LAKE ERIE RENEWABLE ENERGY RESILIENCE PROJECT
PORT OF MONROE
PORT INFRASTRUCTURE DEVELOPMENT PROGRAM
MAY 16, 2022
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## Project Description

<table>
<thead>
<tr>
<th>Name of Applicant: Port of Monroe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the applicant applying as a lead applicant with any private entity partners or joint applicants? No</td>
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<tr>
<td><strong>Project Name: Lake Erie Renewable Energy Resiliency Project</strong></td>
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<tr>
<td>Project Description: The project rehabilitates and reinforces end-of-life infrastructure to increase vessel and cargo handling capacity, improves efficiency of managing bulk materials used in local road infrastructure projects and the manufacture of building materials, improves the handling of steel coils and plate used in regional automotive manufacturing, adds shore power to reduce vehicle and vessel idling, provides new docking capacity to harbor assist vessels to increase the port’s responsiveness against climate change related weather events, and adds dedicated vessel berthing capacity for the marine transport of wind energy components manufactured at the Port of Monroe.</td>
</tr>
<tr>
<td>Is this a planning project? No</td>
</tr>
<tr>
<td>Is this a project at a coastal, Great Lakes, or inland river port? Great Lakes</td>
</tr>
<tr>
<td>GIS Coordinates: 41°53′59″N, 083°21′21″W</td>
</tr>
<tr>
<td>Is this project in an urban or rural area? Urban</td>
</tr>
<tr>
<td>Project Zip Code: 48161-0585</td>
</tr>
<tr>
<td>Is the project located in a Historically Disadvantaged Community or a Community Development Zone? Yes, Opportunity Zone 8318</td>
</tr>
<tr>
<td>Has the same project been previously submitted for PIDP funding? No</td>
</tr>
<tr>
<td>Is the applicant applying for other discretionary grant programs in 2022 for the same work or related scopes of work? No</td>
</tr>
<tr>
<td>Has the applicant previously received TIGER, BUILD, RAISE, FASTLANE, INFRA, or PIDP funding? No</td>
</tr>
<tr>
<td>PIDP Grant Amount Requested: $11,051,586</td>
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<tr>
<td>Total Future Eligible Project Costs: $14,168,700</td>
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<td>Total Project Cost: $14,168,700</td>
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<td>Total Federal Funding: $3,117,114</td>
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<tr>
<td>Total Non-Federal Funding: $3,117,114</td>
</tr>
<tr>
<td>Will RRIF or TIFIA funds be used as part of the project financing? No</td>
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The Project is a $14,168,700 port infrastructure investment to strengthen and expand the capabilities of the Port of Monroe (Port) to meet the ongoing and future maritime logistics needs of a Port-based wind tower manufacturer, area auto manufacturing, local road construction, and other project cargo.

The Port and its stakeholders represent one of the most versatile and dynamic operations in the Great Lakes. It received the U.S. Great Lakes Seaway Development Corporation Pacesetter Award, 6 out of the last 8 years, a prestigious award that recognizes increases in expanding
tonnage growth, vessel calls, and new cargo development for ports within the Great Lakes St. Lawrence Seaway System.

A driving force behind cargo innovations at the Port has been port tenant Ventower Industries, the only wind turbine tower manufacturer in the United States that is located at a port. Since 2012, this U.S. company has manufactured and supplied wind turbine towers to domestic and international land-based utility projects. The facility is built on a former Brownfield site and is supported by local, regional, and state governments. Immediate access to maritime transport makes Ventower more competitive in domestic and international projects. In recent years, the Port has become a major regional distribution hub for other wind energy components including hubs, nacelles and towers arriving by water and rail.

One of the largest clean power coal plants in the United States is based at the Port. The 3,400-megawatt coal-fired DTE Monroe power plant produces coal combustion residuals which are often landfilled. In partnership with the plant, the Port works to reduce negative climate impacts of landfillsing by actively managing a portion of these residuals to ensure beneficial reuse. These recycled dry bulk materials are marketed by the Port and moved out by vessel (117,491 tons in 2021) and rail (21,543 tons in 2021). This material is an important low-cost input for concrete production and the building material industry.

The Port is a major hub for coiled steel products used by regional manufacturing companies representing the automotive, construction, and housing industries. Traditionally, these steel coils are move from steel plants exclusively by truck; however, a single vessel can transport 660 coils and be discharged at the Port in 18 hours. This is in comparison to 330 heavy trucks traveling on 178 miles of highway between Nanticoke, ON and Detroit that must be funneled through a congested land border crossing at Detroit/Windsor\(^1\). The water route is a more environmentally mindful method of transporting large amounts of tonnage and reduces the wear and tear of heavy trucks on the interstate system.

<table>
<thead>
<tr>
<th>Cargo</th>
<th>Road</th>
<th>Marine</th>
</tr>
</thead>
<tbody>
<tr>
<td>660 Steel Coils</td>
<td>330 tractor trailers at 2 coils</td>
<td>One barge</td>
</tr>
<tr>
<td>20,000 Ton Bulk</td>
<td>800 tractor trailers at 25 ton</td>
<td>One seaway vessel</td>
</tr>
<tr>
<td>12,000 Ton bulk</td>
<td>289 tractor trailers at 25 ton</td>
<td>One barge</td>
</tr>
</tbody>
</table>

\(^1\) Assumption of two coils per truck and 178 miles from steel plant in Nanticoke, Ontario to steel customers in Detroit.
The Port averaged 1.8 million short tons in the three-year period between 2019-2021 which qualifies the Project as a small project at a Great Lakes port.

<table>
<thead>
<tr>
<th>Company</th>
<th>Commodity</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTE</td>
<td>Coal &amp; Petcoke</td>
<td>1,606,120</td>
<td>938,229</td>
<td>1,140,808</td>
</tr>
<tr>
<td>DTE</td>
<td>Limestone</td>
<td>284,841</td>
<td>344,562</td>
<td>355,125</td>
</tr>
<tr>
<td>MPM</td>
<td>Liquid Asphalt</td>
<td>137,293</td>
<td>137,421</td>
<td>135,544</td>
</tr>
<tr>
<td>DRM</td>
<td>Bulk product</td>
<td>117,491</td>
<td>64,386</td>
<td>96,324</td>
</tr>
<tr>
<td>DRM</td>
<td>Project cargo</td>
<td>132,066</td>
<td>43,404</td>
<td>2,802</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td><strong>2,277,811</strong></td>
<td><strong>1,528,002</strong></td>
<td><strong>1,730,603</strong></td>
</tr>
</tbody>
</table>

*Table 2: 2019-2021 Cargo Tonnage Totals*

The major challenge for the Port is that all the cargo evolutions described above are restricted to a single 250’ wide berth (breasting platform) which began handling cargo in 2018. The lack of redundant wharf capacity severely constrains the volume and variety of vessels the Port can service. The shared laydown area in front of the wharf limits the throughput capacity of cargo.

![Image](image-url)

*Figure 2: Wind, bulk, and steel coil operations are all presently conducted at the same berth. Far right photo shows steel coil operations constrained by bulk material.*

Residual bulk material, as it becomes available from the powerplant, is incrementally added to piles at the wharf over a period of month before enough is accumulated for vessel. While the bulk is being stockpiled in this high-value work area with direct waterfront access, the Port has often accommodated an inbound shipment of steel coils.

The offloading operations then must work around those bulk piles. This increases safety concerns as the bulk piles create large blind spots for port operators moving steel coils from the wharf and decreases efficiency of the cargo handling equipment by reducing the operating footprint and increasing the distance to set down coils.

The Port has worked to prioritize the handling of wind tower components to support the needs of Ventower. However, wind tower operations place additional strain on the day-to-day operations and throughput capability of the Port. Wind tower segments must be staged in the immediate space near the wharf because of their massive size, forcing the wharf area to be cleared of all cargoes resulting in double-handling of stockpiles or project cargo.
There is also a potential increase in health risk to the surrounding community because of additional exposure to fugitive dust when bulk materials are double handled. The success of a small port demands flexibility and constant availability to meet the demands of ever-changing vessel schedules, which climate-change related weather events will further dictate. Thus, the Port is not able to schedule cargo and vessel activity in the most efficient manner.

The Port hosts Michigan Paving and Materials, which operates the largest liquid asphalt blending facility in the State of Michigan with seven storage tanks and 680,000 barrels capacity. The facility receives product via a pipeline off the Turning Basin Wharf.

The Port is located one mile from Interstate Highway 75, a major transportation link which allows the asphalt storage facility to be a major contributor to critical regional road construction projects.

Existing Conditions
The Turning Basin wharf began construction in 1932 when the Port was established and offers over 1,000 feet of potential wharf space. The U.S. Army Corp of Engineers has authorized advanced maintenance dredging to deepen the 18-foot draft Turning Basin an additional 3-feet, allowing for a consistent 21-foot draft throughout the Port’s navigable waterway. The Turning Basin employs the only on-dock heavy-lift rail spur in the region. This asset, which the Port constructed in 2019, is directly served by both Norfolk Southern and Canadian National railways and represents a direct link to the broader intermodal network. With significant rehabilitation of the seawall, this area can serve as a major transload, laydown, and distribution point for bulk, breakbulk, and project cargoes.

![Figure 3: The Turning Basin dock, built in the 1930s & 40s, is in dire need of repair.](image)

The current degradation of the Turning Basin wharf has led to failing concrete capping, bollard loss due to concrete instability, reduced vessel accessibility, and increased risk of personal injury to dockworker and mariners alike.

At the west end of the Turning Basin, the wharf is further limited due to a seawall failure that has encroached into the navigable waterway which limits safe navigation and prohibits valuable
mooring for lay-by maintenance as well as limits the port’s ability to serve as a safe harbor for weather restricted vessels. The sheet-piling failure has caused water and soil interface which has led to worsening silting in the wharf, reduced shoreside laydown area, and environmental concerns related to contaminated soils in the area.

The turning basin dock is consistently used by a limited number of vessels offloading liquid bulk during the shipping season, but the Port cannot utilize the berth to the fullest operational extent due to the shallow depth and functional obsolescence of the dock infrastructure.

Harbor safety, enforcement, and assist vessels are critical to operating a port facility on an inland waterway. The Port is presently in dire need of a dedicated mooring location for ship-assist towing vessels and specialized government watercraft so that critical support can be provided to the Port’s commercial traffic as well as its interaction with recreational activities occurring along the shared waterway. A dedicated slip located at the heart of the Port’s operations will provide for geographically beneficial moorings for towing vessels as well as strategic access for the timely deployment of emergency response personnel and enforcement agents. This mooring facility will berth the port’s commercial towing vessels, as well as local law enforcement, Fire, USCG, and USCBP craft, strengthening the Port’s relationship with these entities and increasing responsiveness in the face of unforeseen emergencies and events.

Challenges Project Is Intended To Address
Most vessel operations at the Port are constrained to the Port’s Riverfront Dock which is a 250 ft breasting platform constructed in 2018 with $4 million in funding provided by the State of Michigan. The Port demonstrates the versatility of the berth by accommodating a wide variety of different cargoes and vessel activities. However, with the general inactivity at the turning basin wharf and the intense use of the riverfront, the Port is severely constrained to develop and grow cargo handling operations.

By constructing a new berth and rehabilitating existing port facilities, the Project allows the Port to direct the flow of specific cargoes to certain areas, more effectively expanding and managing vessel and cargo operations. A second active wharf creates redundancy and reduces the risk of port closures or delays due to an accident or structural failure that may be caused by unforeseen climate change-related weather events.

The Port and tenant Ventower are focused on making positive contributions to strengthening the alternative energy supply chain and have successfully executed several maritime wind energy projects despite being limited to a single operating riverfront wharf. In 2020, during the height of the Coronavirus pandemic, the Port made numerous adjustments to protect the health and safety of its many Port partners while initiating the largest ever series of cargo in the history of the Port for a large renewable energy project in the State of Michigan. Over a period of 6 months and 10 vessel calls, 484 tower segments from Canada was discharged at the Port. In 2019, an international vessel from Rotterdam, The Netherlands brought into the Port the single highest
value shipment ever transported through the Great Lakes Maritime Transport System. This cargo is the first of four generator stators for delivery to the nearby Fermi II Nuclear plant. Valued at more than $60 million, the 360-ton generator stator was a direct ship-to-rail transfer. The same vessel left the Port riverfront wharf with 42 wind tower segments manufactured by Port tenant Ventower and destined for Peru.

Fortunately, all that activity was before the Port became a major distribution hub for steel coils in 2021. The fleet of vessels used in this distribution network average 500-600 steel coils equating to 12,000 to 14,000 tons of product per delivery. The Port currently averages 2 vessels per month and anticipates that will continue into the foreseeable future based on active dialogue with the customers and carrier. The entire cargo evolution from steel coil vessel arrival, discharge and when coils ultimately depart the Port is 1-2 weeks. Relocating coils from the wharf area is costly, time consuming and not a realistic option as there is not suitable laydown area to handle the weight.

The Port is unique in having an operating wind tower manufacturer onsite. It is incumbent upon the Port to provide a dedicated wharf facility where tower segments can be staged and immediately transferred to vessel. Transporting the large tower segments by vessel vs. trucking has multiple safety and environmental benefits but requires up to three times as much time to do a vessel transfer than bulk or coil operations, further elevating the importance of having a designated space for these cargo evolutions. The Port is investing in vessel stowage frames to facilitate the safe and secure shipment of these US manufactured tower sections on US flagged vessels transiting through the nation’s marine highway network. There is an emerging market opportunity to fit out domestic vessels with these frames to carry wind towers as back hauls to other US Great Lakes ports. The Port is working with the largest U.S. Great Lakes fleet on this concept which will conduct the first trial to Duluth, MN in June 2022. This short sea shipping project increases the competitiveness of U.S. based wind turbine tower manufacturing, supports the US-flagged fleet, and significantly enhances the renewable energy transportation network.

The Project promotes the viability of short-sea shipping in the United States. As a result, it reduces the reliance of existing highway and railway systems, decreasing the amount of fossil fuels required to transport the materials. In addition, the Project reduces heavy truck axle loads on the highway system extending the life of the pavement.

Eligibility of Project
The Project is eligible for funding through the Port Infrastructure Development Program. The Port has the Authority to undertake the Project. The Project is located exclusively within the geographic boundaries of the Port. This is a Great Lakes port project in a Small port. The Project is directly related to port operations.

Statement of Work
The Project addresses the Port challenges listed above and has four primary components.
Figure 4: Component 1 - Riverfront

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPONENT 1 – Riverfront</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>New wharf</td>
<td>1</td>
<td>$ 5,000,000</td>
<td>$ 5,000,000</td>
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<tr>
<td>Remove &amp; Replace Surface of Existing Dock (12”</td>
<td>390</td>
<td>$ 550</td>
<td>$ 214,500</td>
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<tr>
<td>Reinforced Concrete)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shore Rip-Rap Stabilization System</td>
<td>1</td>
<td>$ 1,490,900</td>
<td>$ 1,490,900</td>
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<tr>
<td>Bollard Installation</td>
<td>14</td>
<td>$ 15,000</td>
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<tr>
<td>Crane Pad</td>
<td>1</td>
<td>$ 178,600</td>
<td>$ 178,600</td>
</tr>
<tr>
<td>Concrete Pavement (12” Reinforced Concrete)</td>
<td>1,806</td>
<td>$ 550</td>
<td>$ 993,000</td>
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<tr>
<td>Storm Sewer</td>
<td>1,350</td>
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<td>Design &amp; Construction Administration</td>
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<td>$ 1,486,200</td>
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<td>$ 825,700</td>
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<tr>
<td>Grant Administration</td>
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<td>$ 165,350</td>
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<tr>
<td><strong>COMPONENT 1 – Riverfront Total</strong></td>
<td></td>
<td></td>
<td><strong>$ 10,733,300</strong></td>
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</table>

Table 3: Component 1 - Riverfront Budget

The Riverfront component is a $10,733,300 investment to add a second wharf for the exclusive use of wind energy components transfers.
Technical and Engineering Aspects

For the Riverfront area of the Port, currently there is only one River wharf receiving cargo from vessels, which provides little redundant protection for Port operations. The proposed project involves constructing another wharf east of (downstream) the existing River wharf, which will significantly improve the operational resiliency by minimizing the shocks and disruptions should the existing wharf be in operation or be damaged. An additional berth will also allow the Port to attract vessels for winter work, which is a profitable venture the Port cannot partake in given its present limited wharfage. In addition, a second wharf will boost the receiving capacity in the eastern Great Lakes and provide back-up capacity for other regional port facilities such as Detroit and Toledo.

The existing shoreline along the riverfront suffers from erosion. The proposed project incorporates shoreline rip-rap stabilization utilizing a system of geotechnical fabric, boulders, and concrete to reinforce the entire shoreline. The enhanced shoreline stability will be able to handle severe natural hazards and thus increase the resiliency of the port from operational and economical perspective.

Component 1 is comprised of three areas:

1. Remove and replace the surface of the existing to wharf to provide increased stability and strength to accommodate the increasing heavy steel loads that the Port is discharging.
2. Construction of a second identical riverfront wharf that will be used exclusively for vessel transfers of wind energy cargos. The exclusive 6.65-acre laydown area immediately available at the new wharf will be prioritized for wind energy components.
3. Reinforced shoreline stabilization to correct deteriorating conditions to existing riprap caused by increasing climate effects related to water levels and ice conditions.
Lake Erie Renewable Energy Resiliency Project
FY2022 PIDP Grant Application
Port of Monroe

Component 2: Turning Basin

Figure 5: Component 2 - Turning Basin

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPONENT 2 – Turning Basin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete Rehabilitation of Concrete Dock Cap</td>
<td>1,000</td>
<td>$ 550</td>
<td>$ 550,000</td>
</tr>
<tr>
<td>Demolition of Concrete Dock Cap</td>
<td>1,000</td>
<td>$ 300</td>
<td>$ 300,000</td>
</tr>
<tr>
<td>Bollard Installation</td>
<td>11</td>
<td>$15,000</td>
<td>$165,000</td>
</tr>
<tr>
<td>Bring Dock up to Grade (6A Aggregate)</td>
<td>1,700</td>
<td>$ 70</td>
<td>$ 119,000</td>
</tr>
<tr>
<td>Additional Fendering System (26 tires)</td>
<td>26</td>
<td>$ 3,000</td>
<td>$ 78,500</td>
</tr>
<tr>
<td>Rehabilitate South Wall of Turning Basin &amp; Add Fendering System</td>
<td>370</td>
<td>$ 700</td>
<td>$ 259,000</td>
</tr>
<tr>
<td>Fill Material (21AA) &amp; Cap (South Wall)</td>
<td>1</td>
<td>$200,000</td>
<td>$200,000</td>
</tr>
<tr>
<td>Additional Fendering System (South Wall)</td>
<td>8</td>
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<td>$ 24,000</td>
</tr>
<tr>
<td>Bollard Installation (South Wall)</td>
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<td>$15,000</td>
<td>$ 60,000</td>
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<tr>
<td>Design &amp; Construction Administration</td>
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<td>$315,900</td>
<td>$315,900</td>
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<tr>
<td>Contingency &amp; Project Management</td>
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<td>$175,500</td>
<td>$175,500</td>
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<td>Grant Administration</td>
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<td>$ 35,100</td>
<td>$ 35,100</td>
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<tr>
<td>COMPONENT 2 – Turning Basin Total</td>
<td></td>
<td></td>
<td>$ 2,281,500</td>
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Table 4: Component 2 - Turning Basin Budget
The Turning Basin component is a $2,281,500 investment to repair and rehabilitate 1,050’ of concrete dock cap, install bollards and fendering, and remove and replace 390’ of failed sheet pile.

Technical and Engineering Aspects
For the turning basin, the existing wharf is in poor condition with the concrete cap superstructure losing structural integrity. In addition, the wharf does not have an adequate fendering system or enough mooring bollards. While the Port has worked to shift some activity away from the turning basin, liquid asphalt vessels must moor along the turning basin as it is the only location where they can reach the pipeline to offload. Liquid asphalt deliveries are made year-round, and safety concerns are magnified in the winter when the working area of the dock, uneven and with insufficient mooring, is iced over. As a result, accidents (e.g., navigational, mooring, failure of heavy lift equipment), or natural environmental hazards (e.g., high winds, fast current, increasing water elevations) could cause significant damage to the dock system and operational control of moored vessels, which would endanger the port workers and cause operational disruptions. The proposed project incorporates replacement of the concrete cap superstructure of the dock and replacing the fendering system and adding additional mooring boards so that the probability of failure of the wharf system is significantly lower should these disastrous events occur. In addition, the improvements will ensure a more rapid recovery from disruptions while maintaining operations.

This component allows all dry and liquid bulk material vessel transfers to be handled exclusively at the Turning Basin wharf. This investment improves the structural integrity of the water-land interface and increases available laydown area near the Turning Basin wharf for dry bulk stock piling and loading of rail and vessels. The dedicated dry bulk storage area also opens the work area and laydown capacity at the Riverfront wharf which in turn will increase velocity of vessel transfers.
Component 3: Maritime Readiness Slip

![Diagram of Maritime Readiness Slip]

**Figure 6: Component 3 - Maritime Readiness Slip**

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPONENT 3 – Small Boat “Maritime Readiness Slip”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shore Power (Underground)</td>
<td>1</td>
<td>$ 70,000</td>
<td>$ 70,000</td>
</tr>
<tr>
<td>Sheet Pile installation (Cleats are incidental)</td>
<td>330</td>
<td>$ 700</td>
<td>$ 231,000</td>
</tr>
<tr>
<td>Demolition of Existing Dock System</td>
<td>1</td>
<td>$ 40,000</td>
<td>$ 40,000</td>
</tr>
<tr>
<td>Dredge New Dock Area</td>
<td>1</td>
<td>$ 50,000</td>
<td>$ 50,000</td>
</tr>
<tr>
<td>Concrete Cap &amp; Walk</td>
<td>130</td>
<td>$ 550</td>
<td>$ 71,500</td>
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<tr>
<td>Site Work &amp; Restoration</td>
<td>1</td>
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<td>$ 25,000</td>
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<tr>
<td>Design &amp; Construction Administration</td>
<td>1</td>
<td>$ 87,800</td>
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<td>Contingency &amp; Project Management</td>
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<tr>
<td>Grant Administration</td>
<td>1</td>
<td>$ 9,800</td>
<td>$ 9,800</td>
</tr>
<tr>
<td>COMPONENT 3 – Small Boat “Maritime Readiness Slip” Total</td>
<td></td>
<td></td>
<td>$ 633,900</td>
</tr>
</tbody>
</table>

*Table 5: Component 3 Small Boat "Maritime Readiness Slip" Budget*

The Maritime Readiness Slip component is a $633,900 investment to demolish and rehabilitate an existing small boat slip to be used exclusively by harbor assist vessels.

The rehabilitated slip creates a safe area where up to four harbor assist vessels can dock and access shore power to improve readiness and reduce emissions. Harbor assist vessels presently...
compete for wharf space with commercial vessels and have been forced to relocated based on vessel activities.

Technical and Engineering Aspects

The existing dock and sheeting system are past their useful life and are in poor condition. The sheeting system failures have led to significant soil erosion in the vicinity of the dock and near the west wall of the existing Port Office. The existing conditions are hazardous to port workers, and, if left unchecked could undermine the foundation of the existing Port Office. New sheet pile installation will fortify the earth in this vicinity and prevent further soil erosion. Completion of the new dock will help support vessels necessary for port operations and other agency contingencies and emergencies.

Component 4: Shore Power

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COMPONENT 4 – Shore Power</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shore Power Existing Wharf (Including Relocating Existing Overhead)</td>
<td>1</td>
<td>$300,000</td>
<td>$300,000</td>
</tr>
<tr>
<td>Shore Power New Wharf</td>
<td>1</td>
<td>$100,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Design &amp; Construction Administration</td>
<td>1</td>
<td>$72,000</td>
<td>$72,000</td>
</tr>
<tr>
<td>Contingency &amp; Project Management</td>
<td>1</td>
<td>$40,000</td>
<td>$40,000</td>
</tr>
<tr>
<td>Grant Administration</td>
<td>1</td>
<td>$8,000</td>
<td>$8,000</td>
</tr>
<tr>
<td><strong>COMPONENT 4 – Shore Power Total</strong></td>
<td></td>
<td></td>
<td><strong>$520,000</strong></td>
</tr>
</tbody>
</table>

Table 6: Component 4 - Shore Power Budget

The Shore Power component is a $520,000 investment to remove existing overhead lines and provide shore power to the Riverfront wharfs. The removal of overhead land will reduce potential safety conflicts with cargo handling equipment in the laydown area of the wharf and will reduce idling of vessels during cargo transfers.

Technical and Engineering Aspects

Existing shore power infrastructure is undersized and insufficient. New electrical service with proper voltage and capacity is required for beneficial use of the Port and the vessels that temporarily dock. New conduits, conductors, and terminal enclosures are necessary for proposed upgrades and can be extended from the existing overhead DTE utility wires at the north end of Port Avenue.
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Project Location

The Port is in the City of Monroe, Monroe County, Michigan. Port is within the federally designated Urban Area and community development zone **Opportunity Zone 8318**.

The proposed Project is located within the Great Lakes, on the western shore of Lake Erie, at the Port of Monroe in Monroe, MI. The Port is the only Michigan port on Lake Erie and the first Michigan port for international vessels transiting through the Great Lakes/St. Lawrence Seaway, providing a critical link in the U.S. domestic and international trade supply-chain. The strategic location of the Port within the Great Lakes binational maritime trade corridor is further strengthened by a robust intermodal transportation network that surrounds and services the Port.

![Image of the Port of Monroe](image_url)

*Figure 7: The Port of Monroe, March 2022.*

An important surface transportation connection immediately adjacent to the Port is a highway ramp to the controlled-access, Interstate Highway (I-75). The highway and ramps are designated for the routing of oversize/overweight loads. The Port has on-dock rail and is serviced throughout the port by two Class I freight carriers (Canadian National and Norfolk Southern).

The Port is a part of the M-90 Marine Highway corridor on the Great Lakes. The Port’s role in the growth of America’s Marine Highway System as set forth by MARAD is to “develop and expand marine highway service options and facilitate their further integration into the current U.S. surface transportation system, especially where water-based transport is the most efficient,
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effective and sustainable option.” The Port has collaborated with stakeholders and government associations to shift cargo from landside modes to capable marine transportation assets on the Great Lakes, reducing congestion and moving valuable commodities between Great Lakes ports on US-flagged vessels, proving the viability of short sea shipping at the heart of the nation’s marine highway network.

The Port is located within the active Foreign Trade Zone No. 70.

The Project will support the goals of the Michigan Freight Plan, which is a supplement to Michigan’s State Long-Range Transportation Plan (Michigan Mobility 2045).

1. System Improvement: The Project will modernize and enhance the transportation system to improve mobility and accessibility.
2. Efficient and Effective Operations: The Project will improve the efficiency and effectiveness of the transportation system and transportation services, and expand MDOT’s coordination and collaboration with partners.
3. Safety and Security: The Project will continue to improve transportation safety and ensure the security of the transportation system.
4. Stewardship: The Project will preserve transportation system investments, protect the environment, and utilize public resources in a responsible manner.

Geospatial Data
The Project is located at 41°53’59”N, 083°21’21”W in the Port of Monroe, in the City of Monroe, Michigan.

Figure 8: Overhead view of the Port of Monroe.
Grant Funds, Sources, and Uses of Project Funds

**PIDP Project Costs**

<table>
<thead>
<tr>
<th>Item</th>
<th>PIDP Funds</th>
<th>Other Fed Funds</th>
<th>State Funds</th>
<th>Port Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COMPONENT 1 - Riverfront</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Wharf</td>
<td>$3,900,000</td>
<td>$ -</td>
<td>$ -</td>
<td>$1,100,000</td>
</tr>
<tr>
<td>Remove &amp; Replace Surface of Existing Dock (12&quot; Reinforced Concrete)</td>
<td>$167,310</td>
<td>$ -</td>
<td>$ -</td>
<td>$47,190</td>
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<tr>
<td>Shore Rip-Rap Stabilization System</td>
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<td>$ -</td>
<td>$327,998</td>
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<tr>
<td>Bollard Installation</td>
<td>$163,800</td>
<td>$ -</td>
<td>$ -</td>
<td>$46,200</td>
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<tr>
<td>Crane Pad</td>
<td>$139,308</td>
<td>$ -</td>
<td>$ -</td>
<td>$39,292</td>
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<tr>
<td>Concrete Pavement (12&quot; Reinforced Concrete)</td>
<td>$774,774</td>
<td>$ -</td>
<td>$ -</td>
<td>$218,526</td>
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<tr>
<td>Storm Sewer</td>
<td>$131,625</td>
<td>$ -</td>
<td>$ -</td>
<td>$37,125</td>
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<td>Design and Construction Administration</td>
<td>$1,159,236</td>
<td>$ -</td>
<td>$ -</td>
<td>$326,964</td>
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<tr>
<td>Contingency &amp; Project Management (10%)</td>
<td>$644,046</td>
<td>$ -</td>
<td>$ -</td>
<td>$181,654</td>
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<tr>
<td>Grant Administration (2% of project cost)</td>
<td>$128,973</td>
<td>$ -</td>
<td>$ -</td>
<td>$36,377</td>
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<tr>
<td><strong>COMPONENT 1 - Riverfront Total</strong></td>
<td>$8,371,974</td>
<td>$ -</td>
<td>$ -</td>
<td>$2,361,326</td>
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<tr>
<td><strong>COMPONENT 2 - Turning Basin</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete Rehabilitation of Concrete Dock Cap</td>
<td>$429,000</td>
<td>$ -</td>
<td>$ -</td>
<td>$121,000</td>
</tr>
<tr>
<td>Demolition of Concrete Dock Cap</td>
<td>$234,000</td>
<td>$ -</td>
<td>$ -</td>
<td>$66,000</td>
</tr>
<tr>
<td>Bollard Installation</td>
<td>$128,700</td>
<td>$ -</td>
<td>$ -</td>
<td>$36,300</td>
</tr>
<tr>
<td>Bring Dock up to Grade (6A Aggregate)</td>
<td>$92,820</td>
<td>$ -</td>
<td>$ -</td>
<td>$26,180</td>
</tr>
<tr>
<td>Additional Fendering System (26 tires)</td>
<td>$60,840</td>
<td>$ -</td>
<td>$ -</td>
<td>$17,160</td>
</tr>
<tr>
<td>Rehabilitate South Wall of Turning Basin &amp; Add Fendering System</td>
<td>$202,020</td>
<td>$ -</td>
<td>$ -</td>
<td>$56,980</td>
</tr>
</tbody>
</table>
### Lake Erie Renewable Energy Resiliency Project
#### FY2022 PIDP Grant Application
##### Port of Monroe

<table>
<thead>
<tr>
<th>Item</th>
<th>PIDP Funds</th>
<th>Other Fed Funds</th>
<th>State Funds</th>
<th>Port Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fill Material (21AA) &amp; Cap (South Wall)</td>
<td>$ 156,000</td>
<td>$ -</td>
<td>$ -</td>
<td>$ 44,000</td>
</tr>
<tr>
<td>Additional Fendering System (South Wall)</td>
<td>$ 18,720</td>
<td>$ -</td>
<td>$ -</td>
<td>$ 5,280</td>
</tr>
<tr>
<td>Bollard Installation (South Wall)</td>
<td>$ 46,800</td>
<td>$ -</td>
<td>$ -</td>
<td>$ 13,200</td>
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<tr>
<td>Design and Construction Administration</td>
<td>$ 246,402</td>
<td>$ -</td>
<td>$ -</td>
<td>$ 69,498</td>
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<tr>
<td>Contingency &amp; Project Management (10%)</td>
<td>$ 136,890</td>
<td>$ -</td>
<td>$ -</td>
<td>$ 38,610</td>
</tr>
<tr>
<td>Grant Administration (2% of project cost)</td>
<td>$ 27,378</td>
<td>$ -</td>
<td>$ -</td>
<td>$ 7,722</td>
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<tr>
<td>COMPONENT 2 - Turning Basin Total</td>
<td>$ 1,779,570</td>
<td>$ -</td>
<td>$ -</td>
<td>$ 501,930</td>
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<table>
<thead>
<tr>
<th>Item</th>
<th>PIDP Funds</th>
<th>Other Fed Funds</th>
<th>State Funds</th>
<th>Port Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPONENT 3 - Small Boat &quot;Maritime Readiness Slip&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shore Power (Underground)</td>
<td>$ 54,600</td>
<td>$ -</td>
<td>$ -</td>
<td>$ 15,400</td>
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<tr>
<td>Sheet Pile installation (Cleats are Incidental)</td>
<td>$ 180,180</td>
<td>$ -</td>
<td>$ -</td>
<td>$ 50,820</td>
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<tr>
<td>Demolition of Existing Dock System</td>
<td>$ 31,200</td>
<td>$ -</td>
<td>$ -</td>
<td>$ 8,800</td>
</tr>
<tr>
<td>Dredge New Dock Area</td>
<td>$ 39,000</td>
<td>$ -</td>
<td>$ -</td>
<td>$ 11,000</td>
</tr>
<tr>
<td>Concrete Cap &amp; Walk</td>
<td>$ 55,770</td>
<td>$ -</td>
<td>$ -</td>
<td>$ 15,730</td>
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<tr>
<td>Site Work &amp; Restoration</td>
<td>$ 19,500</td>
<td>$ -</td>
<td>$ -</td>
<td>$ 5,500</td>
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<tr>
<td>Design and Construction Administration</td>
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<td>$ -</td>
<td>$ -</td>
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<td>$ 10,736</td>
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<td>$ -</td>
<td>$ 2,156</td>
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<tr>
<td>COMPONENT 3 - Small Boat &quot;Maritime Readiness Slip&quot; Total</td>
<td>$ 494,442</td>
<td>$ -</td>
<td>$ -</td>
<td>$ 139,458</td>
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<table>
<thead>
<tr>
<th>Item</th>
<th>PIDP Funds</th>
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<th>State Funds</th>
<th>Port Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPONENT 4 - Shore Power</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shore Power Existing Wharf (Including Relocating Existing Overhead)</td>
<td>$ 234,000</td>
<td>$ -</td>
<td>$ -</td>
<td>$ 66,000</td>
</tr>
</tbody>
</table>
Lake Erie Renewable Energy Resiliency Project  
FY2022 PIDP Grant Application  
Port of Monroe

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
<th>Percentage of Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shore Power New Wharf</td>
<td>$78,000</td>
<td>-</td>
</tr>
<tr>
<td>Design and Construction Administration</td>
<td>$56,160</td>
<td>-</td>
</tr>
<tr>
<td>Contingency &amp; Project Management (10%)</td>
<td>$31,200</td>
<td>-</td>
</tr>
<tr>
<td>Grant Administration (2% of project cost)</td>
<td>$6,240</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL 4 - Shore Power Total</td>
<td>$405,600</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL PROJECT COST</td>
<td>$11,051,586</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 7: Project Budget

Funds to be Used, Sources, and Amount

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
<th>Percentage of Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIDP Funding</td>
<td>$11,051,586</td>
<td>78%</td>
</tr>
<tr>
<td>Other Federal Funding</td>
<td>$-</td>
<td>0%</td>
</tr>
<tr>
<td>State Funding</td>
<td>$-</td>
<td>0%</td>
</tr>
<tr>
<td>Port Funding</td>
<td>$3,117,114</td>
<td>22%</td>
</tr>
<tr>
<td>Private Funding</td>
<td>$-</td>
<td>0%</td>
</tr>
<tr>
<td>Total Non-Federal Funding</td>
<td>$3,117,114</td>
<td>22%</td>
</tr>
<tr>
<td>Total Project Cost</td>
<td>$14,168,700</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 8: Funds to be used, sources, and amount

Documentation of Funding Commitments
The Port will fund the $3,117,114 portion of this project using Port funds. The match commitment letter is in the Appendix section of this application.

