PADUCAH-McCRACKEN COUNTY

Riverport

AUTHORITY

PIDP GRANT APPLICATION

JULY 2021

PROJECT TITLE:	BULK YARD INFRASTRUCTURE REVITALIZATION AND EXPANSION PROJECT
PROJECT LOCATION:	PADUCAH-McCRACKEN COUNTY, KENTUCKY
APPLICATION TYPE:	SMALL INLAND RIVER PORT
PROJECT TYPE:	5) FIXED LANDSIDE IMPROVEMENTS IN SUPPORT OF CARGO OPERATIONS
APPLICANT NAME:	MCCRACKEN COUNTY PADUCAH RIVERPORT AUTHORITY
ELIGIBILITY TYPE:	PORT AUTHORITY
FUNDING REQUEST:	$3.32 million
TOTAL PROJ COST:	$3.82 million
WEBSITE:	WWW.PADUCAHRIVERPORT.ORG

BULK YARD INFRASTRUCTURE REVITALIZATION AND EXPANSION PROJECT

MARITIME ADMINISTRATION (MARAD), U.S DEPARTMENT OF TRANSPORTATION

PORT INFRASTRUCTURE DEVELOPMENT PROGRAM

PIDP FFY 2021

GRANT APPLICATION PROJECT NARRATIVE

PROJECT TITLE:	BULK YARD INFRASTRUCTURE REVITALIZATION AND EXPANSION PROJECT
PROJECT LOCATION:	PADUCAH, McCRACKEN COUNTY, KENTUCKY
APPLICATION TYPE:	SMALL INLAND RIVER PORT, SMALL PROJECT
PROJECT TYPE:	5) FIXED LANDSIDE IMPROVEMENTS IN SUPPORT OF CARGO OPERATIONS
APPLICANT NAME:	PADUCAH-MCCRACKEN COUNTY RIVERPORT AUTHORITY
ELIGIBILITY TYPE:	PORT AUTHORITY
FUNDING REQUEST:	$3.32 million
NON-FEDERAL FUNDS:	$0.50 million
TOTAL PROJ. COST:	$3.82 million
WEBSITE:	WWW.PADUCAHRIVERPORT.ORG
APPLICATION WEBSITE:	https://www.paducahriverport.org/2021-Bulk-Yard-PIDP-Grant

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DUNS#: 114178580

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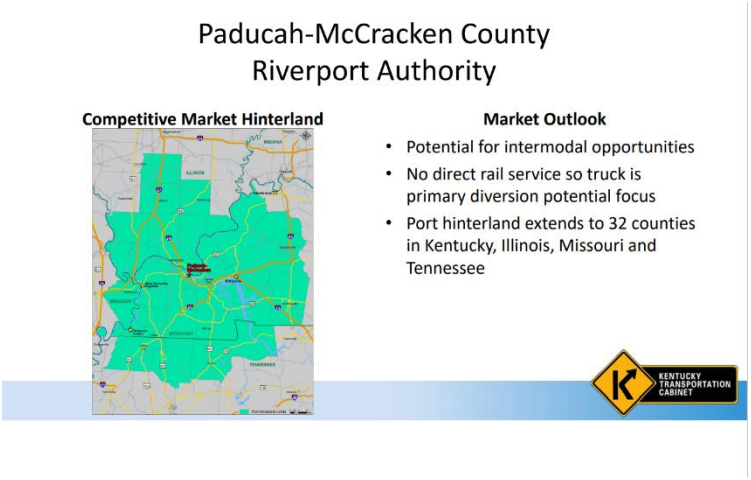
Executive Summary

The Paducah-McCracken County Paducah Authority (PMCRA) in Kentucky is pleased to submit this Small Project at Small Ports application for $3.32 million through the MARAD Port Infrastructure Development Program (PIDP FY21). This grant application will make port bulk cargo operations more efficient and expand capacity to handle additional commodity tonnage by modernizing material handling equipment, repairing damaged storage facilities and upgrading site conditions. The Riverport will be more resilient with the addition of a second scale and a reliable backup power supply.

