construction industry. In a typical year, LCA's members will haul more than 100 million tons of dry- and liquid-bulk cargo.

**Committee on Oversight and Government Reform**
**Witness Disclosure Requirement — "Truth in Testimony"**

Pursuant to House Rule XI, clause 2(g)(5) and Committee Rule 16(a), non-governmental witnesses are required to provide the Committee with the information requested below in advance of testifying before the Committee. You may attach additional sheets if you need more space.

Name: James Weakley

1. Please list any entity you are representing in your testimony before the Committee and briefly describe your relationship with each entity.

| Name of Entity | Your relationship with the entity |
|---|---|
| Lake Carriers' Association | President |
| | |

2. Please list any federal grants or contracts (including subgrants or subcontracts) you or the entity or entities listed above have received since January 1, 2015, that are related to the subject of the hearing.

| Recipient of the grant or contact (you or entity above) | Grant or Contract Name | Agency | Program | Source | Amount |
|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | N/A | N/A |
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3. Please list any payments or contracts (including subcontracts) you or the entity or entities listed above have received since January 1, 2015 from a foreign government, that are related to the subject of the hearing.

| Recipient of the grant or contact (you or entity above) | Grant or Contract Name | Agency | Program | Source | Amount |
|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | N/A | N/A |
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I certify that the information above and attached is true and correct to the best of my knowledge.

Signature James Weakley Date: 1 March 18