Leveraging of Federal Funds
As a small public port, the Port identifies and collaborates with state and local governments to leverage and ensure the maximum impact of public funding sources for infrastructure investment. Examples of the Port using federal funding to attract non-federal sources of infrastructure investment includes:

1. Federal Railroad Administration funds for the development of rail siding to Port tenant manufacturing wind towers were leveraged with financial participation from the Michigan Department of Transportation, Ventower and Port.
2. U. S. Department of Transportation’s America’s Marine Highways Program funds for the purchase of U.S.-made Manitowoc MLC165 crawler crane were leveraged with financial participation from Michigan Department of Transportation, City of Monroe, and Port.
3. Department of Homeland Security Port Security grant funds for the purchase of radiation portal monitor to screen international cargo were leveraged with financial participation of Port.

Merit Criteria

Project Outcomes

<table>
<thead>
<tr>
<th>Without Project Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without the project, the Port of Monroe will continue to handle its current marine cargo, with slight year-over-year increases for bulk and steel coil business and flat volume for its wind tower section business.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>With Project Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>With the project, the Port of Monroe will have sufficient capacity to: grow its outbound wind tower business (Ventower) from an on-site fabricator, avoiding truck moves from the Detroit region to Duluth MN and Thunder Bay ON; grow its steel coil business, avoiding truck moves from Ontario to the Detroit region; and attract new sand business (Carmeuse), avoiding truck moves between the Detroit region and Erie PA/other destinations. These effects combine to increase vessel ton-mileage but reduce national and regional truck VMT, producing terminal operating cost savings, avoided crashes, avoided emissions, and avoided highway maintenance costs.</td>
</tr>
</tbody>
</table>

Table 9: With and Without Project Conditions

<table>
<thead>
<tr>
<th>Capital Cost Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Cost by YOE</td>
</tr>
<tr>
<td>2022</td>
</tr>
<tr>
<td>2023</td>
</tr>
<tr>
<td>2024</td>
</tr>
<tr>
<td>2025</td>
</tr>
<tr>
<td>Benefit</td>
</tr>
</tbody>
</table>

Table 10: Capital Cost Summary
Overall, the project offers a Benefit-Cost Ratio of 1.17 and a Net Present Value of $1,916,192 from a discounted capital cost of $11,187,557 and discounted benefits of $13,103,747. Based on conservative and sourced analysis inputs, methods, and factors, the project exceeds the BCR threshold (1.0) to demonstrate cost-effectiveness.

 Achieving Safety, Efficiency, or Reliability Improvements: Effect on the Movement of Goods
This Project will specialize cargo operations at different locations at the port, allowing for safer usage of equipment and improved traffic flow, which will make port operations safer. The addition of a new dock and the rehabilitation of existing dock faces will allow the Port to specialize the immediate laydown area adjacent to each dock face for specific cargo operations. The operational improvements the Project will address will increase the capacity and cargo handling capabilities of the Port by specializing areas.

Delay times associated with different cargo operations will be reduced and ample storage will be provided for different cargoes at the associated specialized areas, enhancing the reliability of the cargo’s respective supply chains. The addition of a small boat slip as an active operational area at the Port will increase the port’s resilience in the event of natural or human disasters, which include unforeseen weather events on Lake Erie or fire response activities.

This project will also increase the Port’s available berthing, improve its backland storage, and allow different functional areas to be dedicated for specific cargo types. With respect to Port operations, the project will: eliminate the current practice of double-handling bulk cargo; allow the port to double its outbound shipments of wind tower components; allow the port to substantially increase its receipt of steel coils for regional auto manufacturing; and allow the Port to serve a new regional bulk customer (Carmeuse) which is currently moving sand from Lansing, MI to Erie, PA, and other markets via truck.
Project Benefits

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in vessel ton-mileage, discounted for induced growth</td>
<td>627,930,197</td>
</tr>
<tr>
<td>Change in truck VMT, discounted for induced growth</td>
<td>(51,984,979)</td>
</tr>
<tr>
<td>Change in terminal operating cost due to segregation of cargo and avoided double-handling of bulk piles (2020$ discounted)</td>
<td>$ 3,416,567</td>
</tr>
<tr>
<td>Change in fatalities from crashes</td>
<td>(1)</td>
</tr>
<tr>
<td>Change in injuries from crashes</td>
<td>(27)</td>
</tr>
<tr>
<td>Change in property damage crashes</td>
<td>(68)</td>
</tr>
<tr>
<td>Value of avoided crashes (2020$ discounted)</td>
<td>$ 4,847,600</td>
</tr>
<tr>
<td>Change in truck fuel consumption (gallons)</td>
<td>(6,977,172)</td>
</tr>
<tr>
<td>Change in CO2 emissions (MT)</td>
<td>(59,720)</td>
</tr>
<tr>
<td>Change in PM2.5 emissions (MT)</td>
<td>(2)</td>
</tr>
<tr>
<td>Change in NOx emissions (MT)</td>
<td>(103)</td>
</tr>
<tr>
<td>Change in SOx emissions (MT)</td>
<td>(1)</td>
</tr>
<tr>
<td>Value of avoided emissions (2020$ discounted)</td>
<td>$ 3,556,611</td>
</tr>
<tr>
<td>Value of avoided highway maintenance (2020$ discounted)</td>
<td>$ 1,282,971</td>
</tr>
<tr>
<td>Total Value of Monetized Benefits (2020$ discounted)</td>
<td>$ 13,103,748</td>
</tr>
</tbody>
</table>

Table 12: Summary of Benefit Drivers and Effects

Safety

Safety benefits will be realized through the reduction of truck vehicle miles of travel (VMT) and avoidance of crashes associated with that VMT reduction. The offset for VMT reduction is an increase in vessel ton-mileage, and increased crashes and incidents from marine operations are considered in the calculation.

Change in Steel Coil Volume by Water

The project will allow an additional 1,045,877 tons of steel coils to be received inbound from Stelco in Nanticoke, ON. This avoids truck haulage by 24-ton flatbed trucks over 149 miles; the current 179-mile truck trip between Nanticoke and customers in the Detroit area would be replaced by a vessel move and an average dray of 30 miles from the Port to customers.

Change in Wind Tower Section Volume by Water

The project will allow an additional 45,360 tons of wind tower sections (at an average of 36 tons per section) to be shipped outbound from the on-site manufacturer (Ventower) to receiving facilities in the
Duluth, MN, and Thunder Bay, ON regions. This avoids the truck haulage of 36-ton towers sections on “superload” tandem trailers over distance from Monroe to Duluth (734 miles minimum) and Thunder Bay (923 miles minimum).

Change in Sand Volume by Water
The project will allow 41,089,653 tons of sand to move through the Port of Monroe for a new customer (Carmeuse). Carmeuse recently acquired a sand mining facility in Lansing, MI with plans to transport sand to facilities and customers in Erie, PA and elsewhere. The truck distance from Lansing to Erie is 328 miles. Using the Port of Monroe, the truck distance from Lansing to Monroe is 109 miles and the remaining transport is by vessel. With allowance for 30 miles of truck drayage at the receiving port, the total truck distance reduction of 189 miles. Factoring for backhaul movements, total avoided truck VMT from sand movements is 41,089,653 over the analysis period.

Change in Vessel Ton-Miles, Rail Ton-Miles, and Truck VMT
The total reduction in truck VMT is 51,984,979, and the corresponding increase in vessel ton-mileage to provide equivalent transportation service is 627,930,197. The avoidance of truck VMT – from “superload” movements of wind towers, heavy sand trucks, and heavy steel coil trucks – would reduce pavement damage and highway maintenance costs.

Emissions
Overall, the project avoids: 6,977,172 gallons of truck fuel; 59,720 metric tons of CO2; 2 metric tons of PM2.5; 103 metric tons of NOx; and 1 metric ton of SOx.

Efficiency

<table>
<thead>
<tr>
<th>Moving 20,000 tons off the Riverfront dock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requires 3 loaders filling 4 tractor-trailers with 25-ton material.</td>
</tr>
<tr>
<td>One truck rotation (load, dump, return) = 45 minute per truck (assuming distance to turning basin or laydown area equal distance)</td>
</tr>
<tr>
<td>20,000 ton/25 ton/truck = 800 truckloads/4 trucks = 200 rotations/truck .75 hours = 150 hrs. or 6.25 days to clear dock</td>
</tr>
<tr>
<td>Item</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>Front End Loader</td>
</tr>
<tr>
<td>Tractor-Trailer</td>
</tr>
<tr>
<td>Clean up</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

Figure 9: Port Operating Cost to Relocate Bulk per Event

The need for double-handling would be eliminated with the creation of five functional areas under the project, as illustrated in the figure above. The total operating savings is $360,900 per year, or $3,416,567 in discounted 2020 dollars over the analysis period. Other terminal operating costs, including maintenance costs, would be unchanged on average over the analysis period.
## Benefit Accrual by Year and Type (Discounted 2020$)

<table>
<thead>
<tr>
<th>Year</th>
<th>Operations</th>
<th>Crashes</th>
<th>Emissions</th>
<th>M&amp;R</th>
<th>Res. Val.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2025</td>
<td>$257,317</td>
<td>$331,961</td>
<td>$214,265</td>
<td>$87,768</td>
<td>-</td>
<td>$891,310</td>
</tr>
<tr>
<td>2026</td>
<td>$240,483</td>
<td>$313,217</td>
<td>$189,049</td>
<td>$82,812</td>
<td>-</td>
<td>$825,562</td>
</tr>
<tr>
<td>2027</td>
<td>$224,750</td>
<td>$295,534</td>
<td>$168,227</td>
<td>$78,137</td>
<td>-</td>
<td>$766,648</td>
</tr>
<tr>
<td>2028</td>
<td>$210,047</td>
<td>$278,849</td>
<td>$152,806</td>
<td>$73,726</td>
<td>-</td>
<td>$715,428</td>
</tr>
<tr>
<td>2029</td>
<td>$196,306</td>
<td>$263,108</td>
<td>$139,611</td>
<td>$69,564</td>
<td>-</td>
<td>$668,588</td>
</tr>
<tr>
<td>2030</td>
<td>$183,463</td>
<td>$248,256</td>
<td>$134,586</td>
<td>$65,637</td>
<td>-</td>
<td>$631,942</td>
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<tr>
<td>2031</td>
<td>$171,461</td>
<td>$234,243</td>
<td>$124,750</td>
<td>$61,932</td>
<td>-</td>
<td>$592,367</td>
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<tr>
<td>2032</td>
<td>$160,244</td>
<td>$221,022</td>
<td>$111,651</td>
<td>$58,457</td>
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<td>2033</td>
<td>$149,761</td>
<td>$208,549</td>
<td>$115,471</td>
<td>$55,139</td>
<td>-</td>
<td>$528,919</td>
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<td>2034</td>
<td>$139,963</td>
<td>$196,779</td>
<td>$118,528</td>
<td>$52,027</td>
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<td>$507,298</td>
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<tr>
<td>2035</td>
<td>$130,807</td>
<td>$185,675</td>
<td>$120,903</td>
<td>$49,091</td>
<td>-</td>
<td>$486,476</td>
</tr>
<tr>
<td>2036</td>
<td>$122,249</td>
<td>$175,198</td>
<td>$119,895</td>
<td>$46,321</td>
<td>-</td>
<td>$463,663</td>
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<tr>
<td>2037</td>
<td>$114,252</td>
<td>$165,313</td>
<td>$121,138</td>
<td>$43,708</td>
<td>-</td>
<td>$444,410</td>
</tr>
<tr>
<td>2038</td>
<td>$106,777</td>
<td>$155,986</td>
<td>$118,404</td>
<td>$41,242</td>
<td>-</td>
<td>$422,408</td>
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<tr>
<td>2039</td>
<td>$99,792</td>
<td>$147,185</td>
<td>$118,978</td>
<td>$38,915</td>
<td>-</td>
<td>$404,870</td>
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<tr>
<td>2040</td>
<td>$93,263</td>
<td>$138,882</td>
<td>$116,106</td>
<td>$36,719</td>
<td>-</td>
<td>$384,971</td>
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<tr>
<td>2041</td>
<td>$87,162</td>
<td>$131,048</td>
<td>$115,992</td>
<td>$34,648</td>
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<td>$368,850</td>
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<tr>
<td>2042</td>
<td>$81,460</td>
<td>$123,656</td>
<td>$112,769</td>
<td>$32,694</td>
<td>-</td>
<td>$330,578</td>
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<tr>
<td>2043</td>
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<td>$116,681</td>
<td>$110,660</td>
<td>$30,850</td>
<td>-</td>
<td>$334,321</td>
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<tr>
<td>2044</td>
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<td>$110,100</td>
<td>$107,617</td>
<td>$29,110</td>
<td>-</td>
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<td>2045</td>
<td>$66,496</td>
<td>$103,891</td>
<td>$104,673</td>
<td>$27,468</td>
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<td>$293,527</td>
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<td>2046</td>
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<td>$98,032</td>
<td>$101,825</td>
<td>$25,919</td>
<td>-</td>
<td>$287,921</td>
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<td>2047</td>
<td>$58,080</td>
<td>$92,504</td>
<td>$99,068</td>
<td>$24,457</td>
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<td>$274,109</td>
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<tr>
<td>2048</td>
<td>$54,280</td>
<td>$87,287</td>
<td>$96,400</td>
<td>$23,078</td>
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<td>$261,046</td>
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<tr>
<td>2049</td>
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<td>$82,366</td>
<td>$93,816</td>
<td>$21,777</td>
<td>-</td>
<td>$248,688</td>
</tr>
<tr>
<td>2050</td>
<td>$47,410</td>
<td>$77,722</td>
<td>$92,131</td>
<td>$20,549</td>
<td>-</td>
<td>$237,812</td>
</tr>
<tr>
<td>2051</td>
<td>$44,309</td>
<td>$73,340</td>
<td>$88,890</td>
<td>$19,391</td>
<td>-</td>
<td>$225,929</td>
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<tr>
<td>2052</td>
<td>$41,410</td>
<td>$69,205</td>
<td>$85,771</td>
<td>$18,297</td>
<td>-</td>
<td>$214,684</td>
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<tr>
<td>2053</td>
<td>$38,701</td>
<td>$65,304</td>
<td>$82,770</td>
<td>$17,266</td>
<td>-</td>
<td>$204,041</td>
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<tr>
<td>2054</td>
<td>$36,169</td>
<td>$61,623</td>
<td>$79,882</td>
<td>$16,293</td>
<td>-</td>
<td>$193,966</td>
</tr>
</tbody>
</table>

| Total | $3,416,567 | $4,852,514 | $3,556,611 | $1,282,971 | - | $13,108,663 |

Table 13: Benefit accrual by year

### BCA Approach and Methodology

As required by the NOFO, this grant application is supported by a formal Benefit-Cost Analysis (BCA) prepared in accordance with the most current available (March 2022) Benefit-Cost Analysis guidance. The primary features of the BCA methodology are described below:

- The analysis is based on year 2020 dollars. Project costs and future benefit streams are discounted to 2020 dollars at a rate of 7 percent, except for CO2 benefits which are discounted at a rate of 3 percent.
Lake Erie Renewable Energy Resiliency Project
FY2022 PIDP Grant Application
Port of Monroe

- The analysis covers a 30-year period of operations beginning in 2025 (first quarter) and concluding in 2054. The project improvements have an expected 30-year lifespan, so no residual value benefit is calculated as part of the analysis.

- Where available and applicable, monetization factors from 2022 Benefit-Cost Analysis Guidance are used. Where other factors are necessary for the analysis, their sources, manipulations, and uses are clearly shown in the spreadsheet model and discussed in this document.

- Effects and benefits generated from marine cargo growth resulting from the project (the truck VMT related benefits) are discounted at 50 percent; benefits associated with existing marine cargo volumes (the terminal operating benefits) are not discounted.

Supporting Economic Vitality at the National and Regional Level
The Project ensures domestic wind turbine tower manufacturer Ventower has immediate access to redundant and resilient maritime infrastructure at the Port giving U.S. wind energy manufacturing an economic and logistical advantage in distributing tower sections throughout the domestic and international wind energy supply chain.

Being an important logistics partner for the nation’s only port-based wind turbine tower manufacturer has resulted in the Port operating a regional distribution hub for wind energy components. This distribution and logistics operation directly supports and strengthens the development of alternative energy projects.

Competitive Disadvantage
Limited berthing capacity and laydown area is a competitive disadvantage for the Port. Other Lake Erie ports offer deeper draft harbors, more berths, and more expansive laydown areas. For the Port to successfully attract vessels, it is incumbent that the cargo transfer process is done with exceptional efficiency. The lack of redundant berthing capacity increases the risk of port congestion and delay. The lack of dedicated, cargo-specific laydown area increases facility congestion, safety issues, and causes the double-handling of cargoes.

This Project addresses Port competitiveness by increasing available berthing capacity and creating cargo specific laydown areas which increases overall operational capacity. This allows the Port, despite limited draft capacity, to overcome that disadvantage with increased velocity of each cargo evolution. The Project also creates a wind energy export berth in support of local wind turbine manufacturing, the wind energy supply chain, and short sea shipping. This new berth provides a significant niche advantage over other ports and attracts other wind energy related cargoes.
Economic Impacts

In 2017, 1,659 jobs in Michigan were supported by cargo moving via the marine terminal located at the Port.

1. Of the 1,659 jobs, 751 jobs were directly generated by the marine cargo and vessel activity at the marine terminals.
2. As a result of the local and regional purchases by those 751 individuals holding the direct jobs, an additional 574 induced jobs were supported in the regional economy.
3. 334 indirect jobs were supported by $39.7 million of regional purchases by businesses supplying services at the marine terminals at the Port.

In 2017, the direct business revenue received by the firms directly dependent upon the cargo handled at the marine terminals located at the Port was $28.3 million. These firms provide maritime services and inland transportation services for the cargo handled at the marine terminals and the vessels calling at the terminals.

The 751 individuals directly employed because of cargo handled at the marine terminals at the Port received $37.6 million in wages and salaries. These individuals, in turn, used these earnings to purchase goods and services, to pay taxes, and for savings.

The purchase of goods and services from regional sources creates a re-spending effect known as the personal earnings multiplier effect. Using the local personal earnings multipliers, an additional $67.8 million in income and consumption were created by the Port of Monroe. In developing the personal-income multiplier impacts, Martin Associates relied on government agencies to provide the income multipliers.

In addition, the 334 indirectly employed workers received indirect wages and salaries totaling $15.7 million. Combining the direct, induced, and indirect income impacts, the cargo handled at the Port Monroe generated $121.1 million in wages and salaries, and local consumption expenditures in the regional economy.

A total of $38.5 million in state and federal taxes were generated by cargo and vessel activity at the Port of Monroe, with $11.4 million generated at the state level and $27.1 million generated at the federal level.

Addressing Climate Change and Environmental Justice Impacts

The Port contributes to Climate Change reductions by enabling successful transportation evolutions of alternative energy projects components originating from the Port. As the only port in the United States with an operating wind tower manufacturer and as a major distribution hub for large components used in regional wind projects, providing economical, reliable, and efficient

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2 This section is directly from “The Economic Impacts of the Port of Monroe”, Martin and Associates, August 2018. The full report is in the Appendix Section of this application.
access to marine transportation is a significant factor in project success and timeliness. From 2020 to 2021 the Port handled over 500 tower sections, 330 nacelles, and 339 hubs. Successful alternative energy projects directly help reduce the amount of electricity generation from fossil fuels, which results in lower total air pollution and carbon dioxide emissions.

This project also addresses climate change by strengthening the Port’s role in the renewable energy supply chain by ensuring wind energy components are transported using the most efficient and environmentally friendly mode of transportation, via vessel. The rehabilitation of an existing small boat slip will add a Maritime Readiness Slip to the port, which will greatly increase the Port’s responsiveness and measures in case of an environmental or human disaster.

Project will have the following environmental justice impacts on the Great Lakes and St. Lawrence Seaway System:

1. Reduction in truck fuel consumption by $6,977,172.
2. Reduction of CO2 emissions (MT) by 59,720.
3. Reduction in PM2.5 emissions (MT) by 2.
4. Reduction in NOx emissions (MT) by 103.
5. Reduction in Sox emissions (MT) by 1

Utilizing the EPA’s EJSCREEN tool, it was determined the Port is in the 65th percentile for state PM2.5 emissions. The EPA EJSCREEN PM2.5 graphic is in the Appendix Section of this application.

Advancing Racial Equity and Reducing Barriers to Opportunity
The Environmental Justice and Racial Equity Impact Analysis for this Project (see Appendix) indicates the completed Project will improve air, noise, and water quality for adjacent EJ neighborhoods. At this point of the team’s analysis, it is believed that the same EJ population will not be disproportionately negatively impacted by construction of the Project. Analysis and monitoring will continue as the Port and its partners move through the components of the Project. All mitigation measures identified in the design and environmental review process will be implemented and monitored post-construction for compliance and community enhancement. The EJSCREEN Report is in the Appendix of this application.

The Port’s program to advance racial equity and reduce barriers to opportunity include:

1. The Project will help the port attract new business, which will increase manufacturing jobs at Ventower Industries and for the Port’s terminal operator, DRM Terminal Services, which is a minority-owned business. DRM’s terminal workforce are part of the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) union.
2. The Port will review the scope of work for the Project and leverage its existing relationship with the Michigan Economic Development Corporation (MEDC) to identify Disadvantaged Business Enterprises (DBE) in the State of Michigan and determine which businesses have the capacity to participate in the federally funded contracted work at the Port.

Terminal operations at the Port are provided by DRM Maintenance and Management Company of Monroe, MI. The ownership of this local Monroe, Michigan company is of Native American heritage and the company is a certified Michigan Minority Business Enterprise. DRM is a unionized company with a terminal workforce that is part of the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) union. DRM encourages fair choice for all employees to join the union.

Project Readiness

Technical Capacity
The Port has already completed numerous large projects improving safety, reliability, and resiliency to include the design, construction and delivery of the Riverfront wharf, on-dock rail spur, brownfield site rehabilitation, wetlands mitigation and management, stormwater improvement and shoreline stabilization. In addition, the Port has engineering studies, preliminary design performed for all components for this grant.

Project Schedule

<table>
<thead>
<tr>
<th>Activity</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grant Contract Negotiation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEPA and Local Permits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning &amp; Engineering</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RFP/Procurement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Component 1: Riverfront</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Component 2: Turning Basin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Component 3: Small Boat &quot;Maritime Readiness&quot; Slip</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Component 4: Shore Power</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completion/Close Out</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table 14: Project Schedule*

Assessment of Project Readiness Risks and Mitigation Strategies.
There are no apparent risks to completing this project within five years of fund obligation. There is no property acquisition associated with this project. The Project is not dependent on Army Corps of Engineers investments. The Port will be the recipient of Advanced maintenance dredging
funds from USACE in 2022 that will dredge the Port’s facilities and navigation channel, but these funds will not be associated in any way with the Project.

The Port has already completed extensive improvements through the River Raisin docking area and the Turning Basin. The Port has complied with all State and Federal permitting requirements for these projects, including:

1. EGLE/USACE joint permit application.
2. US Fish and Wildlife Clearance Permit
3. City of Monroe Soil and Sedimentation Control Permit
4. City of Monroe Planning and Building Permit
5. MDOT permits

Environmental Permits and Reviews
The Port’s engineering firm will need to conduct a site review to determine if any archeological impacts could occur because of the project.

NEPA
This project is located on land already in use for marine terminal operations. The Project is expected to fall under the Categorical Exclusion category since it will rehabilitate existing facilities and not substantially change the existing character of the facility or affect the project completion timeline.

State and Local Approvals
This project requires environmental permits from EGLE and US Army Corps for shoreline armoring. Project sponsor does not anticipate any delays from permitting. Information on environmental reviews, approvals, and permits by other agencies. The Port has been working with its engineering firm, city officials, state officials, and the Great Lakes Gateway Director for the Maritime Administration regarding the project and does not anticipate there will be any issues with approvals or permits related to the Project. The Project will rehabilitate existing infrastructure and take place within the existing footprint of the Port operations and is expected to receive a categorical exclusion.

<table>
<thead>
<tr>
<th>Identification of Risks</th>
<th>Mitigation Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permit Delay</td>
<td>1. Finalize drawings as soon as possible.</td>
</tr>
<tr>
<td></td>
<td>2. Keep good communication with project stakeholders to avoid any changes in the original design.</td>
</tr>
<tr>
<td></td>
<td>3. Early in the project planning process, decide which permits are needed for the project. Knowing the correct forms to file to save both time and money.</td>
</tr>
</tbody>
</table>
## Table 15: Project risks and mitigations strategies

<table>
<thead>
<tr>
<th>Potential Increase in Project Cost</th>
<th>1. Thorough project planning. Thorough and accurate project cost estimates are more likely to maintain the project budget.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Contractor communication. Make sure we understand the capacity of the contractor and prepare contract language that will control material cost escalation.</td>
</tr>
<tr>
<td></td>
<td>3. Avoid project scope creep.</td>
</tr>
<tr>
<td></td>
<td>4. Keep stakeholders updated throughout the project and make sure the project maintains schedule.</td>
</tr>
<tr>
<td></td>
<td>5. Value Engineering. If scope change or material costs causing increase in project cost is unavoidable, value engineering will be applied to keep the project cost under budget.</td>
</tr>
</tbody>
</table>

**Domestic Preference** Materials and manufactured products used in the Project will be produced or manufactured domestically. This provision will be included in all procurement documents used by contractors or tenants. Materials used to improve the Port property will not require any exception or waiver of the Buy American provisions described in the Notice of Funding Opportunity. The intent of the Port is to source product locally to enhance local benefit and job creation. The Port will require Buy American provisions to flow down to every task undertaken in the project description and funded with the MARAD Port Development Grant Funding.

## Determinations

<table>
<thead>
<tr>
<th><strong>Project Determination</strong></th>
<th><strong>Guidance</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The project improves safety, efficiency, or reliability of the movement of goods through a port or intermodal connection to the port.</td>
<td>See the Merit Criteria section of this application.</td>
</tr>
<tr>
<td>The project is cost effective.</td>
<td>See Grant Funds, Sources, and Uses of Project Funds and Merit Criteria sections of this application.</td>
</tr>
<tr>
<td>The eligible applicant has the authority to carry out this project.</td>
<td>See the Project Description section of this application.</td>
</tr>
<tr>
<td>The eligible applicant has sufficient funding available to meet the matching requirements.</td>
<td>See Appendix of this application.</td>
</tr>
<tr>
<td>The project will be completed without unreasonable delay.</td>
<td>See the Project Readiness section of this application.</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>The project cannot be easily and efficiently completed without Federal funding or financial assistance to the project sponsor.</td>
<td>This project cannot move forward without PIDP funding. See Section III of this application.</td>
</tr>
</tbody>
</table>

*Table 16: Determinations*
Appendices

I. Match Commitment Letter
II. Benefit Cost Analysis
III. Letters of Support
IV. Engineering information
V. Environmental Justice and Racial Equity Impact Analysis
VI. Economic Impacts of the Port of Monroe
VII. Port District Act
VIII. Michigan Minority Supplier Development Council Certification
Lake Erie Renewable Energy Resilience Project
FY2022 PIDP Grant Application
Port of Monroe

Appendix I Port of Monroe Match Commitment Letter
May 16th, 2022
Honorable Pete Buttigieg
Secretary of Transportation
U. S. Department of Transportation
1200 New Jersey Avenue, S. E.
Washington, D. C. 20590

Dear Secretary Buttigieg,

The Port of Monroe has sufficient funding to meet the match requirement for the Lake Erie Renewable Energy Resilience Project and agrees to pay for the non-Federal match of $3,117,114 if the Port Infrastructure Development Program grant is awarded and accepted.

Our Port is the only port in the United States with an active wind tower manufacturing business (Ventower Industries) located on Port property. This Project will facilitate the efficient and economical movement of US-manufactured clean energy components on US-flagged vessels and will position our port to contribute to the Biden Administration’s clean energy revolution outlined in the Build Back Better Act.