The PMCRA Bulk Yard Infrastructure Revitalization and Expansion Project is a rural maritime development in the Jackson Purchase Region of Kentucky. For the three years between 2017 and 2019, the Port averaged just under 2.1 million tons of freight qualifying the Project as a small project at a small port as outlined in the National Defense Authorization Act for Fiscal Year 2021. Appendix A contains information on tonnage handled by the Port[1].

This Project will have a significant impact on our four-state region (Kentucky, Illinois, Tennessee, and Missouri) by ensuring a safe, economical, and eco-friendly transportation mode for U.S. shippers of bulk commodities that support local and regional infrastructure projects. The Project will support major infrastructure projects currently underway by the Army Corps of Engineers and state highway projects in the four states. Given new federal investments in infrastructure recently announced that will provide $1.2 trillion in investments over the next 10 years, updating equipment to handle the raw materials needed to efficiently and effectively deliver those projects are critical to making the dollars allocated achieve as much as possible. The proposed investment in this Project is necessary to avoid delays or re-routing of materials due to potential mechanical issues of the current equipment purchased over 40 years ago. The Paducah McCracken County Riverport (PMCR) is the only port within 79 to 127 miles with the equipment and infrastructure needed to move this material, although it is not certain that there is sufficient capacity at the alternate sites. None of the alternate sites are considered viable due to the cost of trucking the freight back into the area.



The PMCR is strategically located at the heart of the inland waterway system. Located on the Tennessee River at mile marker 1.3 to 2.0, the Riverport is a major trans loader of bulk commodities and aggregates from barge to storage yard to truck. The Riverport provides critical supply chain services to the local building and construction industries along with discharging

[1] See https://usace.contentdm.oclc.org/digital/collection/p16021coll2/id/2969

agriculture commodities and other dry bulk products for businesses in Kentucky, Tennessee, Illinois and Missouri. According to the Kentucky Transportation Cabinet's (KYTC) Riverports, Highway and Rail Freight Study, the PMCR market area includes 32 counties in the 4 states.

Environmental Justice analyses are conducted to determine whether a project may result in a disproportionately high adverse impact on communities of color, low-income, elderly and/or disabled population, considered to be disadvantaged. .An Environmental Justice (EJ) and Racial Equity Impact Assessment analysis done for the Project indicates improvement in multimodal and non-motorized access to the adjacent EJ population neighborhoods. Based on this initial analysis, it is expected that the same EJ population will not disproportionately be negatively impacted by the Project during construction.

Continual analysis and monitoring will occur as the Riverport 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. Additionally, the PMCRA will work to set appropriate Disadvantaged Business Enterprise (DBE) goals for the Project where applicable, particularly the hardening of the laydown area.

By modernizing the port's equipment, the PMCRA expects to realize a minimum 10 percent improvement in energy efficiency of the new equipment. After the nonworking scale is removed and a new scale is constructed, it is expected that queue times will decrease through the use of the new scale and an existing working scale; improving throughput resulting in reduced emissions. Users of the existing working scale currently experience long idle times. Regionally, by ensuring reliable throughput at the Riverport, commodities avoid being diverted to trucks or other ports further from the intended destination which reduces greenhouse gas emissions, highway maintenance needs, and safety-related issues from the added vehicle miles traveled.