Very Respectfully,

[Signature]

Capt. Paul C. LaMarre III
Port Director
Port of Monroe
Appendix II Benefit Cost Analysis
LAKE ERIE RENEWABLE ENERGY RESILIENCE PROJECT

BENEFIT-COST ANALYSIS SUMMARY

Submitted by:
The Port of Monroe, MI

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL INFRASTRUCTURE INVESTMENTS
2022 TRANSPORTATION DISCRETIONARY GRANTS

REPRESENTS CONFIDENTIAL COMMERCIAL INFORMATION (CCI)

Prepared by:
WSP USA Inc.
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1 Introduction

1.1 ABOUT THIS DOCUMENT

In support of application for 2022 transportation discretionary grant funds, WSP Inc. worked with the Port of Monroe, Michigan to identify, quantify, and calculate Merit Criteria relevant to USDOT’s evaluation of proposed improvements to its marine terminal facilities. WSP prepared a formal Benefit Cost Analysis (BCA) Spreadsheet Model and this BCA Summary document for inclusion in a Port Infrastructure Development Program grant application, consistent with Benefit-Cost Analysis guidance issued in March 2022. The BCA Summary and BCA Spreadsheet Model were attached as appendices with the set of required grant application materials.

1.2 ABOUT THE PORT OF MONROE AND THIS PROJECT

The Port of Monroe is a diversified cargo-handling facility serving southeastern Michigan and surrounding areas. The Port hosts a major producer of wind tower components on-site (Ventower) and handles wind tower components moving both outbound from Ventower and inbound for the region. The Port also handles a variety of other commodities – steel coils, liquid asphalt, coal and petroleum coke, limestone, etc. -- produced and consumed by regional industries, utilities, and governments. The Port of Monroe offers the opportunity to move these goods both domestically (lakewise) and internationally (via the St. Lawrence Seaway).

As it has developed over time, the Port has absorbed new commodities and new growth in a less than optimal way. Due to a shortage of wharf and backland space, the port’s berthing and storage areas regularly need to serve multiple purposes, limiting throughput capacity and in some cases requiring open bulk cargo storage piles to be relocated within the terminal to make space available for shipment or receipt of different cargo.

This project will increase the Port’s available berthing, improve its backland storage, and allow different functional areas to be dedicated for specific cargo types. With respect to Port operations, the project will: eliminate the current practice of double-handling bulk cargo; allow the port to double its outbound shipments of wind tower components; allow the port to substantially increase its receipt of steel coils for regional auto manufacturing; and allow the Port to serve a new regional bulk customer (Carmeuse) which is currently moving sand from Lansing, MI to Erie, PA and other markets via truck. The qualifying (under BCA guidance) public benefits of these operations include:
• Reduced truck VMT from increased shipment of freight (wind tower components, steel coils, and sand) by water that is currently moving, and would otherwise continue to move, by truck;

• Reduced crashes from reduced truck VMT, with appropriate offsets for increased vessel ton-mileage;

• Reduced emissions from reduced truck VMT, with appropriate offsets for increase vessel ton-mileage; and

• Reduced operating cost from avoided annual double-handling of bulk cargo within the terminal, along with reduced pavement damage from trucks.

The Port’s expectation to achieve these benefits is grounded in solid market information tied to specific customers: the current on-site wind tower manufacturer (Ventower), the current steel coil producer (Stelco), and the sand shipper (Carmeuse) with known interest in using the Port. Recognizing that the VMT-driven benefits result from projected modal diversion effects, those benefits have been reduced by 50 percent to reflect risk and uncertainty in the projection.

Overall, the project offers a benefit-cost ratio of 1.17, based on: a non-discounted capital cost of $14,168,700; a discounted capital cost of $11,187,557; and discounted benefits of $13,108,663, over a 30-year analysis period.

Operating cost reduction benefits (not discounted) accrue directly to the Port as a public agency, while external crash and emissions benefits (discounted at 50 percent) accrue to society at large, including the immediate Port community and its larger multi-state market service area. No private business benefits are calculated or claimed.

1.3 ABOUT THIS DOCUMENT

This BCA Appendix documents the assumptions, input data, factors, calculation steps, and outputs of the BCA model, and serves as a User Guide for model reviewers. The model itself is an unlocked, self-contained spreadsheet, where every cell is accessible. There were no “black boxes” involved in the modeling process -- all sources, inputs, conversion factors, valuation factors, calculation steps, and results are shown for every year of the analysis and can be viewed (and if desired modified) as appropriate.

This document is organized by the following sections:

• This Introduction
• BCA Process and Summary
• Spreadsheet Model User Guide
2  BCA Process and Summary

2.1  GENERAL FEATURES

As required by the NOFO, this grant application is supported by a formal Benefit-Cost Analysis (BCA) prepared in accordance with the most current available (March 2022) Benefit-Cost Analysis guidance. The primary features of the BCA methodology are described below.

- The analysis is based on year 2020 dollars. Project costs and future benefit streams are discounted to 2020 dollars at a rate of 7 percent, except for CO2 benefits which are discounted at a rate of 3 percent.

- The analysis covers a 30-year period of operations beginning in 2025 (first quarter) and concluding in 2054. The project improvements have an expected 30-year lifespan, so no residual value benefit is calculated as part of the analysis.

- Where available and applicable, monetization factors from 2022 Benefit-Cost Analysis Guidance are used. Where other factors are necessary for the analysis, their sources, manipulations, and uses are clearly shown in the spreadsheet model and discussed in this document.

- Effects and benefits generated from marine cargo growth resulting from the project (the truck VMT related benefits) are discounted at 50 percent; benefits associated with existing marine cargo volumes (the terminal operating benefits) are not discounted.

2.2  BASELINE AND ALTERNATIVE CONDITIONS

While the project has many public benefits as described in the Narrative, the public benefits most directly relevant for purposes of BCA calculation are derived from improved condition and efficiency of the Port’s functional waterfront areas.

Today, the Port of Monroe handles a diverse range of cargo types, utilizing two functional berthing and wharf operating areas. These areas are shared across the different commodity and handling types, and all of which are in need of repair and upgrade.
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Appendix III Letters of Support

1. Governor of Michigan, Gretchen Whitmer and Michigan Department of Transportation Director Paul C. Ajegba, P. E.
2. State Senator Stephanie Chang
3. U.S. Representative Tim Walberg
4. American Association of Port Authorities
5. American Great Lakes Ports Association
6. Green Marine
7. Monroe County Business Development Corporation
8. DRM Terminal Management
9. Capital City Crane Group
10. Interlake Maritime Services
11. McKel Marine Limited
12. Ashton Marine Corporation
13. DTE Energy
14. Gerdau
15. Green Shipping Line
16. Lake Carriers Association
17. Monroe County Board of Commissioners
18. St. Lawrence Seaway Management Corporation
19. Ventower Industries
May 12, 2022

The Honorable Pete Buttigieg  
Office of the Secretary  
United States Department of Transportation  
1200 New Jersey Avenue SE  
Washington, DC 20590

Dear Secretary Buttigieg:

We are pleased to submit this letter of support for the application submitted by the Port of Monroe to the United States Department of Transportation’s 2022 Port Infrastructure Development Program. This funding will support the Lake Erie Renewable Energy Resilience Project.

The project rehabilitates and reinforces end-of-life infrastructure to increase vessel and cargo handling capacity, improves efficiency of managing bulk materials used in local road infrastructure projects, and the manufacture of building materials. This project also improves the handling of steel coils and plates used in regional automotive manufacturing, adds shore power to reduce vehicle and vessel idling, provides new docking capacity, and adds dedicated vessel berthing capacity for handling international containers, and the marine transport of wind energy components manufactured at the Port of Monroe.

As a leading commercial port on the Great Lakes, the Port of Monroe is a critical link in the U.S. domestic and international trade supply chain. This project will have a significant impact on Monroe County by growing existing business in wind energy shipments and facilitate the safe, economical, and environmentally conscious distribution of these components to U.S. ports while supporting local and regional manufacturing jobs.

The Port of Monroe is the only port in the U.S. with an active wind tower manufacturing business (Ventower Industries) located on the Port of Monroe property. This project is necessary to create supply chain efficiencies in wind energy projects and will position the port to contribute to the Administration’s clean energy initiative.
In 2016, the U.S. Maritime Administration designated the Port of Monroe as part of the Marine Highway Route M-90. This project will facilitate the efficient and economical movement of U.S. manufactured clean energy components on U.S. flagged vessels. This project enhances prior local, state, and federal infrastructure investments at the Port of Monroe, which is located within a federally recognized Opportunity Zone (8318).

Michigan’s ports are a critical part of the overall freight transportation system, which contributes to the modal diversity that is one of the state’s competitive advantages. We would appreciate your positive consideration of the Lake Erie Renewable Energy Resilience Project. If you have any questions, please feel free to contact either me or Eric Mullen, Asset Management and Policy Division Administrator, at 517-331-6169 or MullenE@michigan.gov.

Sincerely,

Gretchen Whitmer
Governor of Michigan

Paul C. Ajegba, P.E.
Director
Michigan Department of Transportation
May 12, 2022

The Honorable Pete Buttigieg
U.S. Department of Transportation
Office of the Secretary
Washington, DC 20590

Dear Secretary Buttigieg,

I write to you today in support of the application submitted by the Port of Monroe to the U. S. Department of Transportation's 2022 Port Infrastructure Development Program to support the Lake Erie Renewable Energy Resilience project.

The project is a port infrastructure investment to create a new functional area to strengthen the Port’s ability to handle inbound and outbound clean wind energy components, rehabilitate existing functional areas for existing bulk and project cargo operations, and rehabilitate a small boat slip to increase the port’s responsiveness against climate change related weather events. This project will strengthen the renewable energy supply chain that the Port has worked to develop with key stakeholders and supports President Biden’s plan to position America as a leader in the clean energy revolution.

As a leading commercial port on the Great Lakes, the Port is a critical link in the U.S. domestic and international trade supply-chain. This Project will have a significant impact on Monroe County by growing existing business in wind energy shipments and facilitate the safe, economical, and environmentally conscious distribution of these components to US ports while supporting local and regional manufacturing jobs.

The Port of Monroe is the only port in the United States with an active wind tower manufacturing business (Ventower Industries) located on Port property. This project is necessary to create supply chain efficiencies in wind energy projects and will position the port to contribute to the Biden Administration’s clean energy revolution outlined in the Build Back Better Act.

In 2016, the U.S. Maritime Administration designated the Port of Monroe as part of the Marine Highway Route M-90. This project will facilitate the efficient and economical movement of US-manufactured clean energy components on US-flagged vessels. This project enhances prior local, state, and federal infrastructure investments at the Port of Monroe, which is located within a federally recognized Opportunity Zone (8318).
The funds from the PIDP are essential to strengthen the resiliency of our renewable energy supply chains in America’s heartland. I would appreciate your positive consideration of the Lake Erie Renewable Energy Resilience project.

Sincerely,

Stephanie Chang  
State Senator, District 1  
Senate Minority Floor Leader
The Honorable Pete Buttigieg  
U.S. Department of Transportation  
Office of the Secretary  
Washington, DC 20590

To Whom It May Concern:

I am writing in support of the application by the Port of Monroe for the U.S. Department of Transportation’s 2022 Port Infrastructure Development Program to support the Lake Erie Renewable Energy Resilience Project grant. The Port of Monroe is located in Monroe County, which is one of the 7 counties in Michigan’s 7th Congressional District that I represent.

The project rehabilitates and reinforces end-of-life infrastructure to increase vessel and cargo handling capacity, improves efficiency of managing bulk materials used in local road infrastructure projects and the manufacture of building materials, improves the handling of steel coils and plate used in regional automotive manufacturing, adds shore power to reduce vehicle and vessel idling, provides new docking capacity to harbor assist vessels to increase the port’s responsiveness against climate change related weather events, and adds dedicated vessel berthing capacity for handling international containers and the marine transport of wind energy components manufactured at the Port of Monroe.

I support the work that the Port of Monroe does. Their grant request will enable them to enhance prior local, state, and federal infrastructure investments at the Port of Monroe, which is located within a federally recognized Opportunity Zone (8318).

Thank you for your consideration of the Port of Monroe’s application for U.S. Department of Transportation’s 2022 Port Infrastructure Development Program to support the Lake Erie Renewable Energy Resilience Project.

Sincerely,

Tim Walberg  
Member of Congress
May 11, 2022

The Honorable Pete Buttigieg
Secretary
U.S. Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

RE: Letter of Support, Port of Monroe
Lake Erie Renewable Energy Resilience Project
FY 2022 Port Infrastructure Development Program

Dear Secretary Buttigieg,

Thank you for your continued advocacy for our nation’s transportation projects, including Port infrastructure. The American Association of Port Authorities (AAPA) is writing on behalf of the Port of Monroe to express our strong support for its application to the PIDP for the Lake Erie Renewable Energy Resilience Project at the Port of Monroe.

Founded in 1912, AAPA is the unified and collective voice of the seaport industry in the Americas. AAPA empowers Port Authorities, maritime industry partners, and service providers to serve their global customers and create economic and social value for their communities. Our activities, resources, and partnerships connect, inform, and unify seaport leaders and maritime professionals in all segments of the industry around the Western Hemisphere.

The Project rehabilitates and reinforces end-of-life infrastructure to increase vessel and cargo handling capacity, improves efficiency of managing bulk materials used in local road infrastructure projects and the manufacture of building materials, improves the handling of steel coils and plate used in regional automotive manufacturing, adds shore power to reduce vehicle and vessel idling, provides new docking capacity to harbor assist vessels to increase the port’s responsiveness against climate change related weather events, and adds dedicated vessel berthing capacity for handling international containers and the marine transport of wind energy components manufactured at the Port of Monroe.

As a leading commercial port on the Great Lakes, the Port of Monroe is a critical link in the U.S. domestic and international trade supply-chain. This Project will have a significant impact on Monroe County by growing existing business in wind energy shipments and facilitate the safe, economical, and environmentally conscious distribution of these components to US ports while supporting local and regional manufacturing jobs.

The Port of Monroe is the only port in the United States with an active wind tower manufacturing business (Ventower Industries) located on Port property. This Project is necessary to create supply chain efficiencies in wind energy projects and will position the port
to contribute to the Biden Administration’s clean energy revolution outlined in the Build Back Better Act.

I respectfully ask for your full and fair consideration for this important project.

Very Respectfully,

Christopher J. Connor
President and CEO
May 16, 2022

The Honorable Pete Buttigieg
Secretary
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, D.C. 20590

Dear Secretary Buttigieg:

The American Great Lakes Ports Association represents the public port authorities on the United States side of the Great Lakes. Each of our member ports is a division of state or local government, or an independent agency created by state statute. As a group, and individually, Great Lakes ports work to foster maritime commerce in the region and economic development in their communities.

We are writing to share our support for the application submitted by the Port of Monroe to the U.S. Department of Transportation’s 2022 Port Infrastructure Development Program to support the Lake Erie Renewable Energy Resilience Project.

The project rehabilitates and reinforces end-of-life infrastructure to increase vessel and cargo handling capacity, improves efficiency of managing bulk materials used in local road infrastructure projects and the manufacture of building materials, improves the handling of steel coils and plate used in regional automotive manufacturing, adds shore power to reduce vehicle and vessel idling, provides new docking capacity to harbor assist vessels to increase the port’s responsiveness against climate change related weather events, and adds dedicated vessel berthing capacity for handling international containers and the marine transport of wind energy components manufactured at the Port of Monroe.

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The Port of Monroe is the only port in the United States with an active wind tower manufacturing business (Ventower Industries) located on port property. This project is necessary
to create supply chain efficiencies in wind energy projects and will position the port to contribute to the Biden Administration’s clean energy revolution outlined in the Build Back Better Act. The funds from the PIDP are essential to strengthen the resiliency of our renewable energy supply chains in America’s heartland.

In 2016, the U.S. Maritime Administration designated the Port of Monroe as part of the Marine Highway Route M-90. This project will facilitate the efficient and economical movement of U.S.-manufactured clean energy components on US-flagged vessels. The project enhances prior local, state, and federal infrastructure investments at the Port of Monroe, which is located within a federally recognized Opportunity Zone (8318).

Unlike coastal ports, Great Lakes ports are part of an interconnected navigation system that supports a $3 trillion regional economy. The development of each Great Lakes port contributes to the success of the larger system and for that reason, we are pleased to support this important project.

Sincerely,

Steven A. Fisher
Executive Director
May 11th, 2022

The Honorable Pete Buttigieg
U.S. Department of Transportation
Office of the Secretary
Washington, DC 20590

Dear Secretary Buttigieg,

On behalf of Green Marine, I am pleased to write in support of the application submitted by the Port of Monroe to the U. S. Department of Transportation’s 2022 Port Infrastructure Development Program to support the Lake Erie Renewable Energy Resilience Project.

The Project rehabilitates and reinforces end-of-life infrastructure to increase vessel and cargo handling capacity, improves efficiency of managing bulk materials used in local road infrastructure projects and the manufacture of building materials, improves the handling of steel coils and plate used in regional automotive manufacturing, adds shore power to reduce vehicle and vessel idling, provides new docking capacity to harbor assist vessels to increase the port’s responsiveness against climate change related weather events, and adds dedicated vessel berthing capacity for handling international containers and the marine transport of wind energy components manufactured at the Port of Monroe.

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The funds from the PIDP are essential to strengthen the resiliency of our renewable energy supply chains in America’s heartland.

We would appreciate your positive consideration of the Lake Erie Renewable Energy Resilience project.

Sincerely,

David Bolduc
Executive Director, Green Marine
May 16, 2022

The Honorable Pete Buttigieg  
U.S. Department of Transportation  
Office of the Secretary  
Washington, DC 20590

Dear Secretary Buttigieg,

On behalf of Board of Directors and staff of the Monroe County Business Development Corporation I am pleased to write in support of the application submitted by the Port of Monroe to the U.S. Department of Transportation’s 2022 Port Infrastructure Development Program to support the Lake Erie Renewable Energy Resilience Project.

The Project rehabilitates and reinforces end-of-life infrastructure to increase vessel and cargo handling capacity, improves efficiency of managing bulk materials used in local road infrastructure projects and the manufacture of building materials, improves the handling of steel coils and plate used in regional automotive manufacturing, adds shore power to reduce vehicle and vessel idling, provides new docking capacity to harbor assist vessels to increase the port’s responsiveness against climate change related weather events, and adds dedicated vessel berthing capacity for handling international containers and the marine transport of wind energy components manufactured at the Port of Monroe.

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local, state, and federal infrastructure investments at the Port of Monroe, which is located within a federally recognized Opportunity Zone (8318).

The funds from the PIDP are essential to strengthen the resiliency of our renewable energy supply chains in America’s heartland.

We would appreciate your positive consideration of the Lake Erie Renewable Energy Resilience project.

Sincerely,

Tim C. Lake
Tim C. Lake
President & CEO
tlake@monroecountybdc.org
734-241-8081 x1
May 16, 2022

The Honorable Pete Buttigieg  
U.S. Department of Transportation  
Office of the Secretary  
Washington, DC 20590

Dear Secretary Buttigieg,

On behalf of DRM Maintenance and Management Co. I am pleased to write in support of the application submitted by the Port of Monroe to the U. S. Department of Transportation’s 2022 Port Infrastructure Development Program to support the Lake Erie Renewable Energy Resilience Project.

The Project rehabilitates and reinforces end-of-life infrastructure to increase vessel and cargo handling capacity, improves efficiency of managing bulk materials used in local road infrastructure projects and the manufacture of building materials, improves the handling of steel coils and plate used in regional automotive manufacturing, adds shore power to reduce vehicle and vessel idling, provides new docking capacity to harbor assist vessels to increase the port’s responsiveness against climate change related weather events, and adds dedicated vessel berthing capacity for handling international containers and the marine transport of wind energy components manufactured at the Port of Monroe.

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The funds from the PIDP are essential to strengthen the resiliency of our renewable energy supply chains in America’s heartland.

We would appreciate your positive consideration of the Lake Erie Renewable Energy Resilience project.

Respectfully Yours,

[Signature]

Stephen Gray

President – DRM
May 10, 2022

The Honorable Pete Buttigieg  
U.S. Department of Transportation  
Office of the Secretary  
Washington, DC 20590

Dear Secretary Buttigieg,

On behalf of Capital City Group I am pleased to write in support of the application submitted by the Port of Monroe to the U.S. Department of Transportation’s 2022 Port Infrastructure Development Program to support the Lake Erie Renewable Energy Resilience Project.

The Project rehabilitates and reinforces end-of-life infrastructure to increase vessel and cargo handling capacity, improves efficiency of managing bulk materials used in local road infrastructure projects and the manufacture of building materials, improves the handling of steel coils and plate used in regional automotive manufacturing, adds shore power to reduce vehicle and vessel idling, provides new docking capacity to harbor assist vessels to increase the port’s responsiveness against climate change related weather events, and adds dedicated vessel berthing capacity for handling international containers and the marine transport of wind energy components manufactured at the Port of Monroe.

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The funds from the PIDP are essential to strengthen the resiliency of our renewable energy supply chains in America’s heartland. We would appreciate your positive consideration of the Lake Erie Renewable Energy Resilience project.

Sincerely,

[Signature]

Brian Gibson  
President

2299 Performance Way  •  Columbus, OH 43207  •  877.48.CRANE  •  Fax 614.278.2184  
Capital City Group, Inc.  •  www.ccgroup-inc.com
May 12, 2022

The Honorable Pete Buttigieg
U.S. Department of Transportation
Office of the Secretary
Washington, DC 20590

Dear Secretary Buttigieg,

On behalf of Interlake Maritime Services, I am pleased to write in support of the application submitted by the Port of Monroe to the U.S. Department of Transportation’s 2022 Port Infrastructure Development Program to support the Lake Erie Renewable Energy Resilience Project.

The Project rehabilitates and reinforces end-of-life infrastructure to increase vessel and cargo handling capacity, improves efficiency of managing bulk materials used in local road infrastructure projects and the manufacture of building materials, improves the handling of steel coils and plate used in regional automotive manufacturing, adds shore power to reduce vehicle and vessel idling, provides new docking capacity to harbor assist vessels to increase the port’s responsiveness against climate change related weather events, and adds dedicated vessel berthing capacity for handling international containers and the marine transport of wind energy components manufactured at the Port of Monroe.

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The funds from the PIDP are essential to strengthen the resiliency of our renewable energy supply chains in America’s heartland.

We would appreciate your positive consideration of the Lake Erie Renewable Energy Resilience project.

Very Respectfully,

Brendan P. O’Connor

Interlake Maritime Services • 7300 Engle Road • Middleburg Heights, OH 44130
440-260-6926 • Cell: 330-606-3526 • boconnor@interlakems.com
May 16, 2022

The Honorable Pete Buttigieg
U.S. Department of Transportation
Office of the Secretary
Washington, DC 20590

Dear Secretary Buttigieg,

On behalf of McKeil Marine Limited I am pleased to write in support of the application submitted by the Port of Monroe to the U.S. Department of Transportation’s 2022 Port Infrastructure Development Program to support the Lake Erie Renewable Energy Resilience Project.

The Project rehabilitates and reinforces end-of-life infrastructure to increase vessel and cargo handling capacity, improves efficiency of managing bulk materials used in local road infrastructure projects and the manufacture of building materials, improves the handling of steel coils and plate used in regional automotive manufacturing, adds shore power to reduce vehicle and vessel idling, provides new docking capacity to harbor assist vessels to increase the port’s responsiveness against climate change related weather events, and adds dedicated vessel berthing capacity for handling international containers and the marine transport of wind energy components manufactured at the Port of Monroe.

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The funds from the PIDP are essential to strengthen the resiliency of our renewable energy supply chains in America’s heartland.

We would appreciate your positive consideration of the Lake Erie Renewable Energy Resilience project.

Yours truly,

[Signature]

Paulo Pessoa
VP Commercial
McKeil Marine Limited
(905) 515-1435
www.mckeil.com
May 12, 2022

The Honorable Pete Buttigieg  
U.S. Department of Transportation  
Office of the Secretary  
Washington, DC 20590

Dear Secretary Buttigieg,

On behalf of Ashton Marine Corporation, I am pleased to write in support of the application submitted by the Port of Monroe to the U.S. Department of Transportation’s 2022 Port Infrastructure Development Program to support the Lake Erie Renewable Energy Resilience Project.

The Project rehabilitates and reinforces end-of-life infrastructure to increase vessel and cargo handling capacity, improves efficiency of managing bulk materials used in local road infrastructure projects and the manufacture of building materials, improves the handling of steel coils and plate used in regional automotive manufacturing, adds shore power to reduce vehicle and vessel idling, provides new docking capacity to harbor assist vessels to increase the port’s responsiveness against climate change related weather events, and adds dedicated vessel berthing capacity for handling international containers and the marine transport of wind energy components manufactured at the Port of Monroe.

As a leading commercial port on the Great Lakes, the Port is a critical link in the U.S. domestic and international trade supply-chain. This Project will have a significant impact on Monroe County by growing existing business in wind energy shipments and facilitate the safe, economical, and environmentally conscious distribution of these components to US ports while supporting local and regional manufacturing jobs.

The Port of Monroe is the only port in the United States with an active wind tower manufacturing business (Ventower Industries) located on Port property. This Project is necessary to create supply chain efficiencies in wind energy projects and will position the port to contribute to the Biden Administration’s clean energy revolution outlined in the Build Back Better Act.

In 2016, the U.S. Maritime Administration designated the Port of Monroe as part of the Marine Highway Route M-90. This Project will facilitate the efficient and economical movement of US-manufactured clean energy components on US-flagged vessels. This Project enhances prior local, state, and federal infrastructure investments at the Port of Monroe, which is located within a federally recognized Opportunity Zone (8318).

The funds from the PIDP are essential to strengthen the resiliency of our renewable energy supply chains in America’s heartland.

Respectfully,

[Signature]

Seth Andrie  
President  
Ashton Marine Corporation

10 Clinton Avenue  
Apt D  
Grand Haven, MI 49417  
www.ashton-tugs.com
May 12, 2022

The Honorable Pete Buttigieg
U.S. Department of Transportation
Office of the Secretary
Washington, DC 20590

Dear Secretary, Buttigieg,

On behalf of DTE Energy, I am pleased to write in support of the application submitted by the Port of Monroe to the U.S. Department of Transportation’s 2022 Port Infrastructure Development Program to support the Lake Erie Renewable Energy Resilience Project.

The Project rehabilitates and reinforces end-of-life infrastructure to increase vessel and cargo handling capacity, improves efficiency of managing bulk materials used in local road infrastructure projects and the manufacture of building materials, improves the handling of steel coils and plate used in regional automotive manufacturing, adds shore power to reduce vehicle and vessel idling, provides new docking capacity to harbor assist vessels to increase the port’s responsiveness against climate change related weather events, and adds dedicated vessel berthing capacity for handling international containers and the marine transport of wind energy components manufactured at the Port of Monroe.

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The funds from the PIDP are essential to strengthen the resiliency of our renewable energy supply chains in America’s heartland.

We would appreciate your positive consideration of the Lake Erie Renewable Energy Resilience project.
Sincerely,

Molly Luempert-Coy
Regional Manager
Monroe, Lenawee and Washtenaw Counties
DTE Energy

cc: Paul LaMarre
    Mayor Robert Clark
    City Manager Vince Pastue
    Brian Kincaid
    Michael Tromley II
May 16, 2022

The Honorable Pete Buttigieg
U.S. Department of Transportation
Office of the Secretary
Washington, DC 20590

Dear Secretary Buttigieg,

On behalf of Gerdau Special Steel North America and considering the below points, I am pleased to write in support of the application submitted by the Port of Monroe to the U. S. Department of Transportation’s 2022 Port Infrastructure Development Program to support the Lake Erie Renewable Energy Resilience Project.

The Project rehabilitates and reinforces end-of-life infrastructure to increase vessel and cargo handling capacity, improves efficiency of managing bulk materials used in local road infrastructure projects and the manufacture of building materials, improves the handling of steel coils and plate used in regional automotive manufacturing, adds shore power to reduce vehicle and vessel idling, provides new docking capacity to harbor assist vessels to increase the port’s responsiveness against climate change related weather events, and adds dedicated vessel berthing capacity for handling international containers and the marine transport of wind energy components manufactured at the Port of Monroe. As a Leader in SBQ Steel, Gerdau supports the Port, as both a partner and a neighbor, in the transportation opportunities the Port can provide.

As a leading commercial port on the Great Lakes, the Port is a critical link in the U.S. domestic and international trade supply-chain. This Project will have a significant impact on Monroe County by growing existing business in wind energy shipments and facilitate the safe, economical, and environmentally conscious distribution of these components to US ports while supporting local and regional manufacturing jobs.

The Port of Monroe is the only port in the United States with an active wind tower manufacturing business (Ventower Industries) located on Port property. This Project is necessary to create supply chain efficiencies in wind energy projects and will position the port to contribute to the Biden Administration’s clean energy revolution outlined in the Build Back Better Act.

In 2016, the U.S. Maritime Administration designated the Port of Monroe as part of the Marine Highway Route M-90. This Project will facilitate the efficient and economical movement of US-manufactured clean energy components on US-flagged vessels. This Project enhances prior local, state, and federal infrastructure investments at the Port of Monroe, which is located within a federally recognized Opportunity Zone (8318).

The funds from the PIDP are essential to strengthen the resiliency of our renewable energy supply chains in America’s heartland.

We appreciate your positive consideration of the Lake Erie Renewable Energy Resilience project.

Lisa Owen

Director of Order Fulfillment, S&OP & Logistics
May 12, 2022

The Honorable Pete Buttigieg  
U.S. Department of Transportation  
Office of the Secretary  
Washington, DC 20590

Dear Secretary Buttigieg,

On behalf of Green Shipping Line, I am pleased to give my wholehearted support of the application submitted by the Port of Monroe to the U. S. Department of Transportation’s 2022 Port Infrastructure Development Program to support the Lake Erie Renewable Energy Resilience Project.

The Project rehabilitates and reinforces end-of-life infrastructure to increase vessel and cargo handling capacity, improves efficiency of managing bulk materials used in local road infrastructure projects and the manufacture of building materials, improves the handling of steel coils and plate used in regional automotive manufacturing, adds shore power to reduce vehicle and vessel idling, provides new docking capacity to harbor assist vessels to increase the port’s responsiveness against climate change related weather events, and adds dedicated vessel berthing capacity for handling international containers and the marine transport of wind energy components manufactured at the Port of Monroe.

As a leading commercial port on the Great Lakes, the Port of Monroe is a critical link in the U.S. domestic and international trade supply-chain. This Project will have a significant impact on Monroe County by growing existing business in wind energy shipments and facilitate the safe, economical, and environmentally conscious distribution of these components to U.S. ports while supporting local and regional manufacturing jobs.

The Port of Monroe is the only port in the United States with an active wind tower manufacturing business (Ventower Industries) located on Port property. This Project is necessary to create supply chain efficiencies in wind energy projects and will position the port to contribute to the Biden Administration’s clean energy revolution outlined in the Build Back Better Act.

In 2016, the U.S. Maritime Administration designated the Port of Monroe as part of the Marine Highway Route M-90. This Project will facilitate the efficient and economical movement of U.S.-manufactured clean energy components on U.S. -flagged vessels. This Project enhances prior local, state, and federal infrastructure investments at the Port of Monroe, which is located within a federally recognized Opportunity Zone (8318).
The funds from the PIDP are essential to strengthen the resiliency of our renewable energy supply chains in America’s heartland.

We would appreciate your positive consideration of the Lake Erie Renewable Energy Resilience project.

Sincerely yours,

Percy R. Pyne, IV  
Chairman and CEO  
Green Shipping Line
May 11, 2022

The Honorable Pete Buttigieg
U.S. Department of Transportation
Office of the Secretary
Washington, DC 20590

Dear Secretary Buttigieg:

On behalf of the Lake Carriers’ Association, I am pleased to write in support of the application submitted by the Port of Monroe to the U.S. Department of Transportation’s 2022 Port Infrastructure Development Program to support the Lake Erie Renewable Energy Resilience Project. We represent U.S.-flag vessels operating exclusively on the Great Lakes. Lakers can move as much as 90 million tons of cargo a year and are the pilot light for North American Manufacturing. Our members currently serve the Port of Monroe. With your approval of this project, they will have the ability to both deliver more cargo to and load more cargo from the Port and its Great Lakes port partners.

Monroe’s project rehabilitates and reinforces end-of-life infrastructure to increase vessel and cargo handling capacity, improves efficiency of managing bulk materials used in local road infrastructure projects and the manufacture of building materials, improves the handling of steel coils and plate used in regional automotive manufacturing, adds shore power to reduce vehicle and vessel idling, provides new docking capacity to harbor assist vessels to increase the port’s responsiveness against climate change related weather events, and adds dedicated vessel berthing capacity for handling international containers and the marine transport of wind energy components manufactured at the Port of Monroe.

As a leading commercial port on the Great Lakes, the Port is a critical link in the U.S. domestic and international trade supply-chain. This Project will have a significant impact on Monroe County by growing existing business in wind energy shipments and facilitate the safe, economical, and environmentally conscious distribution of these components to US ports while supporting local and regional manufacturing jobs.

The Port of Monroe is the only port in the United States with an active wind tower manufacturing business (Ventower Industries) located on Port property. This Project is necessary to create supply chain efficiencies in wind energy projects and will position the port to contribute to the Biden Administration’s clean energy revolution outlined in the Build Back Better Act.

In 2016, the U.S. Maritime Administration designated the Port of Monroe as part of the Marine
Highway Route M-90. This Project will facilitate the efficient and economical movement of US-manufactured clean energy components on US-flagged vessels. This Project enhances prior local, state, and federal infrastructure investments at the Port of Monroe, which is located within a federally recognized Opportunity Zone (8318).

The funds from the PIDP are essential to strengthen the resiliency of our renewable energy supply chains in America’s heartland.

We would appreciate your positive consideration of the Lake Erie Renewable Energy Resilience project. This project aligns with national energy policy. It also has regional and local economic benefits that will pay dividends for generations.

Sincerely,

James H. I. Weakley  
President  
Lake Carriers’ Association
May 12, 2022

The Honorable Pete Buttigieg
United States Department of Transportation
Office of the Secretary
Washington, DC 20590

Re: Support for Port of Monroe Application for Funding-U.S. Department of Transportation 2022 Port Infrastructure Development Program to Support the Lake Erie Renewable Energy Resilience Project

Dear Secretary Buttigieg:

This letter offers the full support to the Port of Monroe’s request for funding essential investments in the Port’s aging infrastructure. The County of Monroe enthusiastically encourages your favorable consideration of the Port’s application, knowing the funding will strengthen the capabilities of this leading commercial port on the Great Lakes.

The Port of Monroe is a critical link in the U.S. domestic and international trade supply-chain. This project will have a significant impact on the region beyond Monroe County by growing existing business in wind energy shipments and facilitating the safe, economical, and environmentally conscious distribution of these components to U.S. ports while supporting local and regional manufacturing jobs. Unique to the Port of Monroe is its distinction as the only port in the U.S. with an established and ongoing wind tower manufacturer doing business on the port. As transportation costs become a more pronounced factor in competitiveness around the world, ready access to water transportation on the Great Lakes should be a priority and this project will leverage this opportunity through cost efficiencies moving manufactured products.

The project will rehabilitate and reinforce end-of-life infrastructure at the port to increase vessel and cargo handling capacity and improve the efficiency of managing bulk materials used in local road infrastructure projects along with the manufacture of building materials. The project will also transform the handling of steel coils and plates used in southeast Michigan’s automotive manufacturing sector. Funding will be invested in shore power capacities to reduce vehicle and vessel idling, provide new docking capacity to harbor assist vessels that will directly increase the port’s responsiveness against climate change related weather events. And finally, dedicated vessel berthing capacity will be added for handling international containers and the marine transport of wind energy components manufactured at the Port of Monroe.

As a regional asset in multi-model transportation systems, the investments in the Port of Monroe will enhance efforts to strengthen supply chain and logistics distribution within binational and U.S. trade as growth between the U.S. and Canada is projected to continue to grow. Having a robust port with marine freight transport capacity in the region to compliment truck and rail transportation modes throughout the region create vital links in binational supply chains and promote economic vitality for our citizens.
The project funding request of the Port of Monroe is one that has long been a part of our strategic economic development plan. That plan includes leveraging the assets of the Port and its geographic location as the sole port on Lake Erie and its growth and importance as the Gordie Howe International Bridge opens in 2024. This international crossing will drive additional economic activity and the Port is well positioned to be a leading transport hub moving product and freight. Clearly, funding this project will realize the Port’s potential and role in domestic and international trade and supply chain logistics.

Additionally, in 2016, the U.S. Maritime Administration designated the Port of Monroe as part of the Marine Highway Route M-90. We trust you recognize the importance of this project to facilitate the efficient and cost effective movement of U.S. manufactured clean energy components on U.S. flagged vessels. This project will build upon prior local, state, and federal infrastructure investments at the Port of Monroe, which is located within a federally recognized Opportunity Zone (8318).

On behalf of the citizens and businesses in Monroe County, thank you for your support of this project as we plan to work in partnership with our federal partners along with our local units of government building a new and resilient economy that is both sustainable and valuable for citizens and businesses in southeast Michigan.

Sincerely,

Mark Brant, Chairman
Monroe County Board of Commissioners
May 16, 2022

The Honorable Pete Buttigieg
U.S. Department of Transportation
Office of the Secretary
Washington, DC 20590

Dear Secretary Buttigieg,

On behalf of The St. Lawrence Seaway Management Corporation, I am pleased to write in support of the application submitted by the Port of Monroe to the U. S. Department of Transportation’s 2022 Port Infrastructure Development Program to support the Lake Erie Renewable Energy Resilience Project.

The Project rehabilitates and reinforces end-of-life infrastructure to increase vessel and cargo handling capacity, improves efficiency of managing bulk materials used in local road infrastructure projects and the manufacture of building materials, improves the handling of steel coils and plate used in regional automotive manufacturing, adds shore power to reduce vehicle and vessel idling, provides new docking capacity to harbor assist vessels to increase the port’s responsiveness against climate change related weather events, and adds dedicated vessel berthing capacity for handling international containers and the marine transport of wind energy components manufactured at the Port of Monroe.

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The funds from the PIDP are essential to strengthen the resiliency of our renewable energy supply chains in America’s heartland.

We would appreciate your positive consideration of the Lake Erie Renewable Energy Resilience project.

Sincerely,

Ken Carey, CCLP
Sr. Manager, Real Estate Business Development
May 16, 2022

The Honorable Pete Buttigieg  
U.S. Department of Transportation  
Office of the Secretary  
Washington, DC 20590

Dear Secretary Buttigieg,

On behalf of Ventower Industries, I am pleased to write in support of the application submitted by the Port of Monroe to the U. S. Department of Transportation’s 2022 Port Infrastructure Development Program to support the Lake Erie Renewable Energy Resilience Project.

The Project rehabilitates and reinforces end-of-life infrastructure to increase vessel and cargo handling capacity, improves efficiency of managing bulk materials used in local road infrastructure projects and the manufacture of building materials, improves the handling of steel coils and plate used in regional automotive manufacturing, adds shore power to reduce vehicle and vessel idling, provides new docking capacity to harbor assist vessels to increase the port’s responsiveness against climate change related weather events, and adds dedicated vessel berthing capacity for handling international containers and the marine transport of wind energy components manufactured at the Port of Monroe.

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The funds from the PIDP are essential to strengthen the resiliency of our renewable energy supply chains in America’s heartland.

We would appreciate your positive consideration of the Lake Erie Renewable Energy Resilience project.

Signature

Date

5/12/2022

Best Regards,

Gregory Adanin
President and CEO
Lake Erie Renewable Energy Resilience Project
FY2022 PIDP Grant Application
Port of Monroe

Appendix IV Engineering Information
## COST OPINION

<table>
<thead>
<tr>
<th>PROJECT DESCRIPTION</th>
<th>JOB NO.</th>
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<tbody>
<tr>
<td>Lake Erie Renewable Energy Resilience Project</td>
<td>214572960</td>
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</table>

<table>
<thead>
<tr>
<th>PREPARED BY</th>
<th>REVIEWED BY</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>YD</td>
<td>ML</td>
<td>06/11/22</td>
</tr>
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</table>

### SUMMARY

| CONSTRUCTION COST - COMPONENT #1: RIVERFRONT | $10,733,900 |
| CONSTRUCTION COST - COMPONENT #2: Terning Basin | $2,281,500 |
| CONSTRUCTION COST - COMPONENT #3: SMALL BOAT “MARITIME READINESS” SLIP | $633,900 |
| CONSTRUCTION COST - COMPONENT #4: SHORE POWER | $520,000 |

**TOTAL PROJECT COST** $14,168,700

---

**NOTE:** The engineer has no control over the cost of labor, materials, equipment or services furnished by others, or over the contractors method of determining prices, or over competitive bidding or market conditions. His opinions of probable project costs and construction costs provided herein are to be made on the basis of his experience and qualifications and represent his best judgment as an experienced and qualified engineer familiar with the construction industry. But, the engineer cannot and does not guarantee that proposals bids or actual project or construction costs will not vary from opinions of probable costs prepared by him.
## COST OPINION
### PROJECT NAME: Lake Erie Renewable Energy Resilience Project
### JOB NO. 2145729600

### COMPONENT #1: Riverfront

<table>
<thead>
<tr>
<th>ITEM CODE</th>
<th>PLAN QUANTITY</th>
<th>UNIT</th>
<th>DESCRIPTION</th>
<th>UNIT PRICE</th>
<th>ITEM PRICE</th>
</tr>
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<tbody>
<tr>
<td>1.1</td>
<td>1</td>
<td>L.S.</td>
<td>New Wharf</td>
<td>$5,000,000</td>
<td>$5,000,000</td>
</tr>
<tr>
<td>1.2</td>
<td>390</td>
<td>CYD</td>
<td>Remove &amp; Replace Surface of Existing Dock (12” Reinforced Concrete)</td>
<td>$556</td>
<td>$556,000</td>
</tr>
<tr>
<td>1.3</td>
<td>1</td>
<td>L.S.</td>
<td>Shore Rip-Rap Stabilization System</td>
<td>$1,490,810</td>
<td>$1,490,810</td>
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<tr>
<td>1.4</td>
<td>14</td>
<td>E.A.</td>
<td>Bollard Installation</td>
<td>$5,000</td>
<td>$5,000,000</td>
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<tr>
<td>1.5</td>
<td>1</td>
<td>L.S.</td>
<td>Crane Pad</td>
<td>$178,593</td>
<td>$178,593,000</td>
</tr>
<tr>
<td>1.6</td>
<td>1,605</td>
<td>CYD</td>
<td>Concrete Pavement (12” Reinforced Concrete)</td>
<td>$556</td>
<td>$556,000</td>
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<tr>
<td>1.7</td>
<td>1,350</td>
<td>L.F.</td>
<td>Storm Sower</td>
<td>$125</td>
<td>$166,800</td>
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<tr>
<td>1.8</td>
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<td>L.S.</td>
<td>Design and Construction Administration</td>
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<td>1.9</td>
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<td>L.S.</td>
<td>Contingency &amp; Project Management (10%)</td>
<td>$326,620</td>
<td>$326,620,000</td>
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<tr>
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<td>L.S.</td>
<td>Grant Administration (2% of project cost)</td>
<td>$166,124</td>
<td>$166,124,000</td>
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**TOTAL PROJECT COST - COMPONENT #1**

$10,733,300

### COMPONENT #2: Turning Basin

<table>
<thead>
<tr>
<th>ITEM CODE</th>
<th>PLAN QUANTITY</th>
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<th>DESCRIPTION</th>
<th>UNIT PRICE</th>
<th>ITEM PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>1,000</td>
<td>CYD</td>
<td>Complete Rehabilitation of Concrete Dock Cap</td>
<td>$550</td>
<td>$550,000</td>
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<tr>
<td>2.1A</td>
<td>1,000</td>
<td>CYD</td>
<td>Demolition of Concrete Dock Cap</td>
<td>$300</td>
<td>$300,000</td>
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<td>2.2</td>
<td>11</td>
<td>E.A.</td>
<td>Bollard Installation</td>
<td>$15,000</td>
<td>$165,000</td>
</tr>
<tr>
<td>2.3</td>
<td>1,700</td>
<td>CYD</td>
<td>Bring Dock up to Grads (6A Aggregate)</td>
<td>$70</td>
<td>$119,000</td>
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<tr>
<td>2.4</td>
<td>26</td>
<td>E.A.</td>
<td>Additional Fendering System (26 tares)</td>
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<td>$78,000,000</td>
</tr>
<tr>
<td>2.5</td>
<td>373</td>
<td>L.F.</td>
<td>Rehabilitate South Wall of Turning Basin &amp; Add Fendering System</td>
<td>$700</td>
<td>$260,000,000</td>
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<td>2.5A</td>
<td>1</td>
<td>L.S.</td>
<td>Fill Material (21AA) &amp; Cap (South Wall)</td>
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<td>2.5B</td>
<td>8</td>
<td>E.A.</td>
<td>Additional Fendering System (South Wall)</td>
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<td>$24,000,000</td>
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<tr>
<td>2.6C</td>
<td>4</td>
<td>E.A.</td>
<td>Bollard Installation (South Wall)</td>
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<td>$60,000,000</td>
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<td>2.6</td>
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<td>L.S.</td>
<td>Design and Construction Administration</td>
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<tr>
<td>2.7</td>
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<td>Contingency &amp; Project Management (10%)</td>
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<tr>
<td>2.8</td>
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<td>Grant Administration (2% of project cost)</td>
<td>$35,100</td>
<td>$35,100,000</td>
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</table>

**TOTAL PROJECT COST - COMPONENT #2**

$2,281,500

### COMPONENT #3: Small Boat "Maritime Readiness" Slip

<table>
<thead>
<tr>
<th>ITEM CODE</th>
<th>PLAN QUANTITY</th>
<th>UNIT</th>
<th>DESCRIPTION</th>
<th>UNIT PRICE</th>
<th>ITEM PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>1</td>
<td>L.S.</td>
<td>Shore Power (Underground)</td>
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<td>$70,000,000</td>
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<td>Sheet Pile Installation (Crests are Incidental)</td>
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<td>Demolition of Existing Dock System</td>
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<td>Dredge New Dock Area</td>
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<td>2.5</td>
<td>130</td>
<td>CYD</td>
<td>Concrete Cap &amp; Walk</td>
<td>$550</td>
<td>$71,500,000</td>
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<tr>
<td>2.6</td>
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<td>L.S.</td>
<td>Site Work &amp; Restoration</td>
<td>$25,000</td>
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<td>2.7</td>
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<td>2.9</td>
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<td>Grant Administration (2% of project cost)</td>
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</table>

**TOTAL PROJECT COST - COMPONENT #3**

$853,900

### COMPONENT #4: Shore Power

<table>
<thead>
<tr>
<th>ITEM CODE</th>
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<th>UNIT</th>
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</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>1</td>
<td>L.S.</td>
<td>Shore Power Existing Wharf (including Relocating Existing Overhead)</td>
<td>$300,000</td>
<td>$300,000,000</td>
</tr>
<tr>
<td>4.2</td>
<td>1</td>
<td>L.S.</td>
<td>Shore Power New Wharf</td>
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<td>$100,000,000</td>
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<tr>
<td>4.3</td>
<td>1</td>
<td>L.S.</td>
<td>Design and Construction Administration</td>
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<td>$72,000,000</td>
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<tr>
<td>4.4</td>
<td>1</td>
<td>L.S.</td>
<td>Contingency &amp; Project Management (10%)</td>
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<td>$40,000,000</td>
</tr>
<tr>
<td>4.5</td>
<td>1</td>
<td>L.S.</td>
<td>Grant Administration (2% of project cost)</td>
<td>$6,000</td>
<td>$6,000,000</td>
</tr>
</tbody>
</table>

**TOTAL PROJECT COST - COMPONENT #4**

$520,000

**TOTAL PROJECT COST**

$14,168,700
Port of Monroe - Overall Component Map
Lake Erie Renewable Energy Resilience Project
Port of Monroe
10 Port Ave.
Monroe, MI 48161
Components #1 and #4: Riverfront and Shore Power
Lake Erie Renewable Energy Resilience Project
Port of Monroe
10 Port Ave.
Monroe, MI 48161

Fig. 2
2.1 and 2.1A: Demolition and Complete Rehabilitation of Concrete Dock Cap
2.2: Bollard Installation
2.3: Bring Dock up to Grade (6A Aggregate)
2.4: Additional Fendering System (26 tires)

2.5: Rehabilitate South Wall of Turning Basin & Add Fendering System
2.5A: Fill Material (21AA) & Cap (South Wall)
2.5B: Additional Fendering System (South Wall)
2.5C: Bollard Installation (South Wall)
Component #3: Maritime Slip
Lake Erie Renewable Energy Resilience Project
Port of Monroe
10 Port Ave.
Monroe, MI 48161
Appendix V Environmental Justice and Racial Equity Impact Analysis
Lake Erie Renewable Energy Resiliency Project

Environmental Justice and Racial Equity Impact Analysis

This appendix provides more detailed information on the following aspects of racial equity impact analysis and equity-focused community engagement, including:

1. An overview of the proposed project;
2. Identification of Environmental Justice Census Tracts within / near the project area;
3. Identification of specific project elements that support or impact the Environmental Justice (EJ) populations;
4. Community Outreach and Public Engagement; and,
5. Summarized findings of this Analysis

Equitable Project Analysis

The Port of Monroe (POM) has prepared the following analysis of the Lake Erie Renewable Energy Resiliency Project (Project) to evaluate equitable distribution of project benefits and to identify any inequities that can be mitigated with the Project.

This analysis presents a review of the socioeconomic characteristics in the study area for the Port of Monroe, Monroe, Monroe County, Michigan.

Data from the U.S. Census Bureau 2014 - 2018 American Community Survey (ACS) 5-year estimates has been utilized for the analysis of the study area. Please see the ACS website for more information, data limitations, and an explanation of the methodology used to obtain the data (https://www.census.gov/acs/www/).

This analysis is intended to be used as a first look study into the socioeconomic characteristics that exist within the study area. If, at a later time specific projects and project locations are identified, a more in-depth analysis of the socioeconomic characteristics may be warranted.

The information and results are intended to assist the POM in making informed and prudent transportation decisions in the Project area, especially with regard to the requirements of Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (signed February 11, 1994). Executive Order 12898 states:

“...each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations...”

This report outlines 2014 - 2018 ACS 5-year estimates (ACS) for the project area using tables and maps from multiple US and State Agencies include EPA, CDC and EGLE.
Lake Erie Renewable Energy Resiliency Project

Statistics are provided on minority, low-income, elderly, and disabled populations for the census tracts and block groups near the Project area, Monroe County, Michigan and the United States.

This analysis focuses on identifying any past inequities as well as addressing Climate Change and Environmental Justice for the planning, design and construction/implementation of the Project. The Project sponsors have used environmental justice tools such as EJSSCREEN, MIEJScreen and other mapping programs and reports to identify Environmental Justice (EJ) populations adjacent to the Project and to evaluate any disproportionate effects on such populations and neighborhoods.

The Project team also aligned the Project with MI Healthy Climate Plan which provides science-based benchmark for reducing greenhouse gas emissions to avoid the most devastating and costly impacts of climate change. The planning and selection of the Project components align directly with these MI Healthy Action Plans. The analysis looks to identify any inequities in the community that extends to climate impacts and pollution risks.

1. Project Overview

The Port of Monroe is working toward completing the Lake Erie Renewable Energy Resiliency Project.

Figure 1: Overall component map of Project.
Lake Erie Renewable Energy Resiliency Project

The Project will:

- Rehabilitate the turning basin dock to include removing and replacing the current 1928 concrete cap, improving grade and installing bollards and fendering. This area would then become the primary area for loading and discharging liquid and dry bulk material.
- Rehabilitate the small boat slip to allow berthing of public security and emergency response vessels as well as a dedicated area for harbor crafts.
- Build a new riverfront wharf and install shoreline stabilization to reduce climate change induced storm and ice density changes.
- Provide shore power throughout the port to minimize equipment and vessel idling.

Benefits of the proposed Project are anticipated to:

- Increase safety
- Reduce shoreline erosion
- Increase capacity
- Prevent multiple handling
- Provide redundancy in ability to handle vessels at more than one berth
- Ensure continued support for union jobs for vessel, shoreside and manufacturing
- Enhance supply chain options for bulk, wind energy and project cargo with direct discharge into the U.S. heartland
- Reduce reliance on trucking for movement of bulk and steel goods.

Planning efforts has determined that this Project will allow for a more energy efficient use of cargo handling equipment and operation of vessels.

2. Environmental Justice Analysis

Equity around the Project Area

Using the Environmental Justice Guidance for Michigan Transportation Plans, Programs and Activities as a basis and then enhancing the analysis with additional resources, the Planning Team reviewed Equity in the distribution of benefits and the impacts on the neighboring census blocks to ensure that federal funds programmed in for this Project avoids disproportionate negative impacts or denial of benefits to disadvantaged populations.

This finding is made on the Project as a whole, and with the understanding that individual improvement elements may result in negative impacts to disadvantaged populations given additional review. If such negative impacts are identified in further study, the National Environmental Policy Act (NEPA) process can identify methods or options to avoid and / or mitigate any negative environmental impacts identified.

The Project Planning Team’s Equity methodology is to review the project against the following matrix:
In order to evaluate the overall result of the Project through an environmental justice framework, the project was evaluated individually against the following parameters used by other planning organizations within Michigan.

Among the broad range of investment categories and transportation improvements, four specific categories of projects are automatically considered equitable based on the following types:

- Preservation & Maintenance projects that are prioritized based on empirical data that maximizes the lifespan of the transportation system as a whole.
- Safety improvements that are prioritized by empirical data that maximizes the reduction of risk factors and potential for injury or fatality on the transportation system as a whole, and at locations with a high frequency or severity of crashes.
- Accessibility improvements that are necessary for regulatory compliance and not in locations based on open discretion.
- Public Transportation formula funding utilized to sustain operations and asset management on a systemwide basis.

If the project does not meet the criteria for automatically being deemed equitable it is to be further reviewed. The project is then evaluated on its individual merits according to the following equity considerations:

- Project directly benefits disadvantaged populations
- Project indirectly benefits disadvantaged populations
Lake Erie Renewable Energy Resiliency Project

- Project benefits and/or impacts are proportionately distributed across the community or region.
- Project benefits are limited to non-disadvantaged populations
- Project results in disproportionate negative impacts to disadvantaged populations.

The following map represents the Project area Census Tract 26115831800 in Monroe County where the Port of Monroe is located.

![Map of Project area Census tract](https://egele.maps.arcgis.com/apps/webappviewer/index.html?id=b10011f137945138a52a35ec6d8676f)

This area has a low-income population percentage of 97. Percent of population living below two times the federal poverty level. This tract has 1,436 people over a 2.6 square mile area for a population density of 560 people/square mile. Median household income is $24,757 with an unemployment rate of 12%. (Source: https://egele.maps.arcgis.com/apps/webappviewer/index.html?id=b10011f137945138a52a35ec6d8676f)

The census data for Census Tract 261158318001 (Block Group) shows the presence of a disadvantaged group as indicated by 48.3% of the population in poverty, percentage of homeowners severely burdened of 28.57%, county wide unemployment of 8.7%, and insufficient public transportation. Thus, it will be important to ensure that these underserved populations are not harmed by the proposed Project. If it is determined through the analysis that the disadvantaged populations are impacted disproportionately by the Project benefits being limited to non-disadvantaged populations or Project results in disproportionate negative impacts to disadvantaged populations, mitigation will be required.

**Methodology used in the POM Project Analysis**

The Project was analyzed for the Affected Environment using multiple mapping websites and the *EJSCREEN*. These tools are very helpful in understanding the demographics and community elements.
Lake Erie Renewable Energy Resiliency Project

The two Environmental Justice Mapping Tools reviewed for this analysis include:

- EISCREEN
- Neighborhoods at Risk

Summary of Mapping Tools:

EISCREEN – EPA

EISCREEN provides the same data as the other tools with different downloadable standard reports based upon how the user describes the investment using the drawing tool on the map. For example, the Project location can be drawn on the EISCREEN mapping tool and a buffer around the location can be added. For this report, the location of the Project was added to the map. The standard reports were run and focused on a 1.5 mile distance from the Project area.

EISCREEN uses maps and reports to present three kinds of information: Environmental indicators, demographic indicators and EJ Indexes. An EJ Index summarizes how an environmental indicator and demographics come together in the same location.

An EISCREEN map can display one indicator at a time. An EISCREEN standard report which is attached to this narrative, presents all of the indicators in a single, printable report that covers any area you have selected. To understand EISCREEN's reports and maps, it is helpful to learn more about the EJ Indexes, environmental indicators, demographic indicators as well as how they are presented in the standard report.

Purposes and Uses of EISCREEN

EISCREEN allows users to access high-resolution environmental and demographic information for locations in the United States, and compare their selected locations to the rest of the state, the applicable EPA region, or the nation. The tool may help users identify areas with:

- Minority and/or low-income populations
- Potential environmental quality issues
- A combination of environmental and demographic indicators that is greater than usual
- Other factors that may be of interest

The EJ index is a combination of environmental and demographic information. There are eleven EJ Indexes in EISCREEN reflecting the 11 environmental indicators. The 11 EJ Index names are:

1. National Scale Air Toxics Assessment Air Toxics Cancer Risk
2. National Scale Air Toxics Assessment Respiratory Hazard Index
3. National Scale Air Toxics Assessment Diesel PM (DPM)
4. Particulate Matter (PM2.5)
5. Ozone
6. Lead Paint Indicator
Lake Erie Renewable Energy Resiliency Project

7. Traffic Proximity and Volume
8. Proximity to Risk Management Plan Sites
9. Proximity to Treatment Storage and Disposal Facilities
10. Proximity to National Priorities List Sites
11. Wastewater Discharge Indicator

To calculate a single EJ Index, EJSCREEN uses a formula to combine a single environmental factor with the demographic indicator. It considers how much the local demographics are above the national average. It does this by looking at the difference between the demographic composition of the block group, as measured by the Demographic Index, and the national average (which is approximately 35%). It also considers the population size of the block group, although most block groups are similar in population size.

EJSCREEN calculates the EJ Index by multiplying together three items:

EJ Index =

(The Environmental Indicator)

X (Demographic Index for Block Group – Demographic Index for US)

X (Population count for Block Group)

Demographics in the EJ Index

The demographic portions of the EJ Index can be thought of as the additional number of susceptible individuals in the block group, beyond what you would expect for a block group with this size total population. The terms "susceptible" or "potentially susceptible individuals" are used informally in these examples, as a way to think of the Demographic Index times the population count in a block group. This is essentially the average of the count of minorities and count of low-income individuals. It is easiest to think of the average of these counts as “the susceptible individuals” in these examples.

The number of potentially susceptible individuals (Demographic Index times population count) of course is typically less than the actual number who are minority, low-income or both. The demographic breakdown is not reported by block group –the ACS does not provide that level of resolution on the overlaps.

Overview of Demographic Indicators in EJSCREEN

EJSCREEN uses demographic factors as very general indicators of a community’s potential susceptibility to the types of environmental factors included in this screening tool, as explained further in the EJSCREEN Technical Documentation. EJSCREEN has been designed in the context of EPA’s EJ policies, including EPA’s Final Guidance on Considering Environmental Justice During
the Development of an Action (U.S. EPA, 2010). That guidance document explained EPA’s focus on demographics as an indicator of potential susceptibility to environmental pollution.

There are six demographic indicators:

**Percent Low-Income:**

The percent of a block group's population in households where the household income is less than or equal to twice the federal "poverty level."

**Percent People of Color:**

The percent of individuals in a block group who list their racial status as a race other than white alone and/or list their ethnicity as Hispanic or Latino. That is, all people other than non-Hispanic white-alone individuals. The word "alone" in this case indicates that the person is of a single race, not multiracial.

**Less than high school education:**

Percent of people age 25 or older in a block group whose education is short of a high school diploma.

**Linguistic isolation:**

Percent of people in a block group living in linguistically isolated households. A household in which all members age 14 years and over speak a non-English language and also speak English less than "very well" (have difficulty with English) is linguistically isolated.

**Individuals under age 5:**

Percent of people in a block group under the age of 5.

**Individuals over age 64:**

Percent of people in a block group over the age of 64.

**EISCREEN** includes an index that is based on the above demographic indicators:

A Demographic Index is based on the average of two demographic indicators; Percent Low-Income and Percent Minority.

**Excess Risk**

The EJ Index uses the concept of "excess risk" by looking at how far above the national average the block group's demographics are. For example, assume a block group with 1000 people in it. In that block group, one would expect 350 potentially susceptible individuals (1000 people here x US average of 35%). However, if the Demographic Index for that block group is 75%, well above the US average, then there is the equivalent of 750 potentially susceptible people in that block group, or 400 more than expected for a block group with a population of 1000.
Lake Erie Renewable Energy Resiliency Project

This formula for the EJ Index is useful because for each environmental factor it finds the block groups that contribute the most toward the national disparity in that environmental factor. It can highlight which locations are driving the overall net disparity. By "disparity" in this case we mean the difference between the environmental indicator’s average value among certain demographic groups and the average in the rest of the US population.

Minority and low-income individuals live in older housing more often than the rest of the US population, for example. The EJ Index for lead paint (pre-1960 housing) tells us how much each block group contributes toward this "excess population risk" or "excess number" of people in older housing, for potentially susceptible individuals. "Excess" here simply means the number of potentially susceptible individuals in older housing is above what it would be if they were in older housing at the same rate as the rest of the U.S. population.

It should be noted that the EJ Index raw value itself is not reported in *EISCREEN* reports— it is reported in percentile terms, to make the results easier to interpret. If one is calculating the actual raw values using the formula, it is clear that the EJ Index value can be a positive or negative number.

A positive number occurs where the local Demographic Index is above the US average, and this means the location adds to any excess in environmental indicator values among the specified populations (minority and low-income) nationwide.

A negative value occurs where the local Demographic Index is below the US average, and it means the location offsets other locations, reducing any excess in nationwide average environmental indicator values among minority and low-income populations relative to others.

Most *EISCREEN* users will not work directly with EJ Index raw values, however, and positive raw values for an EJ Index will be presented as higher percentiles and negative raw values will appear as lower percentiles.

How to Interpret a Standard Report in *EISCREEN*

Block Groups

One key output from *EISCREEN* is a standard printed report that describes a selected location. Sometimes the report might focus on a single Census "block group." A block group is an area defined by the Census Bureau that usually has in the range of 600-3,000 people living in it. The US is divided into more than 200,000 block groups.

Buffers

More typically, though, an *EISCREEN* report will cover a "buffer" area, an area on the map that includes everyone who lives within a certain distance of a point, line or polygon. A point might be a factory seeking an emissions permit, for example, and the report could focus on the demographics and environmental conditions within approximately 1 mile of that factory.
Lake Erie Renewable Energy Resiliency Project

In *EISCREEN*, buffers can be drawn up to 10 miles around a point, line or polygon. If you have selected a geographic point, the tool will apply a buffer around that point. The buffer ring will aggregate appropriate portions of the intersecting block groups, weighted by population, to create a representative set of data for the entire ring area, honoring variation and dispersion of the population in the block groups within it. For each indicator, the result is a population-weighted average, which equals the block group indicator values averaged over all residents who are estimated to be inside the buffer.

*EISCREEN*’s report shows:

All 11 of the EJ Indexes

All 11 of the environmental indicators

**The Demographic Index**

All six of the demographic indicators

The first page of *EISCREEN*’s report shows the state, regional and national EJ Indexes for the selected area in tabular form and in a bar chart. "Percentiles" are an important part of *EISCREEN*. Every indicator in *EISCREEN* is put into perspective by showing its associated percentiles.