Exhibit 1: Summary of Proposed Project Current and Future Conditions

Improvement	Current Condition	Future Condition
Barge Unloading Facility	Unpaved laydown areas	• Hardening the laydown area to a concrete pad
Equipment	1970 radial stacker	• Replacing three cable mast radial stackers • Replacing a 90-foot conveyer and reclaim hopper • Electrical installation and reconnection for the three (3) cable mast radial stackers and conveyor/radial hopper
	1966 90' conveyor	• Purchasing three (3) new ground conveyors/grasshoppers for product storage expansion • Purchasing generators for backup power in case of power outage, increasing the resiliency of the port

Warehouse Space- Storage Domes	No roofs on the 2 storage domes since December 2018	• Purchasing of an additional radial stacker to be utilized with the three ground conveyors to expand bulk commodity storage • Purchasing and installing a canopy to ensure availability to move weather sensitive commodities • Removing the non-working scale made of steel • Procuring and installing a new scale made more durable materials that will have a better response to impactful weather conditions • Rebuilding the roofs on two storage domes • Frees up a 20k s.f. warehouse temporarily storing calcined petroleum coke previously stored in the Dome A

Project Location

Latitude: 37.065036° Longitude: -88.578798° Census Tract 21145030100 – classified as a Persistent Poverty tract by the US Census Bureau.

Exhibit 2: Project Location

Paducah, is in rural Kentucky at the heart of the Central U.S. Marine Highway System. It lies at or very near the confluence of the M-65, M-70 (Ohio/Mississippi/Missouri Rivers from Pittsburgh to K.C.) and M-55 corridors (lower Mississippi St. Louis to New Orleans and north to Chicago and the Great Lakes). Exhibit 2 provides a detailed map of the Project location.

Project Parties

Funding for the Project is multi-faceted and includes public and private support in addition to the amounts requested from the PIDP. Public funds from the City of Paducah, McCracken County and the PMCRA demonstrates strong local support for the Project. Private sector funds have been committed by four of the Riverport's customers. The Project has the support of the State of Kentucky and its elected officials. Reflecting the regional significance of the Project, in addition

to Kentucky, public and private sector officials from Illinois and Tennessee have offered letters of support. See Appendix H for more details.

Grant Funds, Sources and Uses of Project Funds

Exhibit 3: Sources of Funds

Source	Status	Amount	Percent Contribution (%)
PIDP FY21 Discretionary Grant	Requested	$3.320	86.9%
Federal - other		$0	0.0%
Federal		**$3.320**	**86.9%**
Local- Paducah, McCracken County and PMCRA	Committed	$0.360	9.4%
Local -Private Parties	Committed	$0.140	3.7%
Non-Federal		**$0.500**	**13.1%**
TOTAL		**$3.820**	**100%**

Selection Criteria

Project Meets Grant Statuary Criteria

- ✓ As a rural project in an Area of Persistent Poverty, the Project exceeds the local match requirements with an 86.9% PIDP funding request. The Port has a 13.1% non-Federal match to Federal funds
- ✓ This Project is low risk and can be under construction well before the required obligation date of September 30, 2024.

Exhibit 4: Criteria Summary

Meets Criteria	Description
a) Merit Criteria	
i. Effect on the Movement of Goods	
Safety	The Project when completed will prevent diversion of commodities to longer-haul truck routes, reducing truck vehicle miles traveled potentially reducing roadway crashes. Equipment failures will be eliminated or minimized, reducing the additional injury risks associated with repairs, making port operations safer.