The second page shows a map of the selected area and the third page shows:

- 11 environmental indicators
- Demographic Index
- Six demographic indicators

The report includes the state, regional and national percentiles for each of the environmental and demographic indicators and for the demographic index. The state, regional and national averages for each of the environmental indicators and demographic indicators are also included as a reference point.

**11 Environmental Indicators**

As can be seen in the *EIScreen* report below, the area in a 1.5 mile radius around the outermost portion of Project when compared to the 11 EJ Environmental Indexes exceeds all USA Percentiles, and exceeds the State Percentile in all categories except Wastewater Discharge Indicator
Lake Erie Renewable Energy Resiliency Project

Demographic Index

<table>
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<tr>
<th>Selected Variables</th>
<th>Value</th>
<th>State Avg.</th>
<th>%ile in State</th>
<th>EPA Region Avg.</th>
<th>%ile in EPA Region</th>
<th>USA Avg.</th>
<th>%ile in USA</th>
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</thead>
<tbody>
<tr>
<td>Demographic Index</td>
<td>64%</td>
<td>28%</td>
<td>90</td>
<td>28%</td>
<td>91</td>
<td>36%</td>
<td>85</td>
</tr>
<tr>
<td>People of Color</td>
<td>50%</td>
<td>25%</td>
<td>83</td>
<td>26%</td>
<td>82</td>
<td>40%</td>
<td>65</td>
</tr>
<tr>
<td>Low Income</td>
<td>78%</td>
<td>32%</td>
<td>96</td>
<td>29%</td>
<td>97</td>
<td>31%</td>
<td>97</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>11%</td>
<td>6%</td>
<td>86</td>
<td>5%</td>
<td>88</td>
<td>5%</td>
<td>88</td>
</tr>
<tr>
<td>Linguistically Isolated</td>
<td>0%</td>
<td>2%</td>
<td>65</td>
<td>2%</td>
<td>59</td>
<td>5%</td>
<td>45</td>
</tr>
<tr>
<td>Less Than High School Education</td>
<td>44%</td>
<td>9%</td>
<td>99</td>
<td>10%</td>
<td>98</td>
<td>12%</td>
<td>97</td>
</tr>
<tr>
<td>Under Age 5</td>
<td>6%</td>
<td>6%</td>
<td>57</td>
<td>6%</td>
<td>52</td>
<td>6%</td>
<td>51</td>
</tr>
<tr>
<td>Over Age 64</td>
<td>10%</td>
<td>17%</td>
<td>19</td>
<td>16%</td>
<td>22</td>
<td>16%</td>
<td>26</td>
</tr>
</tbody>
</table>

The Demographic Index of 64% is in the 90th percentile of the State of Michigan and in the 91th percentile in the EPA Region and the 85th percentile of the US. For low income, this area of 78% is in the 96th percentile of the State of Michigan and in the 97th percentile in the EPA Region and the 97th percentile of the US.

People of Color Index at 50% is in the 83rd percentile for the State, 82nd percentile for the EPA Region and 65th percentile for the US. (This means that 50% of the area’s population is minority, and that is an equal or higher percentage than where 83% of the Michigan population lives)

Based upon these observations, it will be important to consider any elements of the Project that will have an undue impact on the area’s minority or low-income population. Improving port infrastructure will increase operational efficiencies which will directly improve air and noise quality which will benefit everyone in the area. Increasing the cargo volumes through the POM should create additional jobs in the area. Many of these new jobs could provide opportunities for the neighboring community which has a higher-than-average population with less than a high school education.
Lake Erie Renewable Energy Resiliency Project

EJScreen Report (Version 2.0)
Blockgroup: 261158318001, MICHIGAN, EPA Region 5
Approximate Population: 826
Input Area (sq. miles): 2.93

<table>
<thead>
<tr>
<th>Selected Variables</th>
<th>State Percentile</th>
<th>EPA Region Percentile</th>
<th>USA Percentile</th>
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</thead>
<tbody>
<tr>
<td>Environmental Justice Indexes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EJ Index for Particulate Matter 2.5</td>
<td>87</td>
<td>85</td>
<td>74</td>
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<tr>
<td>EJ Index for Ozone</td>
<td>88</td>
<td>85</td>
<td>75</td>
</tr>
<tr>
<td>EJ Index for 2017 Diesel Particulate Matter</td>
<td>88</td>
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<td>75</td>
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<td>EJ Index for 2017 Air Toxics Cancer Risk</td>
<td>85</td>
<td>84</td>
<td>69</td>
</tr>
<tr>
<td>EJ Index for 2017 Air Toxics Respiratory HI</td>
<td>84</td>
<td>82</td>
<td>67</td>
</tr>
<tr>
<td>EJ Index for Traffic Proximity</td>
<td>77</td>
<td>80</td>
<td>70</td>
</tr>
<tr>
<td>EJ Index for Lead Paint</td>
<td>92</td>
<td>92</td>
<td>91</td>
</tr>
<tr>
<td>EJ Index for Superfund Proximity</td>
<td>95</td>
<td>91</td>
<td>86</td>
</tr>
<tr>
<td>EJ Index for RMP Facility Proximity</td>
<td>88</td>
<td>85</td>
<td>79</td>
</tr>
<tr>
<td>EJ Index for Hazardous Waste Proximity</td>
<td>82</td>
<td>85</td>
<td>79</td>
</tr>
<tr>
<td>EJ Index for Underground Storage Tanks</td>
<td>85</td>
<td>85</td>
<td>79</td>
</tr>
<tr>
<td>EJ Index for Wastewater Discharge</td>
<td>89</td>
<td>85</td>
<td>78</td>
</tr>
</tbody>
</table>

Figure 4: EJScreen Report

**Neighborhoods at Risk Tool**

*Neighborhoods at Risk* is a tool designed to meet community planning needs to protect people and property from the impacts of climate change. A free, web-based tool, *Neighborhoods at Risk* generates customized, interactive maps and reports that describe characteristics of potentially vulnerable neighborhoods (by census tract). Additionally, *Neighborhoods at Risk* provides community-level climate projections for temperature and precipitation.
Lake Erie Renewable Energy Resiliency Project

Figure 5: Tract 8318, Monroe County, MI

The three characteristics and filters included under “Climate Exposure” in Neighborhoods at Risk are indicators of land area that may experience more significant impacts from climate change. These variables (floodplains, impervious surface, and lack of tree canopy) represent characteristics of our physical environment that make us more or less vulnerable to climate change by affecting the likelihood of extreme heat and flood events.

The Analysis below is divided into People and Climate Exposure:

Monroe is expected to experience a 159% increase in extremely hot days and a 16% increase in days with heavy precipitation within 25 years.

Figure 6: Heat projections
Lake Erie Renewable Energy Resiliency Project

Figure 7: Precipitation projections

Neighborhoods at Risk can be used to prioritize capital improvements, conduct vulnerability assessments, inform land use and policy decisions, and support FEMA Hazard Mitigation Plans and Carbon Disclosure Project reporting.

Neighborhoods at Risk reports are based on data from the U.S. Census Bureau, FEMA, Multi-Resolution Land Characteristics Consortium, First Street Foundation, and the Northeast Regional Climate Center’s Applied Climate Information System.

The following is a summary of the comparable data found using the Neighborhoods at Risk Tool. This tool appears to provide the best downloadable reports for each of the project areas.

“People” in Neighborhoods at Risk are indicators of populations that are potentially more vulnerable to climate risk and climate-related disasters. Not all people who fit these criteria are more vulnerable, but research shows that these populations are, on average, more likely to experience difficulty during all phases of climate-related disasters including:

- Mitigation: reducing the potential risk
- Preparedness: getting plans and resources ready
- Response: protecting and rescuing
- Recovery: rebuilding

The downloadable Neighborhoods at Risk report provides detailed information and references documenting how each variable is associated with potentially higher risk to climate change.

The four characteristics and filters included under “Climate Exposure” in Neighborhoods at Risk are indicators of land area that may experience more significant impacts from climate change. These variables (hurricane flood zones, floodplains, impervious surface, and lack of tree canopy) represent characteristics of our physical environment that make us more or less vulnerable to climate change by affecting the likelihood of extreme heat and flood events.
Lake Erie Renewable Energy Resiliency Project

Figure 8: Neighborhoods at Risk

Why is this measure important?

People

People of color and Hispanics

- Race and ethnicity are strongly correlated with disparities in health, exposure to environmental pollution, and vulnerability to natural hazards.
- Research consistently has found race-based environmental inequities, including the tendency for minority populations to live closer to noxious facilities and Superfund sites, and to be exposed to pollution at greater rates than predominantly white populations.
- Many health outcomes are closely related to the local environment. Minority communities often have less access to parks and nutritious food, and are more likely to live in substandard housing.
- Minorities tend to be particularly vulnerable to disasters and extreme heat events. This is due to language skills, housing patterns, quality of housing, community isolation, and cultural barriers.
- Blacks and Hispanics, two segments of the population that are currently experiencing poorer health outcomes, are an increasing percentage of the US population.
- Research has identified measurable disparities in health outcomes between various minority and ethnic communities.
Lake Erie Renewable Energy Resiliency Project

- Across races, the rates of preventable hospitalizations are highest among black and Hispanic populations. Preventable hospital visits often reflect inadequate access to primary care. These types of hospital visits are also costly and inefficient for the health care system.
- Relative to other ethnicities and races, Hispanics and blacks are less likely to have health insurance, but rates of uninsured are dropping for both groups.
- Compared to other races, blacks have higher rates of infant mortality, homicide, heart disease, stroke, and heat-related deaths.
- Hispanics have higher rates of diabetes and asthma.
- American Indians have a distinct pattern of health effects different from blacks and Hispanics. Native populations are less likely to have electricity than the general population. They have high rates of infant mortality, suicide and homicide, and nearly twice the rate of motor vehicle deaths than the U.S. average.

Households with no car

Access to a car is linked with higher wages and more financial stability, and can help families relocate or evacuate in the event of emergencies.

- People who own cars are more likely to be employed, work longer hours, and earn more than those who do not.
- Access to a car has measurable benefits for those receiving public assistance. Welfare recipients with access to a car were more likely to work more hours and get higher-paying jobs, and had a greater chance of leaving welfare.
- During emergencies, natural disasters, and extreme weather events, people who do not have a car are less likely to evacuate or have access to emergency response centers.
- During heat waves, people without a car are less able to go to community cooling centers or cooler areas.
- Pedestrian fatalities are more than twice as likely in poor urban neighborhoods than in wealthier parts of cities.

People who don’t speak English well

- Many aspects of life in the US assume basic fluency in English. Thus, people with limited language skills are at risk for inadequate access to health care, social services, or emergency services.
- A person’s ability to take action during an emergency is compromised by language and cultural barriers.
- Poor English skills can make it harder to follow directions or interact with agencies.
- Lack of language skills can also instill lack of trust for government agencies.
- In many industries, poor English skills can make it harder for people to get higher wage jobs.
Lake Erie Renewable Energy Resiliency Project

- Language barriers make it harder to obtain medical or social services; and make it more difficult to interact with caregivers.
- Limited English skills may result in isolation from other segments of the U.S. population, and social isolation is a health risk.
- However, some minority communities can be very tightly-knit and not isolated, so this risk factor cannot be generalized across all populations.

Families in poverty

Families in poverty may lack the resources to meet their basic needs. Their challenges cross the spectrum of food, housing, healthcare, education, vulnerability to natural disasters, and emotional stress.

- To save money, families with low incomes often have to make lifestyle compromises such as unhealthy foods, less food, substandard housing, or delayed medical care.
- Lack of financial resources makes families in poverty more vulnerable to natural disasters. This is due to inadequate housing, social exclusion, and an inability to re-locate or evacuate.
- Inadequate shelter exposes occupants to increased risk from storms, floods, fire, and temperature extremes. Households with low incomes are more likely to have unhealthy housing conditions such as leaks, mold, or rodents.
- The expense of running fans, air conditioners, and heaters makes low-income people hesitant to mitigate the temperature of their living spaces. Furthermore, those in high-crime areas may not want to open their windows.
- Families in poverty are disproportionately affected by higher food prices, which are expected to rise in response to climate change.
- Children in poor families, on average, receive fewer years of education compared to children in wealthier families.
- Low-income residents are less likely to have adequate property insurance, so they may bear an even greater burden from property damage due to natural hazards.
- Living in poverty can lead to a lack of personal control over potentially hazardous situations such as increased air pollution or flooding. Impoverished families may be less likely to take proactive measures to prevent harm.

People with Disabilities

Disabled people are subject to health complications that make environmental risks more consequential.

- Disabled people are less likely to have health insurance, compared to the non-disabled population.
- Being confined to a bed raises heat mortality.
Lake Erie Renewable Energy Resiliency Project

- Extreme weather events or natural disasters may result in limited access to medical care. This is particularly consequential for those who already have compromised health.

People younger than 5 or over 65 years

Young children and older adults both are vulnerable segments of the population. Understanding the age profile of a community can help users determine the types of services likely to be needed.

Older adults also are at increased risk of compromised health related to environmental hazards and climate change.

- Age is the single greatest risk factor related to illness or death from extreme heat.
- The elderly are more likely to have pre-existing medical conditions or compromised mobility, which reduces their ability to respond to natural disasters.
- The likelihood of chronic disease increases with age.
- Older adults are more susceptible to air pollution such as ground level ozone, particulate matter, or dust. Increased dust is associated with drought, wildfires, and high wind events.

Educational Attainment- No High School Degree

High school completion is used as a proxy for overall socioeconomic circumstances. Lack of education is strongly correlated with poverty and poor health.

- People without a high school degree are more than twice as likely to live in inadequate housing compared to those with some college education.
- A study in California (Social Vulnerability to Climate Change in California, 2012) found the lack of a high school degree was the factor most closely related to social vulnerability to climate change.
- Thirty-eight percent of Americans without a high school degree do not have health insurance, compared to 10 percent with a college degree.
- The rate of diabetes is much greater for those without a high school degree. Incidence of this disease is more than double the rate of those who attended education beyond high school.
- Binge drinking is most severe among those without a high school degree. This demographic group had the highest risk of binge drinking across all measured categories (such as income, race, ethnicity, or disability status according to the CDC Health Disparities and Inequalities Report, 2011.

Climate Exposure

These three categories for the project area represent characteristics of the physical environment that make the population within the area more or less vulnerable to climate change by affecting the likelihood of extreme heat and flood events.
Lake Erie Renewable Energy Resiliency Project

- Area lacking tree canopy
- Area of impervious surface
- Area in 500-yr floodplain

3. Specific Project Elements that support our Environmental Justice (EJ) populations

Environmental injustice and climate change are about the fact that in many communities it is far easier to get fast-food than fresh-food and this only stands to get worse as drought and flooding impact the viability and affordability of nutritious food. This can be the case for EJ populations near the Port of Monroe where the nearest fresh fruits are over a 2 mile walk from the Port area. Although this project will not provide any direct transportation options to improve this vulnerability, it is important that the POM is aware of the characteristics of the area and make sure that their development plans improve the Quality of Life of their citizens versus disadvantages the underserved portion of the population even further.

4. Community Outreach and Public Engagement

Community Outreach

The POM began working with and providing ongoing outreach to agencies, businesses, and other community members in the early planning phases of the Project.

The POM will continue to engage interested parties through the following:

- Presentations at local community group meetings
- Meetings with interested parties and stakeholders
- Publicizing updates at key Project milestones
- Media updates via radio and print for Project events

The POM will solicit feedback on the Project through the engagement types outlined above and will meaningfully engage the community through a participation process that is inclusive, effective, and accessible to all. The POM plans to continue to take community and stakeholder feedback into consideration as the Project advances.

5. Conclusions and Next Steps

As can be seen from the results of the various EJ mapping tools and data collected, it is important to understand the Project and the potential impacts it may have on specific sections of the population.

Using multiple lenses through the different Environmental Justice data tools, helps refine the characteristics of the surrounding area. Fine tuning the scope of the analysis from the County level, the Census Tract to the Census Block and finally a 1.5-mile radius around the project area, helps to inform planners in the developing their public outreach efforts. Using the characteristics of the populations near the Project and evaluating Project elements that could
Lake Erie Renewable Energy Resiliency Project

Impact these underserved populations will help planners ensure negative impacts are identified and accounted for through mitigation efforts.

Once those impacts are identified, then specific outreach can be designed to inform the affected populations and develop mitigation options as appropriate.

As noted above Public Engagement and Outreach is a continuous process that will continue throughout the planning, design and implementation of this project. The Public Engagement will continue to inform the planning design, implementation, procurement and/or construction and will enable the project to address any past inequities identified relating to access and barriers to opportunity, and climate change.

Although, current analysis indicates that the proposed Project will improve air, noise, and water quality for adjacent EJ neighborhoods, at this point of the team’s analysis it is believed that the same EJ population will not be disproportionately negatively impacted by the Project. Analysis and monitoring will continue as the POM and its partners move through the phases of the Project. All mitigation measures identified in the design and environmental review process will be implemented and monitored post-construction for compliance and community enhancement.

The Port’s program to advance racial equity and reduce barriers to opportunity include:

1. The Project will help the port attract new business, which will increase manufacturing jobs at Ventower Industries and for the Port’s terminal operator, DRM Terminal Services, which is a minority-owned business. DRM’s terminal workforce are part of the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) union.

2. The Port will review the scope of work for the Project and leverage its existing relationship with the Michigan Economic Development Corporation (MEDC) to identify Disadvantaged Business Enterprises (DBE) in the State of Michigan and determine which businesses have the capacity to participate in the federally funded contracted work at the Port.

Terminal operations at the Port are provided by DRM Maintenance and Management Company of Monroe, MI. The ownership of this local Monroe, Michigan company is of Native American heritage and the company is a certified Michigan Minority Business Enterprise. DRM is a unionized company with a terminal workforce that is part of the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) union. DRM encourages fair choice for all employees to join the union.

Attachments:

EJSCREEN Report (Version 2.0) Blockgroup 261158318001, Michigan, EPA Region 5

Neighborhoods at Risk Tract 8318 Monroe County, MI
### Environmental Justice Indexes

<table>
<thead>
<tr>
<th>Selected Variables</th>
<th>State Percentile</th>
<th>EPA Region Percentile</th>
<th>USA Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>EJ Index for Particulate Matter 2.5</td>
<td>87</td>
<td>86</td>
<td>74</td>
</tr>
<tr>
<td>EJ Index for Ozone</td>
<td>88</td>
<td>87</td>
<td>75</td>
</tr>
<tr>
<td>EJ Index for 2017 Diesel Particulate Matter*</td>
<td>88</td>
<td>85</td>
<td>75</td>
</tr>
<tr>
<td>EJ Index for 2017 Air Toxics Cancer Risk*</td>
<td>85</td>
<td>84</td>
<td>69</td>
</tr>
<tr>
<td>EJ Index for 2017 Air Toxics Respiratory HI*</td>
<td>84</td>
<td>82</td>
<td>67</td>
</tr>
<tr>
<td>EJ Index for Traffic Proximity</td>
<td>77</td>
<td>80</td>
<td>70</td>
</tr>
<tr>
<td>EJ Index for Lead Paint</td>
<td>92</td>
<td>92</td>
<td>91</td>
</tr>
<tr>
<td>EJ Index for Superfund Proximity</td>
<td>81</td>
<td>82</td>
<td>71</td>
</tr>
<tr>
<td>EJ Index for RMP Facility Proximity</td>
<td>95</td>
<td>91</td>
<td>86</td>
</tr>
<tr>
<td>EJ Index for Hazardous Waste Proximity</td>
<td>88</td>
<td>85</td>
<td>79</td>
</tr>
<tr>
<td>EJ Index for Underground Storage Tanks</td>
<td>82</td>
<td>85</td>
<td>79</td>
</tr>
<tr>
<td>EJ Index for Wastewater Discharge</td>
<td>89</td>
<td>85</td>
<td>78</td>
</tr>
</tbody>
</table>

This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

May 01, 2022
EJScreen Report (Version 2.0)
Blockgroup: 261158318001, MICHIGAN, EPA Region 5
Approximate Population: 826
Input Area (sq. miles): 2.93

Sites reporting to EPA

<table>
<thead>
<tr>
<th>Site Type</th>
<th>Count</th>
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</thead>
<tbody>
<tr>
<td>Superfund NPL</td>
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</tr>
<tr>
<td>Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)</td>
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</tr>
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May 01, 2022
### Selected Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>State Avg.</th>
<th>%ile in State</th>
<th>EPA Region Avg.</th>
<th>%ile in EPA Region</th>
<th>USA Avg.</th>
<th>%ile in USA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pollution and Sources</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Particulate Matter 2.5 (µg/m³)</td>
<td>9.03</td>
<td>8.75</td>
<td>58</td>
<td>8.96</td>
<td>49</td>
<td>8.74</td>
<td>62</td>
</tr>
<tr>
<td>Ozone (ppb)</td>
<td>46.8</td>
<td>43.8</td>
<td>99</td>
<td>43.5</td>
<td>96</td>
<td>42.6</td>
<td>83</td>
</tr>
<tr>
<td>2017 Diesel Particulate Matter* (µg/m³)</td>
<td>0.29</td>
<td>0.209</td>
<td>73</td>
<td>0.279</td>
<td>60-70th</td>
<td>0.285</td>
<td>60-70th</td>
</tr>
<tr>
<td>2017 Air Toxics Cancer Risk* (lifetime risk per million)</td>
<td>20</td>
<td>23</td>
<td>70</td>
<td>24</td>
<td>60-70th</td>
<td>29</td>
<td>&lt;50th</td>
</tr>
<tr>
<td>2017 Air Toxics Respiratory HI*</td>
<td>0.2</td>
<td>0.25</td>
<td>50</td>
<td>0.3</td>
<td>&lt;50th</td>
<td>0.36</td>
<td>&lt;50th</td>
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<tr>
<td>Traffic Proximity (daily traffic count/distance to road)</td>
<td>150</td>
<td>830</td>
<td>31</td>
<td>610</td>
<td>40</td>
<td>710</td>
<td>42</td>
</tr>
<tr>
<td>Lead Paint (% Pre-1960 Housing)</td>
<td>0.87</td>
<td>0.37</td>
<td>93</td>
<td>0.37</td>
<td>93</td>
<td>0.28</td>
<td>96</td>
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<tr>
<td>Superfund Proximity (site count/km distance)</td>
<td>0.037</td>
<td>0.15</td>
<td>19</td>
<td>0.13</td>
<td>29</td>
<td>0.13</td>
<td>32</td>
</tr>
<tr>
<td>RMP Facility Proximity (facility count/km distance)</td>
<td>1.8</td>
<td>0.53</td>
<td>92</td>
<td>0.83</td>
<td>86</td>
<td>0.75</td>
<td>88</td>
</tr>
<tr>
<td>Hazardous Waste Proximity (facility count/km distance)</td>
<td>1.7</td>
<td>1.1</td>
<td>76</td>
<td>1.8</td>
<td>66</td>
<td>2.2</td>
<td>67</td>
</tr>
<tr>
<td>Underground Storage Tanks (count/km²)</td>
<td>3.2</td>
<td>7.3</td>
<td>54</td>
<td>4.8</td>
<td>64</td>
<td>3.9</td>
<td>69</td>
</tr>
<tr>
<td>Wastewater Discharge (toxicity-weighted concentration/m distance)</td>
<td>0.001</td>
<td>0.41</td>
<td>53</td>
<td>9</td>
<td>45</td>
<td>12</td>
<td>50</td>
</tr>
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</table>

### Socioeconomic Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
<th>State Avg.</th>
<th>%ile in State</th>
<th>EPA Region Avg.</th>
<th>%ile in EPA Region</th>
<th>USA Avg.</th>
<th>%ile in USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic Index</td>
<td>64%</td>
<td>28%</td>
<td>90</td>
<td>28%</td>
<td>91</td>
<td>36%</td>
<td>85</td>
</tr>
<tr>
<td>People of Color</td>
<td>50%</td>
<td>25%</td>
<td>83</td>
<td>26%</td>
<td>82</td>
<td>40%</td>
<td>65</td>
</tr>
<tr>
<td>Low Income</td>
<td>78%</td>
<td>32%</td>
<td>96</td>
<td>29%</td>
<td>97</td>
<td>31%</td>
<td>97</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>11%</td>
<td>6%</td>
<td>86</td>
<td>5%</td>
<td>88</td>
<td>5%</td>
<td>88</td>
</tr>
<tr>
<td>Linguistically Isolated</td>
<td>0%</td>
<td>2%</td>
<td>65</td>
<td>2%</td>
<td>59</td>
<td>5%</td>
<td>45</td>
</tr>
<tr>
<td>Less Than High School Education</td>
<td>44%</td>
<td>9%</td>
<td>99</td>
<td>10%</td>
<td>98</td>
<td>12%</td>
<td>97</td>
</tr>
<tr>
<td>Under Age 5</td>
<td>6%</td>
<td>6%</td>
<td>57</td>
<td>6%</td>
<td>52</td>
<td>6%</td>
<td>51</td>
</tr>
<tr>
<td>Over Age 64</td>
<td>10%</td>
<td>17%</td>
<td>19</td>
<td>16%</td>
<td>22</td>
<td>16%</td>
<td>26</td>
</tr>
</tbody>
</table>

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA’s 2017 Air Toxics Data Update, which is the Agency’s ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.*

For additional information, see: www.epa.gov/environmentaljustice
Neighborhoods at Risk

Tract 8318, Monroe County, MI

Selected Location(s):
Monroe, MI

Comparison Location:
U.S.

Produced by
Headwaters Economics'
Economic Profile System (EPS)
May 1, 2022
### Headwaters Economics

Headwaters Economics is an independent, nonprofit research group that works to improve community development and land management decisions: [headwaterseconomics.org](http://headwaterseconomics.org).

### Neighborhoods at Risk

Neighborhoods at Risk is a free, web-based tool that provides cities with neighborhood-level information about at-risk populations and their vulnerability to the impacts of climate change.

**Free and easy-to-use:** Quickly create maps and reports of socioeconomic and climate data.

**Available nation-wide:** Explore socioeconomic and climate data for any community or county in the nation.

**Updated continuously:** Make use of the latest available, published government data.

[headwaterseconomics.org/apps/neighborhoods-at-risk](http://headwaterseconomics.org/apps/neighborhoods-at-risk)
# Neighborhoods at Risk

## Tract 8318, Monroe County, MI

## Table of Contents

**Summary:** This front page shows a quick comparison for many of the indicators covered in this report.

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Families in Poverty</td>
<td>6</td>
</tr>
<tr>
<td>Rental &amp; Mobile Homes</td>
<td>8</td>
</tr>
<tr>
<td>People of Color</td>
<td>10</td>
</tr>
<tr>
<td>Language Proficiency</td>
<td>12</td>
</tr>
<tr>
<td>Young &amp; Elderly Populations</td>
<td>14</td>
</tr>
<tr>
<td>Educational Attainment</td>
<td>16</td>
</tr>
<tr>
<td>Potentially Vulnerable Households</td>
<td>18</td>
</tr>
<tr>
<td>Potentially Vulnerable People</td>
<td>20</td>
</tr>
<tr>
<td>Literature Cited</td>
<td>22</td>
</tr>
</tbody>
</table>

*Click the links above for quick access to report sections.*
## Neighborhoods at Risk
### Tract 8318, Monroe County, MI

### Summary

<table>
<thead>
<tr>
<th>Indicators 2019*</th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
<th>Percent Difference Tract 8318, Monroe County, MI vs. U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>People under 5 years</td>
<td>8.1%</td>
<td>6.1%</td>
<td>28%</td>
</tr>
<tr>
<td>People over 65 years</td>
<td>11.1%</td>
<td>15.6%</td>
<td>-34%</td>
</tr>
<tr>
<td>People of color (including Hispanic)</td>
<td>36.8%</td>
<td>39.3%</td>
<td>-7%</td>
</tr>
<tr>
<td>People who don't speak English well</td>
<td>2.0%</td>
<td>4.3%</td>
<td>-73%</td>
</tr>
<tr>
<td>People without a high school degree</td>
<td>35.9%</td>
<td>12.0%</td>
<td>100%</td>
</tr>
<tr>
<td>Families in poverty</td>
<td>44.9%</td>
<td>9.5%</td>
<td>130%</td>
</tr>
<tr>
<td>Housing units that are rentals</td>
<td>30.1%</td>
<td>36.0%</td>
<td>-18%</td>
</tr>
<tr>
<td>Households with no car</td>
<td>17.8%</td>
<td>8.6%</td>
<td>70%</td>
</tr>
<tr>
<td>People with disabilities</td>
<td>21.2%</td>
<td>12.6%</td>
<td>51%</td>
</tr>
<tr>
<td>People without health insurance</td>
<td>9.5%</td>
<td>8.8%</td>
<td>8%</td>
</tr>
</tbody>
</table>

**High Reliability**: Data with coefficients of variation (CVs) < 12% are in black to show that the sampling error is small.

**Medium Reliability**: Data with CVs between 12 & 40% are in orange. These values should be interpreted with caution.

**Low Reliability**: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.


Neighborhoods at Risk
Tract 8318, Monroe County, MI

Summary

What do we measure on this page?

This page shows a quick comparison for many of the indicators covered in this report to highlight how the selected tracts differ from the United States as a whole.

The percent, or relative, difference between the selected tracts and the U.S. is calculated by dividing the difference between the values by the arithmetic mean of the values.

Why is it important?

These indicators are all measures of a population more likely to experience adverse outcomes from disruptions due to extreme weather events, climate change, pollution, or limited health care access.

Particularly high percentages for any of these indicators may highlight populations that are at higher risk and in need of outreach from disaster planning, public health, or social service organizations.
Families in Poverty

<table>
<thead>
<tr>
<th></th>
<th>Monroe, MI</th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total families for whom poverty status is determined, 2019*</td>
<td>4,989</td>
<td>214</td>
<td>79,114,031</td>
</tr>
<tr>
<td>Families in poverty</td>
<td>717</td>
<td>96</td>
<td>7,541,196</td>
</tr>
<tr>
<td>Families with children in poverty</td>
<td>586</td>
<td>90</td>
<td>5,581,063</td>
</tr>
<tr>
<td>Single mother families in poverty</td>
<td>425</td>
<td>56</td>
<td>3,385,236</td>
</tr>
</tbody>
</table>

Percent of Total, 2019*

<table>
<thead>
<tr>
<th></th>
<th>Monroe, MI</th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Families in poverty</td>
<td>14.4%</td>
<td>44.9%</td>
<td>9.5%</td>
</tr>
<tr>
<td>Families with children in poverty</td>
<td>11.7%</td>
<td>42.1%</td>
<td>7.1%</td>
</tr>
<tr>
<td>Single mother families in poverty</td>
<td>8.5%</td>
<td>26.2%</td>
<td>4.3%</td>
</tr>
</tbody>
</table>

Change in Percentage Points, 2010*-2019*

For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.

<table>
<thead>
<tr>
<th></th>
<th>Monroe, MI</th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Families in poverty</td>
<td>1.4</td>
<td>17.2</td>
<td>-0.5</td>
</tr>
<tr>
<td>Families with children in poverty</td>
<td>1.0</td>
<td>18.7</td>
<td>-0.8</td>
</tr>
<tr>
<td>Single mother families in poverty</td>
<td>0.6</td>
<td>16.4</td>
<td>-0.5</td>
</tr>
</tbody>
</table>

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.

Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.

Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

Families in Poverty, Percent of Total, 2019*

* Tract 8318, Monroe County, MI has the largest share of single mother families in poverty (26.2%).

Families in Poverty, Change in Percentage Points, 2010*-2019*

* The largest change in the share of single mother families in poverty occurred in Tract 8318, Monroe County, MI, which went from 9.7% to 26.2%.


Families in Poverty

What do we measure on this page?

This page describes the number of families living below the poverty line, and separately reports families with children and single mother families with children.

The Census defines a family as a group of two or more people who reside together and who are related by birth, marriage, or adoption.

The Census Bureau uses a set of income thresholds that vary by family size and composition to define who is poor. If the total income for a family or an unrelated individual falls below the relevant poverty threshold, then the family or an unrelated individual is classified as being "below the poverty level."

Why is it important?

Families in poverty may lack the resources to meet their basic needs. Their challenges cross the spectrum of food, housing, health care, education, vulnerability to natural disasters, and emotional stress.

To save money, families with low incomes often have to make lifestyle compromises such as unhealthy foods, less food, substandard housing, or delayed medical care.¹

Lack of financial resources makes families in poverty more vulnerable to natural disasters. This is due to inadequate housing, social exclusion, and an inability to re-locate or evacuate.¹ ²

Inadequate shelter exposes occupants to increased risk from storms, floods, fire, and temperature extremes.² Households with low incomes are more likely to have unhealthy housing such as leaks, mold, or rodents.³

The expense of running fans, air conditioners, and heaters makes low-income people hesitant to mitigate the temperature of their living spaces.¹ ² Furthermore, those in high-crime areas may not want to open their windows.²

Families in poverty are disproportionately affected by higher food prices, which are expected to rise in response to climate change.¹

Children in poor families, on average, receive fewer years of education compared to children in wealthier families.⁴ ²

Low-income residents are less likely to have adequate property insurance, so they may bear an even greater burden from property damage due to natural hazards.²

Living in poverty can lead to a lack of personal control over potentially hazardous situations such as increased air pollution or flooding. Impoverished families may be less likely to take proactive measures to prevent harm.²³

Superscript numbers refer to references provided at the end of the report.
Neighborhoods at Risk
Tract 8318, Monroe County, MI

Rental & Mobile Homes

<table>
<thead>
<tr>
<th></th>
<th>Monroe, MI</th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Occupied Housing Units, 2019*</td>
<td>8,219</td>
<td>438</td>
<td>120,756,048</td>
</tr>
<tr>
<td>Rental Units</td>
<td>3,190</td>
<td>132</td>
<td>43,481,667</td>
</tr>
<tr>
<td>Mobile Homes</td>
<td>0</td>
<td>0</td>
<td>6,681,368</td>
</tr>
</tbody>
</table>

Percent of Total, 2019*

<table>
<thead>
<tr>
<th></th>
<th>Monroe, MI</th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rental Units</td>
<td>38.8%</td>
<td>30.1%</td>
<td>36.0%</td>
</tr>
<tr>
<td>Mobile Homes</td>
<td>0.0%</td>
<td>0.0%</td>
<td>5.5%</td>
</tr>
</tbody>
</table>

Change in Percentage Points, 2010*-2019*
For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.

<table>
<thead>
<tr>
<th></th>
<th>Monroe, MI</th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rental Units</td>
<td>0.7</td>
<td>-37.4</td>
<td>4.4</td>
</tr>
<tr>
<td>Mobile Homes</td>
<td>-0.5</td>
<td>-1.4</td>
<td>-0.3</td>
</tr>
</tbody>
</table>

Median Home Value (MHV), 2019*
(2021 $s)

<table>
<thead>
<tr>
<th></th>
<th>Monroe, MI</th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rental Units</td>
<td>$129,638</td>
<td>$51,516</td>
<td>$230,550</td>
</tr>
<tr>
<td>Mobile Homes</td>
<td>-$43,388</td>
<td>-$46,184</td>
<td>-$3,631</td>
</tr>
</tbody>
</table>

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

Rental Units and Mobile Homes as a Percent of Total Housing Units, 2019*

- Monroe, MI has the largest share of rental units (38.8%).
- The U.S. has the largest share of mobile homes (5.5%).

Change in Median Home Value, 2010*-2019* (2021 $s)

- The largest change in median home value occurred in Tract 8318, Monroe County, MI, which went from $97,700 to $51,516.


Rental & Mobile Homes

What do we measure on this page?

This page reports the numbers of housing units that are either rental units or mobile homes, and provides median home value.

Why is it important?

In general, home ownership contributes to well-being and stability. However, each type of living situation has its own risks and health concerns.

Home ownership is often associated with mental health benefits such as high self-esteem, a sense of control over one’s living situation, and financial stability.\textsuperscript{\textsuperscript{13}}

The financial stress associated with losing one’s home is heightened by people’s emotional attachment to their home and their neighborhood.\textsuperscript{\textsuperscript{14}}

Homeowners typically pay a greater overall housing cost, but renters pay a larger proportion of their income. The high proportion of household costs for renters has further increased over the past 25 years.\textsuperscript{\textsuperscript{15}}

Rental homes are generally not maintained as well as those that are owned. Substandard housing conditions like dampness, mold, and exposure to toxic substances or allergens are linked with compromised health outcomes.\textsuperscript{\textsuperscript{13}}

Areas with high-density residences, such as urban areas, tend to have a greater proportion of renters.\textsuperscript{\textsuperscript{1}} High density living conditions and large, multistory apartment buildings exacerbate heat-related health stresses.\textsuperscript{\textsuperscript{4}}

Mobile homes are more likely to be damaged in extreme weather, which poses a risk for both the structure and the occupants.\textsuperscript{\textsuperscript{4,11}}
## People of Color and Hispanics

<table>
<thead>
<tr>
<th></th>
<th>Monroe, MI</th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population, 2019*</td>
<td>19,775</td>
<td>1,275</td>
<td>324,697,795</td>
</tr>
<tr>
<td>White alone</td>
<td>17,712</td>
<td>843</td>
<td>235,377,662</td>
</tr>
<tr>
<td>Black or African American alone</td>
<td>1,017</td>
<td>242</td>
<td>41,234,642</td>
</tr>
<tr>
<td>American Indian alone</td>
<td>142</td>
<td>0</td>
<td>2,750,143</td>
</tr>
<tr>
<td>Asian alone</td>
<td>135</td>
<td>8</td>
<td>17,924,209</td>
</tr>
<tr>
<td>Native Hawaiian &amp; Other Pacific Island alone</td>
<td>8</td>
<td>0</td>
<td>599,868</td>
</tr>
<tr>
<td>Some other race alone</td>
<td>114</td>
<td>7</td>
<td>16,047,369</td>
</tr>
<tr>
<td>Two or more races</td>
<td>647</td>
<td>175</td>
<td>10,763,902</td>
</tr>
<tr>
<td>Hispanic or Latino (of any race)</td>
<td>812</td>
<td>44</td>
<td>58,479,370</td>
</tr>
<tr>
<td>Not Hispanic or Latino</td>
<td>18,963</td>
<td>1,231</td>
<td>266,218,425</td>
</tr>
<tr>
<td>Not Hispanic &amp; White alone</td>
<td>17,018</td>
<td>806</td>
<td>197,100,373</td>
</tr>
<tr>
<td>People of Color and Hispanics</td>
<td>2,757</td>
<td>469</td>
<td>127,597,422</td>
</tr>
</tbody>
</table>

### Percent of Total, 2019*

<table>
<thead>
<tr>
<th></th>
<th>Monroe, MI</th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>White alone</td>
<td>89.6%</td>
<td>66.1%</td>
<td>72.5%</td>
</tr>
<tr>
<td>Black or African American alone</td>
<td>5.1%</td>
<td>19.0%</td>
<td>12.7%</td>
</tr>
<tr>
<td>American Indian alone</td>
<td>0.7%</td>
<td>0.0%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Asian alone</td>
<td>0.7%</td>
<td>0.6%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Native Hawaiian &amp; Other Pacific Island alone</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Some other race alone</td>
<td>0.6%</td>
<td>0.5%</td>
<td>4.9%</td>
</tr>
<tr>
<td>Two or more races</td>
<td>3.3%</td>
<td>13.7%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Hispanic or Latino (of any race)</td>
<td>4.1%</td>
<td>3.5%</td>
<td>18.0%</td>
</tr>
<tr>
<td>Not Hispanic or Latino</td>
<td>95.9%</td>
<td>96.5%</td>
<td>82.0%</td>
</tr>
<tr>
<td>Not Hispanic &amp; White alone</td>
<td>86.1%</td>
<td>63.2%</td>
<td>60.7%</td>
</tr>
</tbody>
</table>


People of Color and Hispanics

What do we measure on this page?

Race is self-identified by Census respondents who choose the race or races with which they most closely identify. Included in "Other Races" are "Asian," "Native Hawaiian or Other Pacific Islander," and respondents providing write-in entries such as multiracial, mixed, or interracial.

Ethnicity has two categories: Hispanic or Latino, and Non-Hispanic or Latino. The federal government considers race and Hispanic origin to be two separate and distinct concepts. Hispanics and Latinos may be of any race.

"People of Color and Hispanics" is calculated by subtracting those who identify as both "Not Hispanic or Latino" and "White alone" from "Total Population."

Why is it important?

Race and ethnicity are strongly correlated with disparities in health, exposure to environmental pollution, and vulnerability to natural hazards.¹

Research consistently has found race-based environmental inequities, including the tendency for minority populations to live closer to noxious facilities and Superfund sites, and to be exposed to pollution at greater rates than whites.⁷,¹

Many health outcomes are closely related to the local environment. Minority communities often have less access to parks and nutritious food, and are more likely to live in substandard housing.¹

Minorities tend to be particularly vulnerable to disasters and extreme heat events. This is due to language skills, housing patterns, quality of housing, community isolation, and cultural barriers.⁸,⁴

Blacks and Hispanics, two segments of the population that are currently experiencing poorer health outcomes, are an increasing percentage of the US population.⁵,⁹

Research has identified measurable disparities in health outcomes between various minority and ethnic communities.

Across races, the rates of preventable hospitalizations are highest among black and Hispanic populations. Preventable hospital visits often reflect inadequate access to primary care. These types of hospital visits are also costly and inefficient for the health care system.⁵

Relative to other ethnicities and races, Hispanics and blacks are less likely to have health insurance, but rates of uninsured are dropping for both groups.¹⁰

Compared to other races, blacks have higher rates of infant mortality, homicide, heart disease, stroke, and heat-related deaths.⁵

Hispanics have higher rates of diabetes and asthma.⁵

American Indians have a distinct pattern of health effects different from blacks and Hispanics. Native populations are less likely to have electricity than the general population.² They have high rates of infant mortality, suicide and homicide, and nearly twice the rate of motor vehicle deaths than the U.S. average.⁵
Neighborhoods at Risk
Tract 8318, Monroe County, MI

Language Proficiency

<table>
<thead>
<tr>
<th></th>
<th>Monroe, MI</th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population 5 years or older, 2019*</td>
<td>18,274</td>
<td>1,172</td>
<td>304,930,125</td>
</tr>
<tr>
<td>Speak English &quot;not well&quot;*****</td>
<td>81</td>
<td>24</td>
<td>13,193,113</td>
</tr>
<tr>
<td>Speak English &quot;not well&quot;***** percent</td>
<td>0.4%</td>
<td>2.0%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Speak English &quot;not well&quot;***** percent change, 2010*-2019*</td>
<td>-0.2</td>
<td>-6.3</td>
<td>-0.4</td>
</tr>
</tbody>
</table>

**For example, if the value is 3% in 2010* and 4.5% in 2015*, the reported change in percentage points is 1.5.
***Includes "not well" and "not well at all".

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

People Who Speak English "Not Well", Percent of Total, 2019*

- The U.S. has the largest share of people who speak English "not well" (4.3%).

People Who Speak English "Not Well", Change in Percentage Points, 2010*-2019*

- The largest change in the share of people who speak English "not well" occurred in Tract 8318, Monroe County, MI, which went from 8.3% to 2.0%.


Language Proficiency

What do we measure on this page?

This page reports the results of self-rated English-speaking ability questions in the American Community Survey.

Why is it important?

Many aspects of life in the US assume basic fluency in English. Thus, people with limited language skills are at risk for inadequate access to health care, social services, or emergency services.

A person’s ability to take action during an emergency is compromised by language and cultural barriers.\(^4\)

Poor English skills can make it harder to follow directions or interact with agencies.\(^4\)

Lack of language skills can also instill lack of trust for government agencies.

In many industries, poor English skills can make it harder for people to get higher wage jobs.\(^1\)

Language barriers make it harder to obtain medical or social services; and make it more difficult to interact with caregivers.\(^1\)

Limited English skills may result in isolation from other segments of the US population, and social isolation is a health risk.\(^1\) However some minority communities can be very tightly-knit and not isolated, so this risk factor cannot be generalized across all populations.
Neighborhoods at Risk
Tract 8318, Monroe County, MI

Young & Elderly Populations

<table>
<thead>
<tr>
<th></th>
<th>Monroe, MI</th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population, 2019*</td>
<td>19,775</td>
<td>1,275</td>
<td>324,697,795</td>
</tr>
<tr>
<td>Under 5 years old</td>
<td>1,501</td>
<td>103</td>
<td>19,767,670</td>
</tr>
<tr>
<td>65 years and older</td>
<td>2,945</td>
<td>142</td>
<td>50,783,796</td>
</tr>
<tr>
<td>80 years and older</td>
<td>416</td>
<td>35</td>
<td>6,269,017</td>
</tr>
</tbody>
</table>

Percent of Total, 2019*

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 5 years old</td>
<td>7.6%</td>
<td>8.1%</td>
<td>6.1%</td>
</tr>
<tr>
<td>65 years and older</td>
<td>14.9%</td>
<td>11.1%</td>
<td>15.6%</td>
</tr>
<tr>
<td>80 years and older</td>
<td>2.1%</td>
<td>2.7%</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

Change in Percentage Points, 2010*-2019*

For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.

|                   |            |                             |          |
|                   |            |                             |          |
| Under 5 years old | 0.2        | 0.6                         | -0.5     |
| 65 years and older| 1.6        | 3.8                         | 2.9      |
| 80 years and older| -0.4       | 2.7                         | 0.2      |

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

Population by Group, Percent of Total, 2019*

- Tract 8318, Monroe County, MI has the largest share of people under 5 years old (8.1%).
- Tract 8318, Monroe County, MI has the largest share of people 80 years and older (2.7%).

Population by Group, Change in Percentage Points, 2010*-2019*

- The largest change in the share of people under 5 years old occurred in Tract 8318, Monroe County, MI, which went from 7.5% to 8.1%.
- The largest change in the share of people 80 years and older occurred in Tract 8318, Monroe County, MI, which went from 0.0% to 2.7%.


Young & Elderly Populations

What do we measure on this page?

This page describes the number of people by specific age category.

The "Under 5 years old" category includes individuals younger than 5 years old. The "65 years and older" category includes individuals age 65 and older and the "80 years and older" category includes individuals age 80 and older. The "80 years and older" category is a subset of the "65 years and older" category.

Why is it important?

Young children and older adults both are vulnerable segments of the population. Understanding the age profile of a community can help users determine the types of services likely to be needed.¹

Children’s developing bodies makes them particularly sensitive to health problems and environmental stresses.¹

Childhood lays the foundations for lifelong health. Poor health during childhood increases the likelihood of problems throughout adulthood.²

Because so many factors of a child’s life are determined during pregnancy, infancy, and early childhood, children in poverty are an especially vulnerable population. Lack of adequate care through the early phases of life is more prevalent in poor populations.²

Children spend more time outside and have a faster breathing rate than adults, so they are more at risk for respiratory problems related to ground level ozone, airborne particulates, wildfire smoke, and allergens. Allergens are associated with climate change due to changing plant communities and longer pollen seasons.³,⁴

Because their immune systems are not fully developed, children are more sensitive to infectious diseases. Natural disasters can breach public water supplies, compromise sanitation, and spread illness. Children are more vulnerable to these hazards compared to adults.⁵

Older adults also are at increased risk of compromised health related to environmental hazards and climate change.

Age is the single greatest risk factor related to illness or death from extreme heat.⁴

The elderly are more likely to have pre-existing medical conditions or compromised mobility, which reduces their ability to respond to natural disasters.³

The likelihood of chronic disease increases with age.¹,⁵

Older adults are more susceptible to air pollution such as ground level ozone, particulate matter, or dust. Increased dust is associated with drought, wildfires, and high wind events.³,⁶
## Neighborhoods at Risk
### Tract 8318, Monroe County, MI

### Educational Attainment

<table>
<thead>
<tr>
<th>Total Population 25 years or older, 2019*</th>
<th>Monroe, MI</th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>No high school degree</td>
<td>13,335</td>
<td>893</td>
<td>220,622,076</td>
</tr>
<tr>
<td>No high school degree, percent</td>
<td>1,456</td>
<td>321</td>
<td>26,472,261</td>
</tr>
<tr>
<td>No high school degree, change in percentage points**, 2010*-2019*</td>
<td>10.9%</td>
<td>35.9%</td>
<td>12.0%</td>
</tr>
</tbody>
</table>

**For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.

- **High Reliability:** Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
- **Medium Reliability:** Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
- **Low Reliability:** Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

### Population with Less than High School Education, Percent of Total, 2019*

- Tract 8318, Monroe County, MI has the largest share of people with less than a high school education (35.9%).

<table>
<thead>
<tr>
<th></th>
<th>Monroe, MI</th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.9%</td>
<td></td>
<td>35.9%</td>
<td>12.0%</td>
</tr>
</tbody>
</table>

### Population with Less than High School Education, Change in Percentage Points, 2010*-2019*

- The largest change in the share of people with less than a high school degree occurred in the U.S., which went from 15.0% to 12.0%.

<table>
<thead>
<tr>
<th></th>
<th>Monroe, MI</th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1.5</td>
<td></td>
<td>-0.1</td>
<td>-3.0</td>
</tr>
</tbody>
</table>


Find more reports like this at headwaterseconomics.org/apps/neighborhoods-at-risk
Neighborhoods at Risk

Tract 8318, Monroe County, MI

Educational Attainment

What do we measure on this page?

This page describes levels of educational attainment, which refers to the highest degree or level of schooling completed by people 25 years and over.

Why is it important?

High school completion is used as a proxy for overall socioeconomic circumstances. Lack of education is strongly correlated with poverty and poor health.

- People without a high school degree are more than twice as likely to live in inadequate housing compared to those with some college education.³

- A study in California found the lack of a high school degree was the factor most closely related to social vulnerability to climate change.⁴

- Thirty-eight percent of Americans without a high school degree do not have health insurance, compared to 10 percent with a college degree.⁷

- The rate of diabetes is much greater for those without a high school degree. Incidence of this disease is more than double the rate of those who attended education beyond high school.⁵

- Binge drinking is most severe among those without a high school degree. This demographic group had the highest risk of binge drinking across all measured categories (such as income, race, ethnicity, or disability status).⁵
## Neighborhoods at Risk

### Tract 8318, Monroe County, MI

### Potentially Vulnerable Households

<table>
<thead>
<tr>
<th></th>
<th>Monroe, MI</th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Occupied Households, 2019*</td>
<td>8,219</td>
<td>438</td>
<td>120,756,048</td>
</tr>
<tr>
<td>People &gt; 65 years &amp; living alone</td>
<td>319</td>
<td>0</td>
<td>4,527,381</td>
</tr>
<tr>
<td>Single female households</td>
<td>1,375</td>
<td>100</td>
<td>15,016,964</td>
</tr>
<tr>
<td>with children &lt; 18 years</td>
<td>813</td>
<td>61</td>
<td>9,427,068</td>
</tr>
<tr>
<td>Households with no car</td>
<td>1,030</td>
<td>78</td>
<td>10,395,713</td>
</tr>
</tbody>
</table>

### Percent of Total, 2019*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>People &gt; 65 years &amp; living alone</td>
<td>3.9%</td>
<td>0.0%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Single female households</td>
<td>16.7%</td>
<td>22.8%</td>
<td>12.4%</td>
</tr>
<tr>
<td>with children &lt; 18 years</td>
<td>9.9%</td>
<td>13.9%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Households with no car</td>
<td>12.5%</td>
<td>17.8%</td>
<td>8.6%</td>
</tr>
</tbody>
</table>

### Change in Percentage Points, 2010*-2019*

For example, if the value is 3% in 2010* and 4.5% in 2019*, the reported change in percentage points is 1.5.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>People &gt; 65 years &amp; living alone</td>
<td>0.0</td>
<td>-2.7</td>
<td>-0.8</td>
</tr>
<tr>
<td>Single female households</td>
<td>0.5</td>
<td>-0.3</td>
<td>-0.2</td>
</tr>
<tr>
<td>with children &lt; 18 years</td>
<td>-2.9</td>
<td>-0.2</td>
<td>0.0</td>
</tr>
<tr>
<td>Households with no car</td>
<td>1.9</td>
<td>1.6</td>
<td>-77.3</td>
</tr>
</tbody>
</table>

**High Reliability:** Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.

**Medium Reliability:** Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.

**Low Reliability:** Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

### Households with No Car as a Percent of Total Households, 2019*

- Monroe, MI has the largest share of households with no car (3.9%).

### Single Female Households as a Percent of Total Households, 2019*

- Tract 8318, Monroe County, MI has the largest share of single female households (22.8%).
- Tract 8318, Monroe County, MI has the largest share of single female households with children (13.9%).


Potentially Vulnerable Households

What do we measure on this page?

This page describes household types that are associated with increased hardship, including the elderly living alone, single female households, single female households with children, and households without a car.

Why is it important?

Older adults are more likely to have compromised health and are less able to overcome disease. Living alone exacerbates health risks, and many health outcomes are worsened by social isolation.

Social isolation is strongly linked to poor health such as premature death, smaller chances of survival after a heart attack, depression, and greater levels of disability from chronic diseases.2

People 65 and older are particularly vulnerable to heat-related illness,4 which is exacerbated by social isolation.

Households headed by women face challenges related to income, education, and food security. These factors make it more difficult to respond to health, environmental, or climate risks.

Female-headed households are more likely to be living in poverty. This is most prevalent among black, Hispanic, and Native American households.16

In 2014, 35 percent of female-headed households were food insecure, compared to 14 percent of all households.17 Single mothers may be burdened by providing basic needs such as food and housing, which can make the urgency of other risks seem less important.18

Single-mother families are disproportionately exposed to hazardous levels of air pollution.4

Single mothers tend to be less educated and less affluent than the general population, which puts them at greater risk during natural disasters.18

Access to a car is linked with higher wages and more financial stability, and can help families relocate or evacuate in the event of emergencies.

People who own cars are more likely to be employed, work longer hours, and earn more than those who do not.19

Access to a car has measurable benefits for those receiving public assistance. Welfare recipients with access to a car were more likely to work more hours and get higher-paying jobs, and had a greater chance of leaving welfare.20

During emergencies, natural disasters, and extreme weather events, people who do not have a car are less likely to evacuate or have access to emergency response centers.4

During heat waves, people without a car are less able to go to community cooling centers or cooler areas.4

Pedestrian fatalities are more than twice as likely in poor urban neighborhoods than in wealthier parts of cities.21
Neighborhoods at Risk
Tract 8318, Monroe County, MI

Potentially Vulnerable People

<table>
<thead>
<tr>
<th></th>
<th>Monroe, MI</th>
<th>Tract 8318, Monroe County, MI</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total civilian noninstitutionalized population, 2019*</td>
<td>19,638</td>
<td>1,149</td>
<td>319,706,872</td>
</tr>
<tr>
<td>People w/ disabilities</td>
<td>3,028</td>
<td>244</td>
<td>40,335,099</td>
</tr>
<tr>
<td>People w/o health insurance</td>
<td>941</td>
<td>109</td>
<td>28,248,613</td>
</tr>
</tbody>
</table>

Percent of Total, 2019*

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of people w/ disabilities</td>
<td>15.4%</td>
<td>21.2%</td>
<td>12.6%</td>
</tr>
<tr>
<td>Percent of people w/o health insurance</td>
<td>4.8%</td>
<td>9.5%</td>
<td>8.8%</td>
</tr>
</tbody>
</table>

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

People with Disabilities, Percent of Total, 2019*

* Tract 8318, Monroe County, MI has the largest share of the noninstitutionalized population that is disabled (21.2%).

People without Health Insurance, Percent of Total, 2019*

* Tract 8318, Monroe County, MI has the largest share of the noninstitutionalized population without health insurance (9.5%).


Neighborhoods at Risk
Tract 8318, Monroe County, MI

Potentially Vulnerable People

What do we measure on this page?

This page describes groups of people that are associated with increased hardship, including people with disabilities and people without health insurance.

Why is it important?

Disabled people are subject to health complications that make environmental risks more consequential.

- Disabled people are less likely to have health insurance, compared to the non-disabled population.\textsuperscript{5}
- Being confined to a bed raises heat mortality.\textsuperscript{2}
- Extreme weather events or natural disasters may result in limited access to medical care. This is particularly consequential for those who already have compromised health.\textsuperscript{3}

People who lack health insurance are disadvantaged by several different mechanisms. They may avoid or delay diagnoses, treatment, and/or medication and thus may increase their odds of poor health. They do not have a regular place of care, and they are not benefitting from the standard of care that is afforded many Americans.

- Households living in poverty are more likely to be uninsured. More than one quarter of uninsured households live in poverty.\textsuperscript{10}
- People with lower educational attainment are more likely to be uninsured.\textsuperscript{5}
- People without health insurance are less likely to have a regular source of care, and less likely to receive preventive, primary, and specialty care services.\textsuperscript{32,33} This risk is particularly evident among racial and ethnic minorities.\textsuperscript{5}
- People without health insurance are more likely to use the hospital emergency department for standard health care needs.\textsuperscript{5}
- About 25% of uninsured adults report having either delayed or gone without care in the past year because of costs.\textsuperscript{23}
- Uninsured people are more likely to skip medications due to the costs, and some providers are less likely to prescribe medications to uninsured patients.\textsuperscript{24}
- People who do not have health insurance suffer greater health consequences from air pollution compared to those with insurance.\textsuperscript{4}
Literature Cited


Appendix VI Economic Impacts of the Port of Monroe
ECONOMIC IMPACTS
of the
PORT OF MONROE

August, 2018
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ABOUT THIS REPORT

A report entitled Economic Impacts of Maritime Shipping in the Great Lakes-St. Lawrence Region was published on July 18, 2018. (The report is available at www.greatlakesseway.org). Martin Associates of Lancaster, Pennsylvania, was retained to prepare this study by a consortium of U.S. and Canadian Great Lakes-St. Lawrence Seaway System stakeholders. Study sponsors include: the Saint Lawrence Seaway Development Corporation, the St. Lawrence Seaway Management Corporation, the American Great Lakes Ports Association, the Chamber of Marine Commerce, the Lake Carriers’ Association, and the Shipping Federation of Canada.

The analysis includes the economic impacts generated by marine cargo activity on the Great Lakes-St. Lawrence Seaway system, including U.S. domestic commerce, Canadian domestic commerce, bi-national commerce between the two countries, and international traffic moving between the Great Lakes-Seaway region and overseas destinations. The impacts are measured for the year 2017 and are presented in terms of total economic impacts at the bi-national regional level, the country level, and the state/provincial level.

This report, Economic Impacts of the Port of Monroe, isolates the economic impacts created by all cargo and vessel activity at the Port of Monroe.
INTRODUCTION

From the earliest days of European settlement, the Great Lakes and St. Lawrence River have been utilized as a means of transportation. Great Lakes cities were founded as trading posts along a vast marine highway that facilitated commerce in an era pre-dating railroads and highways. This relationship to the water has enabled the region to thrive and today, the Great Lakes-St. Lawrence region is the industrial and agricultural heartland of both the United States and Canada — with a combined GDP of more than $6 trillion U.S. dollars. This output would represent the third-largest economy in the world — behind the U.S. and China — if it were a country.

Over the last 200 years, navigation improvements in both the United States and Canada have enhanced the waterway. The Welland Canal first connected Lake Ontario and Lake Erie in 1829, enabling vessels to bypass Niagara Falls. The Soo Locks have made the St. Marys River navigable, connecting Lake Superior to the lower four Great Lakes and the St. Lawrence Seaway. The St. Lawrence Seaway has tamed the St. Lawrence River, enabling ships to sail from Lake Ontario to the Atlantic Ocean since 1959.

The resulting deep-draft inland navigation system is the longest in the world, extending 3,700 kilometers (2,300 miles) into the North American heartland. This bi-national trade corridor complements the region’s rail and highway network and offers customers a cost effective, safe, reliable and environmentally smart means of moving raw materials, agricultural commodities and manufactured products to and from domestic and global markets. Cargoes include iron ore, coal, steel, aluminum, machinery, stone, cement, grain, sugar, fertilizers, road salt, petroleum products and containerized goods. These cargoes become the staples of everyday life — food and other household items; buildings, factories, roads and bridges; vehicles and planes; and the energy that powers cities and towns.

Three distinct vessel-operator communities serve the waterway. These include U.S. domestic carriers (“U.S. Lakers”) transporting cargo between ports on the Great Lakes, Canadian domestic carriers (“Canadian Lakers”) operating between ports on the Great Lakes and the St. Lawrence River and Canadian coastal waters, and ocean-going vessel operators (“Salties”), which operate between the region’s ports and overseas destinations. These carriers serve more than 110 system ports located in each of the eight Great Lakes states and the provinces of Ontario and Quebec.

In addition to locks, ships and ports, a host of maritime service providers work to ensure the safe, reliable and efficient transport of cargo. These include stevedores, warehouse employees, freight forwarders, dockworkers, crane operators, vessel agents, dredging contractors, marine pilots, truck drivers and port rail operators, tugboat operators and shipyard workers.

This report is designed to provide the navigation community, transportation planners, government policy makers and the general public with a realistic assessment of the contributions made by commercial maritime shipping at the Port of Monroe.
Chapter I

METHODOLOGY

This section describes the methodology utilized to produce the report entitled *Economic Impacts of Maritime Shipping in the Great Lakes-St. Lawrence Region*, which was published on July 18, 2018. The economic impacts related specifically to the Port of Monroe are included in that broader Great Lakes-St. Lawrence study, and have been isolated and reported separately in this document. The impacts are measured for the year 2017.

The Great Lakes, their connecting channels and the St. Lawrence River extend from the western-most point in Duluth, Minnesota, to eastern Quebec. This analysis examines the economic impacts created by cargo and vessel activity at all marine terminals located along this transportation corridor — in the states of Minnesota, Wisconsin, Illinois, Indiana, Michigan, Ohio, Pennsylvania and New York, and the provinces of Ontario and Quebec. Included are terminals owned by public port authorities such as municipalities, counties and independent port agencies, as well as those owned and operated by private companies.

The study methodology is based on analysis of a core group of 40 Canadian and U.S. Great Lakes-St. Lawrence River ports. The 40 individual ports are listed in Exhibit I-1.

The study team conducted detailed interviews with marine terminal operators, service providers, railroads, port tenants and other stakeholders at each port. The firms included in the interview process were identified from the following sources:

- Greenwood’s Guide to Great Lakes Shipping
- Port directories
- Interviews with port authorities associated with the 40 individual ports
- Supplemental lists provided by stakeholders

<table>
<thead>
<tr>
<th>EXHIBIT I-1</th>
<th>Individual Ports Included in the Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Ports (19)</td>
<td>Canadian Ports (21)</td>
</tr>
<tr>
<td>Ashtabula</td>
<td>Baie Comeau</td>
</tr>
<tr>
<td>Burns Harbor</td>
<td>Becancour</td>
</tr>
<tr>
<td>Calcite</td>
<td>Goderich</td>
</tr>
<tr>
<td>Chicago</td>
<td>Hamilton</td>
</tr>
<tr>
<td>Cleveland</td>
<td>Havre-Saint-Pierre</td>
</tr>
<tr>
<td>Conneaut</td>
<td>Johnstown</td>
</tr>
<tr>
<td>Detroit</td>
<td>Meldrum Bay</td>
</tr>
<tr>
<td>Duluth</td>
<td>Montreal</td>
</tr>
<tr>
<td>Erie</td>
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<td>Green Bay</td>
<td>Oshawa</td>
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<tr>
<td>Lorain</td>
<td>Port Alfred</td>
</tr>
<tr>
<td>Milwaukee</td>
<td>Port-Cartier</td>
</tr>
<tr>
<td>Monroe</td>
<td>Quebec</td>
</tr>
<tr>
<td>Muskegon</td>
<td>Sarnia</td>
</tr>
<tr>
<td>Oswego</td>
<td>Sept Iles</td>
</tr>
<tr>
<td>Saginaw River</td>
<td>Sorel</td>
</tr>
<tr>
<td>Superior</td>
<td>Thunder Bay</td>
</tr>
<tr>
<td>Toledo</td>
<td>Toronto</td>
</tr>
<tr>
<td>Two Harbors</td>
<td>Trois-Rivieres</td>
</tr>
<tr>
<td></td>
<td>Valleyfield</td>
</tr>
<tr>
<td></td>
<td>Windsor</td>
</tr>
</tbody>
</table>

*Economic Impacts of the Port of Monroe*
In total, 770 firms with 1,105 operations throughout the region were identified. All firms were contacted by telephone to collect the data required to assess direct impacts and develop the individual port models. These firms provided data in the following categories:

- Jobs
- Income
- Revenue
- Local purchases
- Terminal operational specifics:
  - Modal splits
  - Hinterland distribution patterns
  - Rail and truck rates
  - Rail yard specifics

To measure the impacts of marine cargo moving via individual ports and private terminals not included in the core group of 40 ports, Martin Associates developed prototype economic impact models.