Reliability	The Project will result in less down time for equipment repairs, provide redundancy to weigh trucks in and out of the gate and provide adequate storage for products moved from barge to storage for transload to trucks. This increases the reliability for suppliers and their customers.
ii. Economic Vitality	
	The Project will ensure construction and agriculture supply chains are efficient, which is critical as additional infrastructure investments are made nationally and locally. Expanding capacity in both the outdoor and warehouse storage areas will result in additional products moving through the port. The PMCRA is currently negotiating with several new clients that need storage space and to take advantage of the Riverport's Foreign Trade Zone designation. Of the top seven traded clusters in the Paducah Economic Area, three are directly tied to riverport operations including water transportation; construction products and services; and, transportation and logistics. The Project will support expanded employment opportunities in those industries.
iii. ***Climate Change and Environmental Justice***	
	Modernizing the cargo equipment will improve air quality which will benefit everyone in the area. Increasing the cargo volumes through the Riverport 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.
	The Project will reduce truck dwell time (vehicle idling) due to the increased efficiency and reliability of the new equipment and the addition of a second working scale for trucks entering and leaving the facility. In the No- Build scenario, the equipment is not replaced, periodic maintenance issues and ultimately failure will result in significant re-routing of the commodities, increasing movements by truck. Increased truck vehicle hours traveled (VHT) will generate more greenhouse gas emissions, particulate matter and noise in the region. The Build scenario -Reduces GHG emissions which can slow the rate of climate change—thus reducing impacts.
	The new equipment will be at least 10% more energy efficient than the current equipment, reducing demand for electricity that currently is generated by coal fired plants in the area.
iv. ***Racial Equity and Barriers to Opportunity***	
	The PMCRA recognizes the need to develop strategies and policies, such as *Efficiency inside the Gate – Equity outside the Gate* to advance racial equity by engaging with area residents and in implementing the Project. The goal is to identify issues the

	neighboring residents might have with port operations and developing mitigation strategies in collaboration with the residents.
	In preparing the work for bid, the Authority will review the work items and identify Disadvantaged Business Enterprises certified in Kentucky that have available capacity to participate in the Project. Based on the analysis, a DBE goal will be established for construction and professional services contracting. This will mark the first time the PMCRA will work to proactively address past barriers to opportunities to participate in port infrastructure projects.
vii. ***Leverage of Federal Funding***	
	Non-federal funds are being contributed by seven distinct public and private entities. Public sector funding is coming from the City of Paducah, McCracken County and the PMCRA for a 9.4% total match. Private sector contributions have been committed by four of the port's leading customers for another 3.7% of the Project costs.
b) Project Readiness	
	The Project includes equipment purchases, installation, construction, design engineering, and other professional services as needed. It is expected that the entire Project will be obligated by mid-2023. The procurement process for the equipment is anticipated to take approximately 8 months with installation, the Project should be completed 10 - 12 months post- obligation.
c) Domestic Preferences	
	The Project components will comply with domestic preferences including Buy American. Additionally, when fully implemented, the Project will provide more reliable supply chains for American products used in construction and agriculture.

PMCR Supports Nation Infrastructure Projects

With the focus on infrastructure investments by Congress and the Administration, ensuring that key domestically sourced bulk commodities such as rock and sand used as raw materials in the building process can be efficiently and reliably delivered will be tantamount to effectively implementing infrastructure improvements. Last year, bulk cargoes moving through the PMCR supported I-24 reconstruction, the U.S. Army Corps of Engineers (USACE) Kentucky Dam project, the Tennessee Valley Authority (TVA) Shawnee Power Plant, Ash Facility project and numerous other infrastructure, manufacturing and residential construction projects in the 4-state region.