These models were used to expand the individual port impacts to a state/provincial level, thus incorporating the cargo tonnage at all marine terminals located within a specific state or province.

For the purpose of determining economic impacts, the report uses a tonnage handled figure. “Handled” refers to both the shipping (exporting) of the cargo from a system port, and to the receipt (importing) of that cargo in a system port. Because economic activity is created every time cargo is handled, for the purposes of this study, cargo moved between ports within the region has been handled twice. By contrast, cargo moved between the region’s ports and overseas ports has been handled once (in the region).

### 1. FLOW OF IMPACTS

Waterborne cargo activity at a marine terminal contributes to the local, regional, state/provincial and national economies by generating business revenue for firms that provide vessel and cargo-handling services at the terminal.

These companies, in turn, provide employment and income to individuals, and pay taxes to federal, state/provincial and local governments. Exhibit 1-2 shows how activity at marine terminals generates impacts throughout the local, regional, state/provincial and national economies. As this exhibit illustrates, the

---

**EXHIBIT 1-2**

Flow of Economic Impacts Generated by Marine Activity

- **Seaport Activity**
  - **Business Revenue**
    - **Payroll**
      - **Direct Jobs**
      - **Re-spending**
    - **Retained Earnings, Dividends & Investments**
    - **Local Purchases**
      - **Induced Jobs**
      - **Indirect Jobs**
  - **Taxes**
The economic impact of a port cannot be reduced to a single number, as the port activity creates several impacts — the revenue impact, employment impact, personal income impact, and tax impact.

These impacts are non-additive. For example, the income impact is part of the revenue impact, and adding together these impacts would result in double-counting.

The report also provides a total economic activity value, which is explained later in this chapter.

1.1 Business Revenue Impact

At the outset, activity at a port generates business revenue for firms that provide services. This business revenue impact is dispersed throughout the economy in several ways; it is used to hire people, purchase goods and services, and pay federal, state and local taxes. The remainder may be used to pay stockholders, retire debt or make investments, or may be held as retained earnings. Note that the only components of the revenue impact that can definitely be identified as remaining in the local economy are those portions dispersed in the following ways: salaries to local employees; local purchases by individuals and businesses directly dependent on the seaport; contributions to federal, state/provincial and local taxes; tenant lease payments to the port authorities; and wharfage and docking fees paid by the steamship lines to the individual port authorities.

1.2 Employment Impact

Employment is measured in terms of full-time equivalent jobs, as defined by 2,080 hours per year per full-time worker. The employment impact of the port activity consists of three levels of job impacts:

- **Direct employment impact** — jobs directly generated by seaport activity. Direct jobs generated by marine cargo include jobs with railroads and trucking companies moving cargo between inland origins and destinations, and the marine terminals, as well as the jobs of longshoremen and dockworkers, steamship agents, freight forwarders, stevedores, and others. It should be noted that jobs classified as “directly generated” are those that would experience near-term dislocation if the activity at the marine terminals was discontinued.

- **Induced employment impact** — jobs created throughout the local, regional and national economies because individuals directly employed due to port activity spend their wages locally on goods and services such as food, housing and clothing. These jobs are held by residents located throughout the region, since they are estimated based on local and regional purchases.

- **Indirect employment impact** — jobs created within the region due to purchases of goods and services by firms, not individuals. These jobs are estimated directly from local purchases data supplied by the 770 companies interviewed as part of this study. They include jobs with office supply firms, maintenance and repair firms, parts and equipment suppliers, and others.

1.3 Personal Earnings Impact

The personal earnings impact is the measure of employee wages and salaries (excluding benefits) received by individuals directly employed due to port activity. Re-spending of these earnings on goods and services throughout the regional economy is also estimated using a state or provincial personal-earnings multiplier, which reflects the percentage of purchases by individuals that are made within the state/province in which the port is located. This re-spending generates additional jobs or the “induced” employment impact. The re-spending effect varies by region — a larger effect occurs in regions that produce a relatively large proportion of the goods and services consumed by residents, while lower re-spending effects are associated with regions that import a relatively large share of consumer goods and services (since personal earnings “leak out” of the region for these out-of-region purchases). The direct earnings are a measure of the local impact since they are received by those directly employed by port activity.

1.4 Tax Impact

Tax impacts are tax payments to federal, state/provincial and local governments by firms and by individuals whose jobs are directly dependent upon and supported (induced and indirect jobs) by activity at the marine terminals.

1.5 Total Economic Activity

The total economic activity value calculated in this report consists of the direct business revenue received by the businesses supplying the cargo and vessel handling services, and the re-spending of direct income and consumption expenditures. These two monetary measures of economic impact are additive, since the re-spending impact is in addition to the direct income impact and the business revenue is independent of
other dollar value impacts. The direct personal income, business purchases and taxes are paid from business revenue, and to include these in the total economic impact measure would result in double counting.

2. IMPACT STRUCTURE

The four types of economic impacts are created throughout various business sectors of the local, regional, state/provincial and national economies. Four distinct sectors are impacted as a result of activity at the marine terminals. These are:

- Surface transportation sector
- Maritime services sector
- Shippers/consignees using the port
- Port authorities/Seaway authorities

Within each business sector, various participants are involved. This study estimates separate impacts for each of the participants. Below is a discussion of the four sectors analyzed for economic impacts — including a description of the major participants in each.

2.1 Surface Transportation Sector

The surface transportation sector consists of both the railroad and trucking industries. The trucking firms and railroads are responsible for moving the various cargoes between the marine terminals, and the inland origins and destinations.

2.2 Maritime Services Sector

Waterborne cargoes handled by each port/marine terminal generate economic activity in various business sectors of the local economy. Specifically, these impacts occur in the following categories:

Terminal Operations — includes those companies that hire labor to load/off-load ships, transfer cargo to truck or rail, sort cargo, stage cargo, and provide short- and long-term storage of cargo

Dockworkers — includes members of the International Longshoremen’s Association, International Union of Operating Engineers, International Brotherhood of Teamsters and the United Steelworkers, as well as those dockworkers with no union affiliation that are involved in the loading/unloading of cargo

Tug Assist — includes those companies that provide tug boats to assist vessels with docking and undocking

Pilots — includes those companies and organizations that provide navigation-assistance services to vessels as required under U.S. and Canadian law

Agents — includes those companies that provide vessel and crew-related services, including documentation required to enter and clear the ship, arrangement of pay for crews, and provision of food and supplies

Marine Services — includes a variety of service providers such as chandlers that supply ships with food, supplies and equipment; marine surveyors that inspect vessels and cargo, and provide valuations for insurance purposes; launch operators that provide ferry services for crew to move from ship to shore; and fuel-supply companies that provide vessels with bunker fuel

Freight Forwarders — includes those companies that provide transportation logistics and management services, and that coordinate both marine and land transportation for cargo

Government — includes those federal and local government agencies that perform services related to cargo handling and vessel operations, such as the U.S. Army Corps of Engineers, Department of Homeland Security, U.S. Customs and Border Protection, the Canadian and U.S. Coast Guards, and the Canada Border Services Agency

Ship Repair — includes those companies that provide ship construction and repair services on both a scheduled and emergency basis

Laker Operators — includes the crew and headquarters-based management employees of U.S. and Canadian domestic Great Lakes vessel operators that transport cargo

Barge Operators — includes the crew and headquarters-based management employees of U.S. and Canadian domestic Great Lakes barge operators that transport cargo

2.3 Shippers/Consignees Sector

This sector includes cargo owners that ship or receive cargo via a specific port. These companies are dependent upon the port and usually located within the port’s immediate vicinity.
2.4 Port Authorities/Seaway Authorities
This sector includes the various port authorities operating in the Great Lakes-Seaway and St. Lawrence River. Also included in this category are the employees of the U.S. Saint Lawrence Seaway Development Corporation (SLSDC) and the Canadian St. Lawrence Seaway Management Corporation (SLSMC), as well as the lock operators at each of the lock systems on the Great Lakes-Seaway system — including the Soo Locks, which connect Lake Superior and Lake Huron.

3. SUMMARY OF METHODOLOGY
This section provides a summary of the methodological approach used to analyze the economic impacts of the vessel and cargo activity on the Great Lakes and St. Lawrence River.

3.1 Data Collection
The cornerstone of Martin Associates' approach is the collection of detailed baseline impact data from firms providing services at the ports and terminals. To ensure accuracy and defensibility, the baseline impact data were collected from interviews with 770 firms that provide services on the Great Lakes and St. Lawrence River. In most cases, multiple interviews were conducted with several persons in each firm.

The baseline survey data collected from the 770 firms was used to develop operational impact models for each of the 40 ports. This data was also used to develop models to expand the impact calculations beyond the 40 ports and therefore, to estimate state-wide/province-wide impacts.

3.2 Direct Jobs, Income, Revenue and Tax Impacts
The results of these interviews were then used to develop the baseline direct job, revenue and income impacts for the business sectors and job categories associated with the cargo activity at the marine terminals in the 40 individual port districts for which specific impact models were developed.

Total state and local tax impacts generated by the cargo activity on the St. Lawrence were estimated from several sources. The U.S. tax impacts were estimated from income indices developed by the Tax Foundation and the US Bureau of Census, “State and Local Government Finances,” while the Canadian tax impacts were estimated based on data provided to Martin Associates by Revenue Canada. In addition, adjustments were made to reflect the different tax relationships in Quebec at the federal level.

3.3 Induced Impacts
Induced impacts are those generated by the purchases of individuals directly employed as a result of port and terminal activity. For example, a portion of the personal earnings received by those directly employed due to activity at the marine terminals is used for purchases of goods and services, both regionally, as well as out-of-region. These purchases, in turn, create additional jobs in the region; these jobs are classified as “induced”.

To estimate these induced jobs for the 19 U.S. Great Lakes ports, the study team developed a state personal-earnings multiplier (for each state in which a port was located) from data provided by the U.S. Bureau of Economic Analysis, Regional Income Division. This personal-earnings multiplier was used to estimate the total personal earnings generated in the state as a result of the activity at the specific Great Lakes port within that state. A portion of this total personal-earnings impact was next allocated to specific local purchases (as determined from consumption data for the relevant state residents), as developed from the U.S. Bureau of Labor Statistics, Consumer Expenditure Survey, 2015. These purchases were next converted into retail and wholesale induced jobs in the state economy — by combining the purchases with the jobs-to-sales ratios in the supplying industries. A portion of the retail purchases was allocated to wholesale purchases, based on industry-specific data developed from the U.S. Bureau of Census, 2012 Economic Census. These wholesale purchases were combined with the relevant jobs-to-sales ratios for the wholesale industries associated with the local purchases. These ratios were developed at the state level in which the specific port was located.

To estimate the induced impacts associated with the cargo moving via the 21 Canadian ports, personal-income multipliers for the waterborne transportation sector in Ontario and Quebec were developed by Statistics Canada, Industry Accounts Division and provided to Martin Associates. Martin Associates developed the distribution of purchases by type of purchase (food at home, food in restaurants, housing, apparel, home furnishings, transportation, medical care, etc.) for each province — using data provided by Statistics Canada (2015 base data). The associated supplying industry jobs-to-sales ratios on a provincial level were also supplied to Martin Associates by Statistics Canada (Provincial Input-Output Models).
These ratios included the retail and wholesale re-spending impacts. The personal consumption expenditures from the port activity were then combined with these job multipliers to estimate the “consumption” induced impacts by the province in which each of the 21 Canadian ports are located.

To estimate the “non-consumption” induced impacts with such sectors as state/provincial governments, education, and other social services, a ratio of state/provincial employment in these key service industries to total state/provincial employment was developed. This ratio was then multiplied by the direct and consumption induced jobs to estimate the total direct and induced job impact.

The re-spending impact includes not only the wage and salary income received by people employed to provide goods and services to the direct job holders, but also the value of the purchases. Therefore, the re-spending/local consumption impact cannot be divided by the induced jobs to estimate the induced income — as this would overestimate the induced personal wage/salary impact per induced job.

A separate induced impacts model was developed for each of the 40 ports.

3.4 Indirect Jobs

Indirect jobs are generated in the local economy as the result of purchases by companies that are directly dependent upon cargo and vessel activity at ports and marine terminals, including shippers/consignees. These purchases are for goods such as office supplies and equipment, as well as for services including maintenance and repair, communications and utilities, transportation and professional services. To estimate the indirect economic impact, data on local purchases — by type of purchase — were collected from each of the firms interviewed. These local purchases were then combined with employment-to-sales ratios in local supplying industries, developed from the U.S. Bureau of Economic Analysis, Regional Input-Output Modeling System (RIMS II) for the U.S. ports and from Statistics Canada, Industry Accounts Division, for Canadian ports. The indirect job ratios also account for the in-state/in-province spin-off effects from multiple rounds of supply chains that are required to provide the purchased goods and services. Indirect income, local purchases and taxes are also estimated.

A separate indirect impacts model was developed for each of the 40 ports, as well as for the province-wide and state-wide models.

4. COMMODITIES INCLUDED IN THE ANALYSIS

Economic impacts were estimated for the following commodities handled at the marine terminals on the Great Lakes-Seaway and St. Lawrence River.

- Containers
- Steel products
- General cargo (excluding steel)
- Iron ore
- Grain
- Stone/aggregates
- Cement
- Salt
- Other dry bulk
- Other liquid bulk
- Coal
- Petroleum products

Impacts that are related to cargo or activity outside of the listed commodity groups are categorized as Not Allocated. This category includes employees such as the St. Lawrence Seaway Management Corp. and the St. Lawrence Seaway Development Corporation, Customs and Border Protection, Canadian and U.S. Coast Guard, U.S. Army Corps of Engineers assigned to the Great Lakes Districts, shiprepair and boatbuilding, portions of marine construction activity, to name a few.

Impacts of cruise passenger activity were not included in the analysis, but the impacts generated by passenger ferry operations were included.

5. ESTIMATE OF TONNAGE

Currently, there is no single data source for the marine cargo moving on the Great Lakes and St. Lawrence River. In order to accurately capture the tonnage moving on the Great Lakes-St. Lawrence waterway an extensive data collection effort was undertaken. The Chamber of Marine Commerce provided detailed port to port cargo movements by commodity carried on Canadian-flag vessels. International tonnage by commodity and port was provided by The St. Lawrence Seaway Management Corporation and the Maritime Information Bureau of the St. Lawrence Economic Development Council. The Lake Carriers’ Association provided port to port movements by commodity for tonnage moved on U.S.-flag carriers.
This proprietary data base of tonnage represents the only comprehensive data base describing port to port cargo flows, by commodity and by flag, for cargo operations on the waterway.

The report estimates tonnage volume (and its dollar value) moved for each of the geographic segments detailed in the Organization of Study Results. This is the recorded tonnage transported by vessels.

Tonnage value was calculated for 2017 by using the US Bureau of Census, USA Trade On-Line, which publishes the value per ton of waterborne cargo at a 7 digit commodity code classification, for both containerized and non-containerized commodities. This value per ton at the commodity level excludes the ocean or laker shipping rates as well as the terminal charges and inland transportation costs. The value per ton by commodity was then multiplied by the specific commodities moving on the Great Lakes and St. Lawrence River. The dollar value of the cargo was then expressed in both U.S. as well as Canadian dollars.

For the purpose of determining economic impacts, the report uses a tonnage handled figure. “Handled” refers to both the shipping (exporting) of the cargo from a system port, and to the receipt (importing) of that cargo in a system port. Because economic activity is created every time cargo is handled, for the purposes of this study, cargo moved between ports within the region has been handled twice. By contrast, cargo moved between the region’s ports and overseas ports has been handled once (in the region). For example, one ton of cargo moved to or from Europe is counted as one ton handled by a port, while one ton of cargo moved from Duluth, Minn., to Cleveland, Ohio, is counted as two tons (one ton exported in Duluth and one ton imported in Cleveland).

The tonnage handled at each of the 40 ports was then used as inputs into the port-specific models, which consist of the direct, induced, indirect sub-modules. Impacts were then estimated for each of the 40 ports.

6. EXPANSION OF THE 40-PORT IMPACT MODELS TO MEASURE SYSTEM-WIDE IMPACTS

A prototype model was developed for each state and province to measure the cargo that moves through private terminals and ports not located in one of the 40 port districts for which the individual models were developed. These prototype models also consist of direct, induced and indirect sub-modules, and were developed based on revenue-per-ton ratios and jobs-per-ton ratios by commodity and category, estimated from the port-specific models for the ports located in each relevant state or province.

The tonnage handled at ports that was not among the 40 ports was grouped by state and province and used in the other state and province models to develop a comprehensive measure of the economic impact on the bi-national economies.

Using the 40 port-specific models, and the state and provincial models, the economic impacts at the level of the 40 port districts and the “other state and provincial ports” were then combined to estimate total impacts in the following categories:

- Bi-national System-wide
- By country
- By state and province
- By commodity
- By carrier flag
- By employment sector

Note: Total figures on all tables and charts may not add up due to rounding.
This report isolates the economic impacts created by all cargo and vessel activity at the Port of Monroe in 2017.

1. JOB IMPACTS

1,659 jobs in Michigan were supported by cargo moving via the marine terminals located at the Port of Monroe.

- Of the 1,659 jobs, 751 jobs were directly generated by the marine cargo and vessel activity at the marine terminals.

- As a result of the local and regional purchases by those 751 individuals holding the direct jobs, an additional 574 induced jobs were supported in the regional economy.

- 334 indirect jobs were supported by $39.7 million of regional purchases by businesses supplying services at the marine terminals at the Port of Monroe.

2. REVENUE IMPACTS

In 2017, the direct business revenue received by the firms directly dependent upon the cargo handled at the marine terminals located at the Port of Monroe was $28.3 million. These firms provide maritime services and inland transportation services for the cargo handled at the marine terminals and the vessels calling at the terminals.

3. PERSONAL INCOME AND LOCAL CONSUMPTION IMPACTS

The 751 individuals directly employed as a result of the cargo handled at the marine terminals at the Port of Monroe received $37.6 million in wages and salaries. These individuals, in turn, used these earnings to purchase good and services, to pay taxes, and for savings.

<table>
<thead>
<tr>
<th>EXHIBIT II-1</th>
<th>Economic Impacts of the Port of Monroe</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Jobs</strong></td>
<td></td>
</tr>
<tr>
<td>Direct Jobs</td>
<td>751</td>
</tr>
<tr>
<td>Induced</td>
<td>574</td>
</tr>
<tr>
<td>Indirect</td>
<td>334</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,659</td>
</tr>
<tr>
<td><strong>Personal Income (1,000)</strong></td>
<td></td>
</tr>
<tr>
<td>Direct</td>
<td>$37,623</td>
</tr>
<tr>
<td>Re-Spending/Local Purchases</td>
<td>$67,751</td>
</tr>
<tr>
<td>Indirect</td>
<td>$15,709</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$121,083</td>
</tr>
<tr>
<td><strong>Business Revenue (1,000)</strong></td>
<td>$28,256</td>
</tr>
<tr>
<td><strong>Local Purchases (1,000)</strong></td>
<td>$39,658</td>
</tr>
<tr>
<td><strong>Taxes (1,000)</strong></td>
<td></td>
</tr>
<tr>
<td>Federal</td>
<td>$27,066</td>
</tr>
<tr>
<td>State</td>
<td>$11,382</td>
</tr>
</tbody>
</table>

Note: Totals may not add due to rounding
The purchase of goods and services from regional sources creates a re-spending effect known as the personal earnings multiplier effect. Using the local personal earnings multipliers, an additional $67.8 million in income and consumption were created by the Port of Monroe. In developing the personal-income multiplier impacts, Martin Associates relied on government agencies to provide the income multipliers.

In addition, the 334 indirectly employed workers received indirect wages and salaries totaling $15.7 million. Combining the direct, induced and indirect income impacts, the cargo handled at the Port of Monroe generated $121.1 million in wages and salaries, and local consumption expenditures in the regional economy.

4. FEDERAL, STATE AND LOCAL TAX IMPACTS

A total of $38.5 million in state and federal taxes were generated by cargo and vessel activity at the Port of Monroe, with $11.4 million generated at the state level and $27.1 million generated at the federal level.
ABOUT MARTIN ASSOCIATES

Martin Associates of Lancaster, Pennsylvania, is a leading provider of economic analysis and consulting services to the maritime industry. Since 1986, the company has developed more than 1,000 economic impact, strategic planning, financial feasibility and market studies for major ports and waterway systems throughout the United States and Canada, as well as for ports in Europe, Asia and the Caribbean. Martin Associates’ clients include port authorities, marine terminal operators, private investment groups, ocean carriers and federal, provincial and state governments, as well as maritime trade organizations.

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ECONOMIC IMPACTS
of the
PORT OF MONROE
Appendix VII Port District Act
PORT DISTRICTS
Act 234 of 1925

AN ACT to provide for the creation and establishment of port districts; to prescribe their rights, powers, duties and privileges; to prescribe their powers of regulation in certain cases; to prescribe their powers in respect to acquiring, improving, enlarging, extending, operating, maintaining and financing various projects and the conditions upon which certain of said projects may extend into another state or county.


The People of the State of Michigan enact:

PORT DISTRICTS
Act 234 of 1925

120.1 Port districts; incorporation, exercise of powers.
Sec. 1. Port districts are hereby authorized to be created in the various counties of this state, as in this act provided. Such districts whether heretofore or hereafter created, shall be bodies corporate and have a corporate seal, and may sue and be sued and may contract and be contracted with. Port districts shall have all the powers specifically granted to them and any powers implied or necessary for the exercise of the powers specifically granted. Whenever in this act any power is granted to a port district, it shall be exercised by the port commission unless otherwise provided herein, and whenever in this act any power is granted to a port commission it shall be deemed to be granted to the port district but to be exercised by such port commission.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.

120.2 Referendum petition; filing, examination, certification; resolution of board of supervisors.
Sec. 2. At any general election or at any special election which may be called for that purpose, the board of county supervisors of any county in this state, may or on petition of 10 per cent of the qualified electors of such county based on the total vote cast in the last county election shall, by resolution, submit to the voters of such county the proposition of creating a port district which will be coextensive with the limits of such county as now or hereafter established. Such petition shall be filed with the county clerk, who shall, within 15 days, examine the signatures thereof and certify to the sufficiency or insufficiency thereof, and for such purpose the county clerk shall have access to all registration books in the possession of the officers of any incorporated city or town in such proposed port district.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.

120.3 Insufficient petitions; certification of sufficiency; submission of proposition at election.
Sec. 3. If such petition be found to be insufficient, it shall be returned to the person or persons filing the same, who may, within 10 days thereafter, amend or add names thereto, when the same shall be returned to the county clerk who shall have an additional 15 days to examine the same and attach his certificate thereto. No person having signed such petition shall be allowed to withdraw his name therefrom after the filing of the same with the county clerk. Whenever such petition shall be certified to as sufficient, the county clerk shall forthwith transmit the same, together with his certificate of sufficiency attached thereto, to the board of county supervisors, who shall submit such proposition at the next general election, or the board of county supervisors may at their first meeting after the date of such certificate, by resolution call a special election to be held not less than 30 days nor more than 60 days from the date of such certificate.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.
120.4 Election; notice, form of ballot.

Sec. 4. The notice of the election shall state the boundaries of the proposed port district and the object of such election. In submitting the said question to the voters for their approval or rejection, the proposition shall be expressed on said ballot substantially in the following terms: “Port of ............... , Yes” (giving the name of the principal port city within such proposed port district, or if there be more than 1 city within such district, such name as may be determined by the board of county supervisors). “Port of ............... , No” (giving the name of the principal port city within such proposed port district, or if there be more than 1 city of the same class within such district, such name as may be determined by the board of county supervisors).


Compiler’s note: For repeal of act, see MCL 120.130 and Compiler’s note thereto.

120.5 Formation; procedure, referendum, effective date of creation.

Sec. 5. Any city or township, or any 2 or more whole contiguous cities or townships, or any combination thereof, by resolution of their respective governing bodies, approved by a majority vote of the electors may form a port district. The resolution shall designate the name of the port district and the cities or townships to be included in the port district. The proposition to create the port district shall be submitted at a general or special election held simultaneously in each city or township having indicated its desire to become a part of the port district, and the date of such election shall be set forth in the resolution. The procedures relative to conducting the election shall be as nearly as may be in the same form as provided herein for the formation of a port district coterminous with a county and when not so provided in conformity with the general election laws or the charter of each city. The creation of the port district shall become effective upon the filing with the secretary of state and county clerk of the county in which the cities or townships are located, of certified copies of each resolution, each election notice, and each official canvass of votes showing that in each city or township the proposition was approved by a majority of the electors voting on the proposition.


Compiler’s note: For repeal of act, see MCL 120.130 and Compiler’s note thereto.

120.6 Formation of district comprising more than 1 county; limitation; lesser port districts.

Sec. 6. A port district may be comprised of more than 1 whole county if the electors in such counties so elect, and the same procedure shall be followed as is prescribed in this act for the formation of a port district coextensive with a county, except that the board of county supervisors of the respective counties composing the proposed district shall each act in the submission of the proposition and have charge of the elections in their respective counties. No lesser port district shall ever be created within the limits in whole or in part of any port district. No port district shall consist of more than 5 whole contiguous counties.


Compiler’s note: For repeal of act, see MCL 120.130 and Compiler’s note thereto.

120.7 Formation of district; canvass and declaration of election results; three-fifths vote.

Sec. 7. Within 5 days after such election the board of supervisors shall canvass the returns and if at such election 3/5 of the voters voting upon such proposition shall vote in favor of the formation of such district, the board of county supervisors shall so declare in its canvass of the returns of such election and such voting district shall then be and become a municipal corporation of the state of Michigan and the name of such port district shall be “port of ............... ,” (inserting the name appearing on the ballot).


Compiler’s note: For repeal of act, see MCL 120.130 and Compiler’s note thereto.

120.8 Formation of district; election and survey expense.

Sec. 8. All the expenses of elections for the formation of such port districts shall be paid by the county or counties holding election, and such expenditure is hereby declared to be for county purposes. Prior to the
adoption of a resolution by the board of supervisors to submit the question of establishing a port district to the electors, said board may expend not to exceed 5,000 dollars for purposes of making a survey and study of a port district plan.


Compiler’s note: For repeal of act, see MCL 120.130 and Compiler’s note thereto.

***** 120.9 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

120.9 Port commission, appointment, term, vacancies.

Sec. 9. The control and management of the port district shall be exercised through a port commission consisting of 5 members who shall be appointed by the boards of supervisors. In port districts the boundaries of which are coterminous with a single county at least 2 members shall be residents of the city constituting the seat of the county in which the port district lies. In any port district located in more than 1 county, representation on the port commission from each county covered by the port district shall be, as near as may be, in proportion to the state equalized value of the county in relation to the total state equalized value of the port district. The terms of office of the persons appointed shall be so arranged and designated at the time of their appointment that the term of 2 members shall expire in 3 years, 2 in 2 years, and 1 in 1 year, from July 1 following the appointment. Annually thereafter the boards of supervisors shall appoint the member or members to serve for 3 years as the term of any member or members appointed by them shall expire; any vacancy occurring among the commissioners shall be filled for the unexpired term by the board of supervisors. In any port district, the boundaries of which are coterminous with a city or township or coterminous with 1 or more whole cities or coterminous with 1 or more whole townships, the appointment of members of the port commission shall be made by the governing body of the city or township or cities or townships in which the port district is located, and such members shall hold office and be appointed in the same manner for the same term and subject to the same conditions as members of port districts appointed by the boards of supervisors.


Compiler’s note: For repeal of act, see MCL 120.130 and Compiler’s note thereto.

***** 120.10 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

120.10 Port commission; service of member; quorum; passage of resolution; transaction of business; eligibility to hold office; financial interest prohibited; waiver; vacancy; removal; oath.

Sec. 10. A member of the commission shall continue to serve until a successor is appointed and qualified. A majority of the port commissioners constitutes a quorum for the transaction of business and the concurrence of the majority of the commissioners shall be necessary for the passage of a resolution. The business of the commission shall not be transacted unless there are in office at least a majority of the full number of commissioners fixed by law. A person shall not be eligible to hold the office of port commissioner unless the person is a qualified voter, a property owner within the port district, and is and has been a resident in the port district for at least 3 years. A member of a port commission shall not have a financial interest in the profits of a contract or business transaction with the port district. This prohibition shall not apply if the commission declares, on the record, and it is found by unanimous vote of the members present not having a financial interest, that the best interests of the district are to be served by the waiving of the prohibition in a particular case, and then only if competitive purchasing and contracting are used in the case, or if the members of the commission not having an interest, unanimously determine that competitive purchasing or contracting is not feasible in that particular case. A vacancy in the office of port commissioner may occur by death, resignation, or removal as provided in this section, by conviction of a felony, by statutory disqualification, or by a permanent disability preventing the proper discharge of the duties of a commissioner. The county board of commissioners may remove a port commissioner for habitual misconduct, misfeasance, habitual or willful neglect of duty, or when the board is satisfied that the officer is incompetent to properly execute the duties of the office. A member of a port district appointed by the governing body of a city or township or cities or townships as provided in section 9, may be removed by the governing body for any of the reasons set forth in this section. A commissioner, within 20 days after the commission receives notice of appointment, shall qualify by taking and subscribing the constitutional oath of office.

120.10a Conducting business at public meeting; notice.

Sec. 10a. The business which the commission or a board or committee created pursuant to this act may perform shall be conducted at a public meeting of the commission held in compliance with Act No. 267 of the Public Acts of 1976, being sections 15.261 to 15.275 of the Michigan Compiled Laws. Public notice of the time, date, and place of the meeting shall be given in the manner required by Act No. 267 of the Public Acts of 1976.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note therefor.

120.11 Port commission; submission of propositions at elections, canvass of votes.

Sec. 11. At any general state election propositions may be submitted to the electors on such subjects as the port commission of a port district may by resolution prescribe subject to the limitations and pursuant to the requirements of this act. At the request of the port commission the governing body of the cities or townships or the county or counties comprising the port district shall call a special election for the submission of propositions and the expenses of such elections shall be paid by the port district. It shall be the duty of the election officials of the cities or townships or the county or counties in a port district to prepare the ballots or voting machines for general or special elections so that questions submitted by the port commission shall be submitted to the electors. The canvass of votes on such questions shall, if the port district be located in a single county, be made by the board of county canvassers, and if it be located in more than 1 county, be made by the board of state canvassers. The general election laws of the state shall govern the conduct of all such elections and the qualifications of electors.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note therefor.

120.12 Port commission; commissioners, compensation; mileage, expenses.

Sec. 12. Port commissioners shall receive such compensation as shall be determined and fixed by resolution of the governing body of the cities or townships or the board of supervisors of the county or counties in which the port district is located. Port commissioners, while actually engaged in the performance of their duties, outside the area of the port, shall also be paid their actual traveling expenses, both said traveling expenses and mileage to be submitted in writing to the port commission, and to be audited and approved in writing by said port commission before payment.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note therefor.