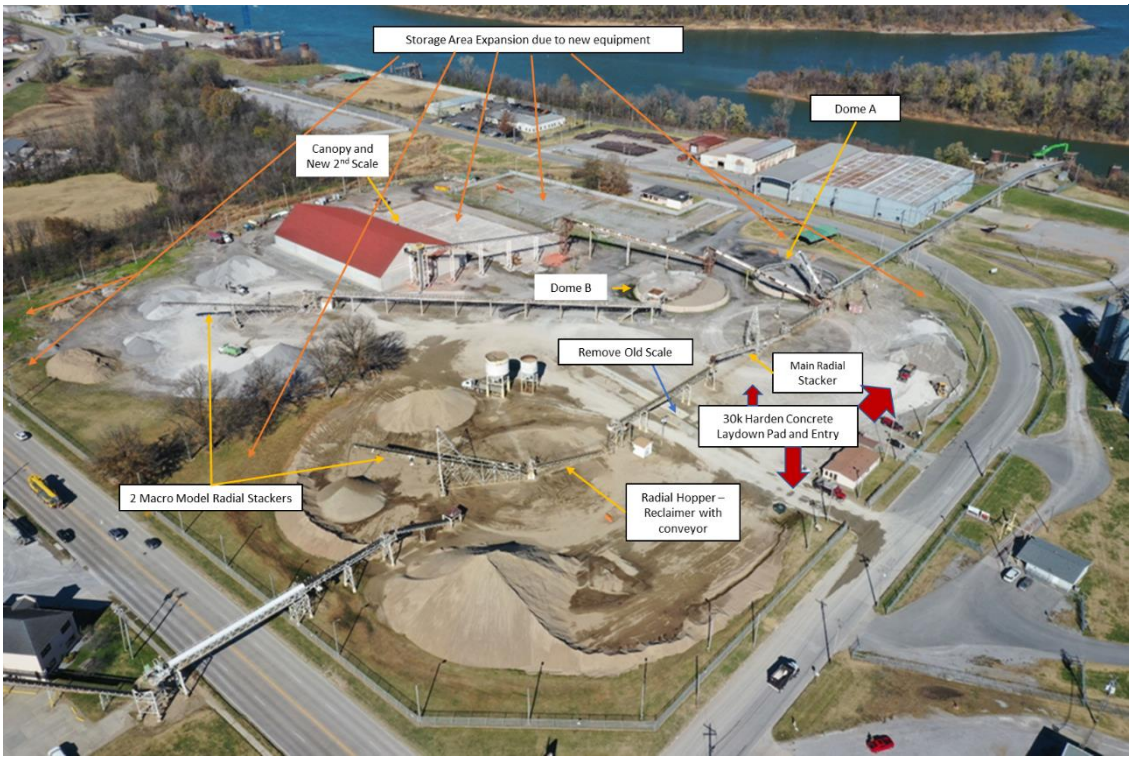
The next phase of these major infrastructure projects are continuing and will generate significant commodity transfers at PMCR in support of the on-going construction.

The Project will ensure these and other construction projects can be implemented with minimal supply chain interruptions for materials. The regional agriculture industry, which relies on fertilizers and other ag related products that move through the bulk yard, will also benefit from federal investments. As a result of the Project, hundreds of construction and agricultural jobs will continue to be supported in the four-state region.

The Project consists of landside yard and equipment modernization and upgrades, improving the state of good repair and expanding capacity to maximize use of the safer and more environmentally sustainable marine highway system.

I. Project Description

Exhibit 5: Project Components Map



The PMCRA Bulk Yard Revitalization and Expansion Project is made up of several components that will modernize port operations, ensure reliable through put for area construction and agriculture supply chains, position the region for growth in the movement of goods and provide an economical and environmentally responsible option for area shippers and receivers.

The components of the Project include the following items and the professional services needed to accomplish implementation:

- Replacing three cable mast radial stackers

    - New units will be replacing 1966 (2 units) and 1977 equipment that are currently used throughout the facility.
- Replacing a 90-foot conveyer and reclaim hopper
    - New items will replace 1966 unit currently utilized with existing sand radial stacker on site. This system allows for hopper loading that provides direct truck loading, increasing loading capabilities while reducing truck dwell time and fuel usage.
- Replacement of electrical connections
    - Electrical connections will need to be replaced for the three (3) cable mast radial stackers and the sand yard conveyor/radial hopper.
- Rebuilding the roofs on two storage domes
    - Dome A is 100 feet in diameter and Dome B is 108 feet in diameter. Concrete foundations and walls have been inspected and approved for reconstruction utilizing galvanized steel frame and tarp covers.
- Hardening the laydown area to a 30k square foot concrete pad
    - Concrete hardening for storage in the bulk yard and creation of a paved ingress/egress easement area for the bulk yard which reduces potential product carry back on truck chassis and tires.
- Removing the non-working steel scale
    - Demolition of a non-working truck scale foundation and a corresponding 95-foot by 16-foot driveway which improves transit safety and sight lines within the bulk yard.
- Procurement of three ground conveyors/grasshoppers
    - The purchase of three, thirty-inch-wide ground conveyors that will allow for product storage expansion and customer diversification.
- Purchase of one additional radial stacker
    - The new unit will be utilized in conjunction with the three ground conveyors to expand storage capabilities.
- Purchasing four generators for backup power in case of power outage, increasing the resiliency of the port
- Procuring and installing a new more resilient scale with improved measurement technology
    - Purchase of an 11-foot wide by 90-foot-long truck scale, with a concrete deck for increased compatibility with fertilizer products.
- Purchasing and installing a canopy to ensure availability to move weather sensitive commodities

The main stacker was acquired in 1977 and is one catastrophic failure away from being shut down completely. The sand and rock stackers built in 1966 and purchased used, control the flow of those commodities at the Riverport, if they go out of service for any length of time throughput

would no longer be possible. The hopper conveyor is tied to the sand stacker and with the replacement of this equipment truck wait times will be significantly diminished improving productivity of the port and the trucks moving the material to its final destination. Repairs for the existing three stackers have totaled $85,000 for just 2019 and 2020, funds that could have been used to address other operating or maintenance needs or to expand capacity to accommodate increasing demand.

Both domes partially collapsed in December 2018. They contained product used for fuel at a manufacturing facility in nearby Hopkinsville. As a temporary solution the products from one of the domes was transferred to a PMCR 20,000 square foot warehouse and the product from the other dome had to revert to train delivery at the plant. This has significantly increased costs for the customer and has resulted in less efficient port operations since the products are discharged from the barge to the bulk yard and then loaded onto trucks to transport the half-mile to the warehouse. Replacing the dome roofs will create efficiencies by reducing handling and trucking. Also, because of the double handling the Riverport has to schedule two berth days for each barge which equates to lost productivity of 1,500 tons of transshipment for other products each day.

Exhibit 6: Dome A After Roof Collapse

The new equipment will provide direct offloading access to additional storage areas expanding capacity for bulk materials as shown in Exhibit 5. The expanded storage capabilities will allow for increased throughput since the current storage areas are close to capacity. Increased activity from nearby infrastructure projects will require additional capacity to handle materials over and above current activity. This throughput efficiency will create additional expansion opportunities for other commodities identified by a recent market analysis as areas for growth including feldspar, salt and gypsum. It is projected that greater efficiency and the added storage capacity created by the updated equipment would create up to three new jobs at the Riverport and support additional employment in the industries reliant on those products.

Replacing the inoperable scale will create a wider and safer ingress/ egress area with better sightlines for equipment, trucks and personnel entering or transiting the yard. The new scale will be sited under the canopy next to an existing fertilizer building . The new scale will be larger than the inoperable scale and will have a concrete deck, which is more suitable for agriculture-related products making port operations more resilient to weather impacts. With the addition of the second scale, the out- gate tonnage capacity and volume throughput from barges will increase. The second scale will also provide redundancy and resiliency in case of failure of the

currently operating scale. The new canopy will allow loadout under cover for weather sensitive agriculture products.

Purchasing the 4 new generators, 3 of one type for the ground conveyors and one of different type for the radial stacker. will make port operations more resilient in the case of power failure. The new generators will be fuel efficient helping to minimize emissions even during an outage.

PMCRA is investing significantly to address aging assets that will benefit the regional economy and reduce stress on other publicly owned infrastructure. In July 2020, the Authority was awarded a Kentucky Riverport Improvement grant to replace the in-bound triple pantleg chute where products discharged from barges enter the bulk storage yard. The Authority provided over a 52 percent match toward the $34,277 project. That investment of State and local funds coupled with the components of this Project will position the Riverport for growth and ensure reliable operations.