120.13 Port commission; acquisition of property.

Sec. 13. Each port commission shall have power to acquire by purchase or condemnation, or both, all lands, property, property rights, leases or easements necessary for the purposes of the port districts and to exercise domain in the acquirement or damaging of all land, property, property rights, leases or easements. Such right of domain shall be exercised in the same manner and by the same procedure as is and may be provided by law for the taking of private property by the board of county supervisors in this state, except insofar as such may be inconsistent with the provisions of this act, and the duties devolving upon the county treasurer under such law shall be and the same are hereby imposed upon the county treasurer for the county in which such property is located for the purposes of this act.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note therefor.
120.13a Port commission; acceptance of gifts, grants or loan; approval.

Sec. 13a. Each port commission may accept gifts, grants, loans or contributions from the United States of America, this state, local municipalities, foundations, any public or private agency or any individual. In port districts coterminous with a county or counties, such authority shall not be exercised without first obtaining the approval therefor by a majority vote of the members elect of the board of supervisors of each county wherein the port district is situated.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.

120.14 Port districts; powers.

Sec. 14. Each port district shall have power to lay out, construct, condemn, purchase, acquire, improve, enlarge, extend, maintain, conduct and operate, seawall jetties, piers, wharves, docks, boat landings, warehouses, storehouses, elevators, grain bins, cold storage plants, terminal icing plants, bunkers, oil tanks, ferries, canals, locks, bridges, seaways, tramways, cableways, conveyors, modern appliances for the economical handling, storing and transporting of freight and handling of passengers traffic and other harbor improvements, and rail and water transfer and terminal facilities, (the foregoing being sometimes herein referred to as “public improvements”) and in connection with the operation of the port district to perform all customary services including the receiving, delivering, handling, weighing, measuring and reconditioning of all commodities received, and the advertisement of the business of the port district. No such public improvement shall be acquired without first obtaining the approval thereof by a 2/3 vote of the members present and voting of the board or boards of supervisors of the county or counties in which the port district is situated. In addition to the foregoing powers each port commission shall have the following powers:

(b) Subject to the paramount authority of the federal government and the state or any municipality thereof, to regulate the construction of structures in navigable waters including the establishment of harbor lines, pierhead lines and bulkhead lines.

(c) To require within the area designated as the port area by the comprehensive port plan the repair, rebuilding, or in the alternative the removal, by the owners, of private marine facilities when said private marine facilities are determined by the port commission to constitute a hazard to navigation. The determination of the port commission shall be made in the manner and in accordance with the standards prescribed in the building and safety code of the municipality wherein said private facility is located.

(d) The powers granted in subsections (b) and (c) above shall be exercised by the port commission in accordance with such rules and regulations as shall be adopted by a majority vote of the port commission and approved by a majority vote of the members elect of the board of supervisors. If within 180 days after submission to said board such board fails to disapprove such rules and regulations, it shall be thereupon presumed that such board has approved the same. Appeals from determinations of the port commission shall be had in the same manner as appeals on “contested cases” as provided in Act No. 197 of the Public Acts of 1952, as amended, being sections 24.101 to 24.110 of the Compiled Laws of 1948.

(e) To represent the port district before all federal, state and local agencies.

(f) To cooperate with other public agencies and with industry and business in port improvement matters.

(g) To lay out, construct, condemn, purchase, acquire, operate, lease, sell and convey planned industrial districts within the confines of the area designated as the port area by the comprehensive port plan and adjacent to existing port facilities and improvements.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler’s note thereto.

120.15 Port district public improvement; issue of evidence of indebtedness.

Sec. 15. Whenever in order to carry out the purposes of this act it becomes necessary to acquire property which cannot be wholly paid for out of any funds which may be available to the commission under the provisions of section 24, the commission is authorized and empowered to issue notes, bonds or other evidences of indebtedness which shall be a lien upon the property to be acquired for such purposes, which lien may be secured by a mortgage, trust deed, or other form of indenture, and is also authorized and empowered...
to, in the name of the port district, guarantee the payment in whole or in part of any and all such notes, bonds or other evidences of indebtedness according to the terms thereof, or of any mortgage, trust deed or other security issued in connection therewith.


**Compiler’s note:** For repeal of act, see MCL 120.130 and Compiler’s note thereto.

***** 120.16 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

120.16 Port district public improvements; bonds for public improvement, revenue, full faith and credit, approvals.

Sec. 16. In lieu of the bonds authorized in section 15, any port district may issue revenue bonds as provided in Act No. 94 of the Public Acts of 1933, as amended, being sections 141.101 to 141.139 of the Compiled Laws of 1948, or as may be provided in any other appropriate statute of this state, for the purpose of financing the whole or any part of the cost of acquiring, improving, enlarging, extending or repairing any of the public improvements mentioned in section 14 and in such case any such public improvements shall be deemed to be a “public improvement” under said act, and the port district shall be governed by the provisions of said act in all matters covered thereby. No such bonds shall be issued without first obtaining the approval therefor by a majority vote of the governing body of each of the cities, towns, or counties that are member units of the port districts. Revenue bonds which pledge the faith and credit of the port district shall be controlled by the general revenue limitations of section 24. No bonds, which pledge the faith and credit of the county or counties wherein the port district is situated, shall be issued without first obtaining the approval of the electors.


**Compiler’s note:** For repeal of act, see MCL 120.130 and Compiler’s note thereto.

***** 120.17 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

120.17 Port district public improvements; lands, leases and easements.

Sec. 17. Each port commission shall have power to own and control lands, leases, and all easements in land necessary for the purposes of the port district.

**History:** 1925, Act 234, Eff. Aug. 27, 1925;—CL 1929, 2306;—CL 1948, 120.17.

**Compiler’s note:** For repeal of act, see MCL 120.130 and Compiler’s note thereto.

***** 120.18 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

120.18 Port district public improvements; streams.

Sec. 18. Each port commission shall have power to improve navigable and nonnavigable streams of the United States and the state of Michigan within the port district.

**History:** 1925, Act 234, Eff. Aug. 27, 1925;—CL 1929, 2307;—CL 1948, 120.18.

**Compiler’s note:** For repeal of act, see MCL 120.130 and Compiler’s note thereto.

***** 120.19 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

120.19 Port district public improvements; waterways, creation.

Sec. 19. Each port commission shall have power to create and improve for harbor purposes any waterways within the port district; to regulate and control all such waters and all natural or artificial waterways within the limits of such port district so far and to the full extent that this state can grant the same and remove obstructions therefrom.

**History:** 1925, Act 234, Eff. Aug. 27, 1925;—CL 1929, 2308;—CL 1948, 120.19.

**Compiler’s note:** For repeal of act, see MCL 120.130 and Compiler’s note thereto.

***** 120.20 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

120.20 Public improvements; income producing; payment in lieu of taxes.

Sec. 20. Any port district owning and operating an income-producing public improvement shall pay from such income annual sums in lieu of taxes to the county, city, school district or other taxing unit of the state, with respect to any real or personal property held by it and which constitutes a part of such improvement.
amount so paid to each taxing unit in each year shall be equivalent to the taxes which would have been paid if such property were not exempt from taxation. The port district shall have the same right of appeal as is provided by law to any other taxpayer insofar as any levy or assessment of such taxes is concerned.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.

***** 120.21 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

120.21 Commodities; tolls, fees, rents; approval.

Sec. 21. Each port district shall have power to fix and collect tolls, fees, rents and other charges for the use of the services, property, facilities and commodities furnished by it, subject to review and approval of a majority of the members present and voting of the board or boards of supervisors of the county or counties in which the port district is situated. The tolls, fees, rents and other charges shall at no time be less than necessary to satisfy the requirements of any statute, ordinance or resolution under which revenue bonds then outstanding shall have been issued by the port district.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.

***** 120.22 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

120.22 Lease of property; maximum term, bond.

Sec. 22. Each port commission shall have power to lease under such covenants and conditions as the commission may prescribe, all storage facilities, wharves, piers, bulkheads, docks, sheds, warehouses, industrial locations and other property owned and controlled by said port district upon such terms as the port commission may deem proper: Provided, That no lease shall be executed for longer than a period of 50 years and every such lease shall be secured by a bond with surety satisfactory to or approved by the port commission.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.

***** 120.23 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

120.23 Sale of property; approval.

Sec. 23. Each port commission shall have power to sell and convey any property in anywise acquired and owned by the port district whenever the port commission of such district shall have by resolution declared such property to be no longer needed for the purpose of the port district: Provided, That the power herein granted to the commission shall not be exercised without first obtaining the approval therefor by a 2/3 vote of the members elect of the board of supervisors of the county or counties in which such property is located.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.

***** 120.24 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

120.24 Port commission; taxes, special assessments; allocation of millage.

Sec. 24. Each port commission shall have power to raise revenue by a tax to be levied on all taxable property within such port district, not exceeding 2 mills in any one year on each dollar of the assessed valuation of the taxable property in such port district. The tax shall be for such number of years as approved by the electors of the cities or townships or of the county or counties and shall be levied and collected in the same manner now provided for the levy of state and county taxes under the general tax law, and shall be paid to the county treasurer having custody of the port district fund, to the credit of such fund, and such tax shall not exceed $1,500,000.00 in any one year. If the port commission is authorized under any present or future law of the state to establish special assessment zones and to raise revenue through the medium of special assessments for benefits within such zones, taxes so assessed shall be in excess of such 2 mill limitation. This act shall not authorize a county allocation board to allocate millage within the 15 mill limitation for capital construction purposes, except to meet any deficiency in the payments of principal or interest upon bonds.
regularly issued with the approval of the electors. Funds may be appropriated from regular millage for operating purposes only in an amount to be established by the board of supervisors, and the board of supervisors may also appropriate for any purposes moneys obtained as revenues from the operation of the port.


**Compiler's note:** For repeal of act, see MCL 120.130 and Compiler's note thereto.


**Compiler's note:** The repealed sections provided for port districts' estimates and reports of amounts necessary to be raised by general tax.

***** 120.25 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

**120.25 Port commission; bond issues, limit, approval by governing bodies or electors.**

Sec. 25. Each port commission shall have power to borrow money and issue bonds to an amount not greater in any one year than 1/5 of 1% of the total assessed valuation of such port district, nor to a total amount including all outstanding bonded indebtedness of such district exceeding 2% of the assessed valuation of such district and at a rate of interest not to exceed 6% after a resolution to that effect is passed by the majority of the board of commissioners and approved by a 3/5 majority of the members elect of the governing body of the cities or townships or of the board of supervisors of the county or counties of the port district, and the question shall be submitted to a vote of the electors of the district at a general election and 51% of the electors voting on such resolution shall vote in favor thereof. The election officials of the cities or townships or of the county or counties in the port district shall prepare the ballots or voting machines. The canvass of votes on such question shall, if the port district be located in a single county, be made by the board of county canvassers, and if it be located in more than 1 county, be made by the board of state canvassers. The general election laws of the state shall govern the conduct of the vote and qualifications of electors. In any port district having an assessed valuation of $50,000,000.00 or less, the commission shall have power to borrow money and issue bonds to an amount not greater in any one year than 1 1/2% of the total assessed valuation of such district. General bonds for any such district may be issued for any period not exceeding 30 years. No bond or evidence of indebtedness shall be negotiated at less than par and the accrued interest. The question of a bond issue may be submitted to the electors at the same time that the question of the creation of a port district is submitted to them, but a vote authorizing a bond issue shall be invalid unless the creation of the district is also authorized by the electors voting thereon. In such case the expense of the elections shall be paid by the cities or townships or the county or counties and the question of the bond issue shall be submitted in substantially the following form: “Shall the port commission, if authority be given for its creation at this election, have the power to issue ............ in bonds for port improvements?”


**Compiler's note:** For repeal of act, see MCL 120.130 and Compiler's note thereto.

***** 120.26 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

**120.26 Port commission; assistants and employees.**

Sec. 26. Each port commission shall have power to employ such assistants, clerks, inspectors, engineers, legal counsel or other employees for carrying out the purposes of the port commission, and fix the salaries, compensation and bonds of such employees as it may by resolution provide, subject, however, to the provisions of section 34 hereof.


**Compiler's note:** For repeal of act, see MCL 120.130 and Compiler's note thereto.

***** 120.27 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

**120.27 Port commission; expenditures, authority, bids.**

Sec. 27. No port district coextensive with a county, or comprising an area greater than a county, shall be empowered to make any expenditure or any commitment for the expenditure of funds, arising from any
source whatsoever, except to the extent that the same shall have been first duly authorized by the port district budget committee if there be one and specific appropriations made by the board or boards of supervisors of such county or counties: Provided, That nothing in this act contained shall be construed as preventing a port district from making any expenditure or commitment, or performing any act, required by any statute or by the terms of any ordinance or resolution pertaining to the issuance of revenue bonds, if such issuance was approved by the board or boards of supervisors as required in section 16 of this act. In all cases involving the expenditure of $1,000.00, or more, each port commission shall enter into contract with the lowest competent and reliable bidder for all work to be done and for the purchase of all supplies and materials required by the port district.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.

***** 120.28 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

120.28 Port commission; lease of harbor area, rents.

Sec. 28. The port commission of each port district shall have full power and authority to lease the harbor area belonging to the state of Michigan situated within such port district, to the highest bidder upon such terms and conditions as shall conform to the provisions of this act and to the comprehensive scheme of harbor improvement as herein later provided. Every such lease shall provide that the rental thereunder shall be payable to the county treasurer wherein such port district is situated for the use of such port district and to go into a special fund hereinafter provided for: Provided, That where the port district covers 2 or more counties such rents shall be paid to the county treasurer designated by the port commission.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.

***** 120.29 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

120.29 Port commission; election and powers of officers; rules; seal; recording proceedings of board; disposition and disbursement of funds of port district; office; access to maps, charts, plans, and documents.

Sec. 29. The port commission shall elect from among its members a chairperson, vice-chairperson, and secretary. The officers selected shall possess and exercise the powers granted to them by the commission. The port commission, by resolution, shall adopt rules governing the transaction of its business and shall adopt an official seal. Proceedings of the board of commissioners shall be by resolution recorded in a book kept for that purpose. The funds of the port district shall be paid to the county treasurer, of the county in which the port district is situated, or if it consists of 2 or more whole counties, then to the county treasurer designated by the commission. Disbursements shall be made by the officer on warrants drawn by the county auditor, or, in port districts not having a county auditor, on warrants drawn by the county clerk, on order of, or vouchers approved by, the port commission. The port commission shall have an office in which they shall keep maps, charts, plans, and documents relating to the land and waters and all matters for which the commission is responsible. The commission shall have access to other maps, charts, plans, and documents relating to port district in the office or custody of a public board, commission, or officer.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.

***** 120.29a THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: SEE (2) OF 120.130 *****

120.29a Availability of writings to public.

Sec. 29a. A writing prepared, owned, used, in the possession of, or retained by the commission or a board or committee created pursuant to this act in the performance of an official function shall be made available to the public in compliance with Act No. 442 of the Public Acts of 1976, being sections 15.231 to 15.246 of the Michigan Compiled Laws.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.

***** 120.30 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****
120.30 Comprehensive port plan of harbor improvements; notice, hearing, approval by municipalities, restrictions.

Sec. 30. It shall be the duty of the port commission of any port district, before creating any improvements hereunder, to adopt a comprehensive port plan of harbor improvement in such port district after a public hearing thereon, of which at least 10 days' notice shall be published in a daily newspaper of general circulation in such port district. Such comprehensive port plan shall include an indication of the relationship of the area designated as the port area by the comprehensive port plan to land transportation and other land uses related to port activities. The port commission shall submit to the legislative body of any city, village or township, for its approval, that portion of the comprehensive plan which includes territory lying within the boundaries of the said city, village or township. Such submission shall be made by delivering the said portion of the comprehensive port plan to the clerk of the city, village or township involved, and if approved by the legislative body thereof, shall take effect from the date of such approval. If within 180 days after submission the legislative body of such city, village or township fails to disapprove such portion of the plan as shall have been submitted, it shall be thereupon presumed that such city, village or township has approved the same and such portion of the plan shall become effective without further notice. If the legislative body of the city, village or township to which a portion of the plan as amended or altered has been submitted disapproves the same, the commission may proceed to make such public improvements on lands leased or owned by the port commission as are prescribed in said plan to be made in the other part or parts of the port district. The port commission shall have the power to amend or alter the comprehensive port plan: Provided, however, That wherever such amendments or alterations of the comprehensive port plan include any area or territory lying within a city, village or township, that portion of the amendment or alteration shall be submitted to the legislative body of said city, village or township for its approval. Such submission shall be made by delivering the said portion of the comprehensive port plan, as amended or altered, to the clerk of the city, village or township involved, and if approved by the legislative body thereof, shall take effect from the date of such approval. If within 180 days after submission the legislative body of such city, village or township fails to disapprove that portion of the amendment or alteration of the comprehensive plan, it shall be thereupon presumed that such city, village or township has approved the same, and such portion of the comprehensive plan, as amended or altered, shall become effective without further notice. If the legislative body of the city, village or township to which a portion of the plan as amended or altered has been submitted disapproves the same, the commission may proceed to make such public improvements on lands leased or owned by the port commission as are prescribed in such amendment or alteration of the port plan to be made in the other part or parts of the port district. Wherever the legislative body of any city, village or township has approved that portion of the comprehensive port plan which includes the area or territory of such city, village or township, it shall be the duty of the port commission to recommend the zoning district classifications for the area to said legislative body: Provided, however, That nothing herein contained shall be construed as conferring, directly or indirectly, upon said port district, or port district commission or authority, power or powers to acquire, own, maintain or operate the Detroit, Michigan—Windsor, Ontario, Canada tunnel or international bridge: And provided further, That where any language in said act is in conflict with this prohibition, then and in that event any such language shall be deemed to be void and of no force or effect.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.

***** 120.31 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

120.31 Property rights in improvements; cooperation between port district and certain other public bodies.

Sec. 31. No improvements shall be acquired or constructed by the port district unless such improvements shall, when completed, be the property of such port district, the county in which such port district is located, any commercial waterway district created within its boundaries, any city within such port district, the state of Michigan, or the United States of America, and the funds of such port district may be expended in the acquisition or construction of any harbor improvement embraced in such general plan adopted as in this act provided, in conjunction with the county in which such port district is located, any commercial waterway district created within its boundaries, any city in such port district, the state of Michigan, or the United States of America, or any or all of them.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.
120.32 Power to borrow in anticipation of tax.
Sec. 32. (1) A port commission is hereby authorized, prior to the receipt of taxes raised by a levy, to borrow money or issue the warrants of the district in anticipation of the revenues to be derived by the district from the levy of taxes for the purpose described in this act. The warrants shall be redeemed from the first money available from the levy of taxes when collected.

(2) Bonds and notes issued under this section are subject to the revised municipal finance act, 2001 PA 34, MCL 141.2101 to 141.2821.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.

120.33 Fund created; special funds; disbursement.
Sec. 33. The county treasurer of the county in which the port district is located, or in the event that the district covers 2 or more whole counties, then the county treasurer designated by the port commission shall create a fund to be known as the “Port of ............... Fund,” into which shall be paid all money received by him from the collection of taxes in behalf of such port district, and no money shall be disbursed therefrom except upon warrants of the county auditor, or upon order of or vouchers approved by the port commission. The county treasurer shall also maintain such other special funds as may be prescribed by the port commission, into which shall be placed such monies as the port commission may by its resolution direct, and from which disbursements shall be made upon proper warrants of the county auditor or county clerk issued against the same by authority of the port commission.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.

120.34 Annual reports; budgets; budget committee.
Sec. 34. The commission shall on or before September 1 of each year submit a written report to the governor, the legislature, the public service commission, and the governing body of the cities or townships or the board of supervisors of the county or counties of the port district, which report shall contain a statement of the doings of the port commission during the preceding calendar year and such recommendations as to legislation as in the opinion of the commission may be necessary or expedient to enable the commission better to administer the affairs of the port district and to carry out the purposes for which the port district was enacted. In port districts coterminous with a county the commission shall also file with the board of supervisors of the county on or before September 1 of each year a budget setting out in detail its program for the ensuing year, together with the several amounts estimated by the commission to be necessary for the purposes indicated therein. The board of supervisors may decrease the budget proposed by the commission and also eliminate specific items. In port districts coterminous with 2 or more counties, the boards of supervisors of the counties included in the port district shall appoint a port district budget committee composed of not more than 15 members of the boards of supervisors. Representation on the port district budget committee from each county in the port district shall be, as near as may be, in proportion to the state equalized value of the county in relation to the total state equalized value of the port district. The port district budget committee shall review the budget request of the commission and recommend to the boards of supervisors of the counties in the port district the budget for the port district. The boards of supervisors may decrease the budget recommended by the port district budget committee and also eliminate specific items. The budget shall be approved by boards of supervisors with 66-2/3% of the state equalized value of the total port district and the budget as approved shall be reported to the port district budget committee and port commissions, and shall become final and binding on the boards of supervisors of all the counties in the port district, and the boards of supervisors shall appropriate their proportionate share of the total budget for the port district. The budget shall be apportioned between the counties in proportion to the state equalized value of the county in relation to the total state equalized value of the port district. No money shall be expended by the commission for any purpose not included in the budget as approved by the port district budget committee and the boards of supervisors of the county or counties in the district. In port districts coterminous with a county, all disbursements shall be made by the county treasurer on warrants drawn by the board of county auditors, or in port districts having no board of county auditors on warrants drawn by the county clerk, upon
order of vouchers approved by the port commission. In port districts of 2 or more counties, disbursements shall be made by the county treasurer designated by the commission subject to the same conditions imposed on the county treasurer of a port district coterminous with 1 county. Port districts coterminous with a city or township shall follow the same procedure, as near as may be, substituting the local governing body and local officers where applicable for the board of supervisors and county officials, and be subject to the same conditions as set forth for county port districts, and port districts coterminous with 2 or more cities or townships shall in the same manner follow the procedure as near as may be and be subject to the same conditions as set forth for port districts coterminous with 2 or more counties.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.

***** 120.34a THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

120.34a Port districts coterminous with cities and townships; powers of local governing bodies.

Sec. 34a. In construing this act, port districts coterminous with a city or township shall follow the same procedure, as near as may be, substituting the local governing body and local officers where applicable for the board of supervisors and county officials, shall enjoy the same powers and be subject to the same conditions as set forth for county port districts, and port districts coterminous with 2 or more cities or townships shall in the same manner follow the same procedure, as near as may be, shall enjoy the same powers and be subject to the same conditions as set forth for port districts coterminous with 2 or more counties.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.

***** 120.35 THIS SECTION IS SUBJECT TO CONDITIONAL REPEAL: See (2) of 120.130 *****

120.35 Construction of act.

Sec. 35. This act shall not be construed to repeal, amend, or modify any law heretofore enacted, providing a method of harbor improvement, regulation or control in this state, but shall be held to be an additional and concurrent method providing for such purpose and except by agreement between the port commission and the parties at interest, shall not be construed to include within its terms any property now or hereafter devoted to public use, owned, operated or controlled by any person, municipality or private corporation.


Compiler's note: For repeal of act, see MCL 120.130 and Compiler's note thereto.


Compiler's note: The repealed section provided that nothing in port district act deemed to constitute a grant of state land.
Appendix VIII Michigan Minority Supplier Development Council Certification
THIS CERTIFIES THAT

DRM MAINTENANCE & MANAGEMENT CO.

* Nationally certified by the: MICHIGAN MINORITY SUPPLIER DEVELOPMENT COUNCIL

* NAICS Code(s): 561730; 488490

* Description of their products/services as defined by the North American Industry Classification System (NAICS)

11/01/2021
Issued Date

02/01/2023
Expiration Date

Ying McGuire
NMSDC CEO and President

Michelle Sourie Robinson, President & CEO

MI01394
Certificate Number

By using your password (NMSDC issued only), authorized users may log into NMSDC Central to view the entire profile: http://nmsdc.org

Certify, Develop, Connect, Advocate.

* MBEs certified by an Affiliate of the National Minority Supplier Development Council, Inc.®
ATTACHMENTS FORM

Instructions: On this form, you will attach the various files that make up your grant application. Please consult with the appropriate Agency Guidelines for more information about each needed file. Please remember that any files you attach must be in the document format and named as specified in the Guidelines.

Important: Please attach your files in the proper sequence. See the appropriate Agency Guidelines for details.
**Application for Federal Assistance SF-424**

<table>
<thead>
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<th><strong>1. Type of Submission:</strong></th>
<th><strong>2. Type of Application:</strong></th>
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**State Use Only:**

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**8. APPLICANT INFORMATION:**

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<th><strong>c. UEI:</strong></th>
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**f. Name and contact information of person to be contacted on matters involving this application:**

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<tr>
<th><strong>Prefix:</strong></th>
<th><strong>First Name:</strong> Gregg</th>
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**Organizational Affiliation:**

The Port of Monroe

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<tr>
<td><a href="mailto:gward@portofmonroe.com">gward@portofmonroe.com</a></td>
</tr>
</tbody>
</table>
### Application for Federal Assistance SF-424

#### 9. Type of Applicant 1: Select Applicant Type:
- D: Special District Government

#### Type of Applicant 2: Select Applicant Type:

#### Type of Applicant 3: Select Applicant Type:

* Other (specify):

#### 10. Name of Federal Agency:
Maritime Administration

#### 11. Catalog of Federal Domestic Assistance Number:
29.823

**CFDA Title:**
Port Infrastructure Development Program

#### 12. Funding Opportunity Number:
MA-PID-22-001

* Title:
2022 Port Infrastructure Development Program Grants

#### 13. Competition Identification Number:

**Title:**

#### 14. Areas Affected by Project (Cities, Counties, States, etc.):

**Add Attachment**  **Delete Attachment**  **View Attachment**

#### 15. Descriptive Title of Applicant's Project:
Lake Erie Renewable Energy Resilience Project

Attach supporting documents as specified in agency instructions.

**Add Attachments**  **Delete Attachments**  **View Attachments**
Application for Federal Assistance SF-424

16. Congressional Districts Of:
   * a. Applicant MI07
   * b. Program/Project MI07

Attach an additional list of Program/Project Congressional Districts if needed.

17. Proposed Project:
   * a. Start Date: 07/01/2023
   * b. End Date: 10/01/2025

18. Estimated Funding ($):

   * a. Federal 11,051,586.00
   * b. Applicant 3,117,114.00
   * c. State 0.00
   * d. Local 0.00
   * e. Other 0.00
   * f. Program Income 0.00
   * g. TOTAL 14,168,700.00

19. Is Application Subject to Review By State Under Executive Order 12372 Process?
   [ ] a. This application was made available to the State under the Executive Order 12372 Process for review on
   [ ] b. Program is subject to E.O. 12372 but has not been selected by the State for review.
   [x] c. Program is not covered by E.O. 12372.

20. Is the Applicant Delinquent On Any Federal Debt? (If “Yes,” provide explanation in attachment.)

   [ ] Yes  [x] No

If “Yes”, provide explanation and attach

21. “By signing this application, I certify (1) to the statements contained in the list of certifications” and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances” and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)

[ ] I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:

Middle Name: A

* Last Name: Torrey

Suffix:

* Title: Grant Manager

* Telephone Number: 7325347824

Fax Number: 7325340154

* Email: ttorrey@torrey-enterprises.com

* Signature of Authorized Representative: Tiffany Torrey

* Date Signed: 06/15/2022
# BUDGET INFORMATION - Construction Programs

**NOTE:** Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case, you will be notified.

<table>
<thead>
<tr>
<th>COST CLASSIFICATION</th>
<th>a. Total Cost</th>
<th>b. Costs Not Allowable for Participation</th>
<th>c. Total Allowable Costs (Columns a-b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Administrative and legal expenses</td>
<td></td>
<td>$0.00</td>
<td>$1,961,900.00</td>
</tr>
<tr>
<td>2. Land, structures, rights-of-way, appraisals, etc.</td>
<td></td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>3. Relocation expenses and payments</td>
<td></td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>4. Architectural and engineering fees</td>
<td></td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>5. Other architectural and engineering fees</td>
<td></td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>6. Project inspection fees</td>
<td></td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>7. Site work</td>
<td></td>
<td>$25,000.00</td>
<td>$25,000.00</td>
</tr>
<tr>
<td>8. Demolition and removal</td>
<td></td>
<td>$300,000.00</td>
<td>$300,000.00</td>
</tr>
<tr>
<td>9. Construction</td>
<td></td>
<td>$10,036,550.00</td>
<td>$10,036,550.00</td>
</tr>
<tr>
<td>10. Equipment</td>
<td></td>
<td>$537,000.00</td>
<td>$537,000.00</td>
</tr>
<tr>
<td>11. Miscellaneous</td>
<td></td>
<td>$218,250.00</td>
<td>$218,250.00</td>
</tr>
<tr>
<td>12. SUBTOTAL (sum of lines 1-11)</td>
<td></td>
<td>$13,078,700.00</td>
<td>$13,078,700.00</td>
</tr>
<tr>
<td>13. Contingencies</td>
<td></td>
<td>$1,090,000.00</td>
<td>$1,090,000.00</td>
</tr>
<tr>
<td>14. SUBTOTAL</td>
<td></td>
<td>$14,168,700.00</td>
<td>$14,168,700.00</td>
</tr>
<tr>
<td>15. Project (program) income</td>
<td></td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>16. TOTAL PROJECT COSTS (subtract #15 from #14)</td>
<td></td>
<td>$14,168,700.00</td>
<td>$14,168,700.00</td>
</tr>
</tbody>
</table>

**FEDERAL FUNDING**

17. Federal assistance requested, calculate as follows:
(Consult Federal agency for Federal percentage share.)
Enter eligible costs from line 16c Multiply X 75 % $11,051,586.00

Enter the resulting Federal share.
**DISCLOSURE OF LOBBYING ACTIVITIES**
Complete this form to disclose lobbying activities pursuant to 31 U.S.C.1352

OMB Number: 4040-0013
Expiration Date: 02/28/2025

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. contract</td>
<td>a. bid/offer/appoision</td>
<td>a. initial filing</td>
</tr>
<tr>
<td>b. grant</td>
<td>b. initial award</td>
<td>b. material change</td>
</tr>
<tr>
<td>c. cooperative agreement</td>
<td>c. post-award</td>
<td></td>
</tr>
<tr>
<td>d. loan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. loan guarantee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. loan insurance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. Name and Address of Reporting Entity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Name</td>
</tr>
<tr>
<td>* Street 1</td>
</tr>
<tr>
<td>* City</td>
</tr>
</tbody>
</table>

5. If Reporting Entity in No.4 is Subawardee, Enter Name and Address of Prime:

<table>
<thead>
<tr>
<th>6. * Federal Department/Agency:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Transportation/VIASAD</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. * Federal Program Name/Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port Infrastructure Development Program</td>
</tr>
</tbody>
</table>

8. Federal Action Number, if known:

9. Award Amount, if known:

10. a. Name and Address of Lobbying Registrant:

<table>
<thead>
<tr>
<th>Prefix</th>
<th>* First Name</th>
<th>Middle Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>* Last Name</th>
<th>Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>* Street 1</th>
<th>Street 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>* City</th>
<th>State</th>
<th>Zip</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b. Individual Performing Services (including address if different from No. 10a)

<table>
<thead>
<tr>
<th>Prefix</th>
<th>* First Name</th>
<th>Middle Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>* Last Name</th>
<th>Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>* Street 1</th>
<th>Street 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>* City</th>
<th>State</th>
<th>Zip</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when the transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

<table>
<thead>
<tr>
<th>* Signature:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tiffany Torrey</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>* Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prefix</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>* Last Name</th>
<th>Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Torrey</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title:</th>
<th>Telephone No.:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grant Manager</td>
<td>5325347824</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/15/2022</td>
</tr>
</tbody>
</table>

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