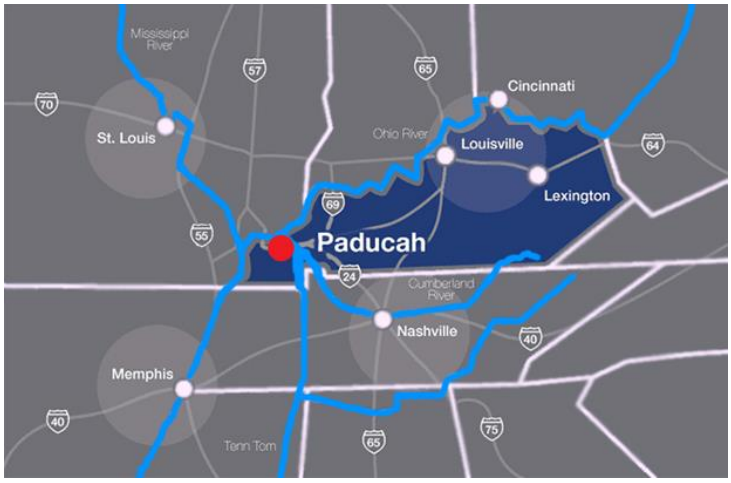
II. Project Location

Latitude: 37.065036° Longitude: -88.578798° Census Tract 21145030100 – classified as a Persistent Poverty tract by the US Census Bureau.

Paducah, is in rural Kentucky at the heart of the Central U.S. Marine Highway System. It lies at or very near the confluence of the M-65, M-70 (Ohio/Mississippi/Missouri Rivers from Pittsburgh to K.C.) and M-55 corridors (lower Mississippi St. Louis to New Orleans and north to Chicago and the Great Lakes). The intent of the Marine Highway System, as stated on the Maritime Administration's web page indicates that Marine highways "work to reduce landside congestion by focusing public and private efforts on increasing the amounts of cargoes and passengers transported on the [Nation's] commercially navigable waterways". USDOT projects that daily traffic along the M-65 and M-70 marine highway routes could grow to the equivalent of 25,000 long haul trucks each year. By connecting to the M-55 route just to the west at Cairo Illinois, Paducah also is an important location for agricultural interests and rural America as 92% of the nation's agriculture exports are produced in the Mississippi River Basin (which includes the Ohio River) and 60% of U.S. grain exports move on the Mississippi.

The PMCRA is physically located at 2000 Wayne Sullivan Drive in Paducah, Kentucky, at the confluence of the Ohio and Tennessee Rivers. The PMCRA is a small port located approximately 30 miles from the confluence of the Ohio and Mississippi Rivers. The PMCRA is located on a section of 0.43 miles on the banks of a channel on the Tennessee River. The PMCRA is also the northernmost, ice-free inland port facility in the U.S., which guarantees year-round shipment of cargoes.

Exhibit 7: Project Location in Relation to Inland Waterways



III. Grant Funds, Sources, & Uses of Project Funds

The Project brings together various regional partners given the potential difficulties for major industries in the area if port operations were interrupted due to an equipment malfunction or failure.

a) Project Costs

The PMCRA is requesting $3.32 million to develop the Project. The Project budget below depicts how the funds received from the PIDP grant award will be allocated toward Project costs.

Exhibit 8: Project Costs

Paducah-McCracken County Riverport Bulk Yard Modernization and Expansion Project Cost by Category	
Cost Category	Amount
Construction	$1,063,725
Equipment	$1,882,565
Professional Services	$451,018
Contingency	$421,019
Total Cost	**$3,818,328**

A detailed cost summary is included in Appendix B.

b) Eligible Costs, sources and amount of funds

Exhibit 9: Sources of Funds

Source	Status	Amount	Percent Contribution (%)
PIDP FY21 Discretionary Grant	Requested	$3.320	86.9%
Federal - other		$0	0.0%
Federal		**$3.320**	**86.6%**
Local- Paducah, McCracken County and PMCRA	Committed	$0.360	7.9%
Local -Private Parties	Committed	$0.140	3,7%
Non-Federal		**$0.500**	**13.1%**
TOTAL		**$3.820**	**100%**

c) Documentation of funding commitments

Documentation on all non-Federal funding commitments can be found in Appendix C.

d) Amount and Nature of Federal Funds

Exhibit 10: Summary of Sources and Uses of Funds by Agency

Source PIDP FY21 Grant Request	Amount in Millions	Percent Contribution (%)	Use
Federal			
PIDP FY21 Discretionary Grant	$3.320	86.9%	Final Design /Env. /Construction/ Equip.
Other Federal Funding	$0.000	0%	
Total Federal Funding	**$3.320**	**86.9%**	
Non-Federal /Local Funding			
Paducah- McCracken Riverport	$0.160	4.2%	Equipment
Local – City & County	$0.200	5.2%	Equipment
Private Funding	$0.140	3.7%	Equipment
Total Non-Federal Funding	**$0.500**	**13.1%**	-
	$3.820	**100%**	

e) Use of Funds by Source

Exhibit 11: Use of Funds

f) Paducah-McCracken County Riverport g) Bulk Yard Modernization and Expansion Project h) Sources of Funding			
Funding Sources	Amount	Status	Purpose
PMCRA	$160,000	Committed	Equipment
City of Paducah	$100,000	Committed	Equipment
McCracken County	$100,000	Committed	Equipment
PMCRA Customers	$140,000	Committed	Equipment
PIDP FY 21	$3,320,000	Requested	Construction/Equipment/Professional Services/Contingency
Total Project Funding	$3,820,000		
Total Federal	$3,320,000	86.9%	
Total Local	$360,000	9.4%	
Total Private	$140,000	3.7%	

IV. Merit Criteria

A. Achieving Safety, Efficiency or Reliability Improvements

Diverting freight from highways to the inland waterways results in fewer long-haul trucks on our nation's highways and interstate system, resulting in fewer truck-related accidents and improved travel times for the public and remaining commercial traffic. According the Federal Motor Carrier Safety Administration 2016 Large Truck and Bus Crash Facts, there are 1.5 fatalities per 100 million vehicle miles traveled by large trucks annually. By providing reliable marine transportation of bulk materials, this Project will result in fewer fatal crashes involving trucks. Given that the nearest ports are between 79 and 127 miles away, by making port operations more reliable, the potential for increased VMT and VHT is greatly reduced.

Waterborne freight movement is considered to be the safest mode of transportation. There are 155 truck-freight related fatalities and 22.7 rail-freight related fatalities for every 1 inland-marine related fatality. For every 1 inland marine-related injury, 2,171.5 injuries occur with truck freight and 125.2 injuries with rail freight. The spill rate for truck freight per million-ton miles is 68% higher than the inland marine spill rate.

The PMCRA has not experienced a lost-work day injury in over 14 years. We train our staff utilizing the most current and stringent safety regulations for our industry, including regular safety meetings, routine inspections and maintenance of equipment, and monthly emergency protocol drills with the U.S. Coast Guard.

Replacing the dated equipment will lower maintenance costs and increase reliability in operations. In addition, eliminating costly breakdowns requiring repairs will further enhance worker safety. Operational costs are expected to be reduced as it is estimated by potential equipment suppliers that the new equipment running on electricity will be at least 10 percent more efficient than the current equipment. At the same time the expansion of the bulk yard and reroofing the domes will add capacity for additional bulk cargo and free up warehouse space for additional revenue opportunities. All of this strengthens the bottom line of the PMCRA, eliminating the risk of reduced operational capacity.

The new equipment will increase efficiency and reliability of the port's throughput which will lead to increased productivity for the port and its customers. Down time risk for equipment problems and repairs will also be greatly reduced.

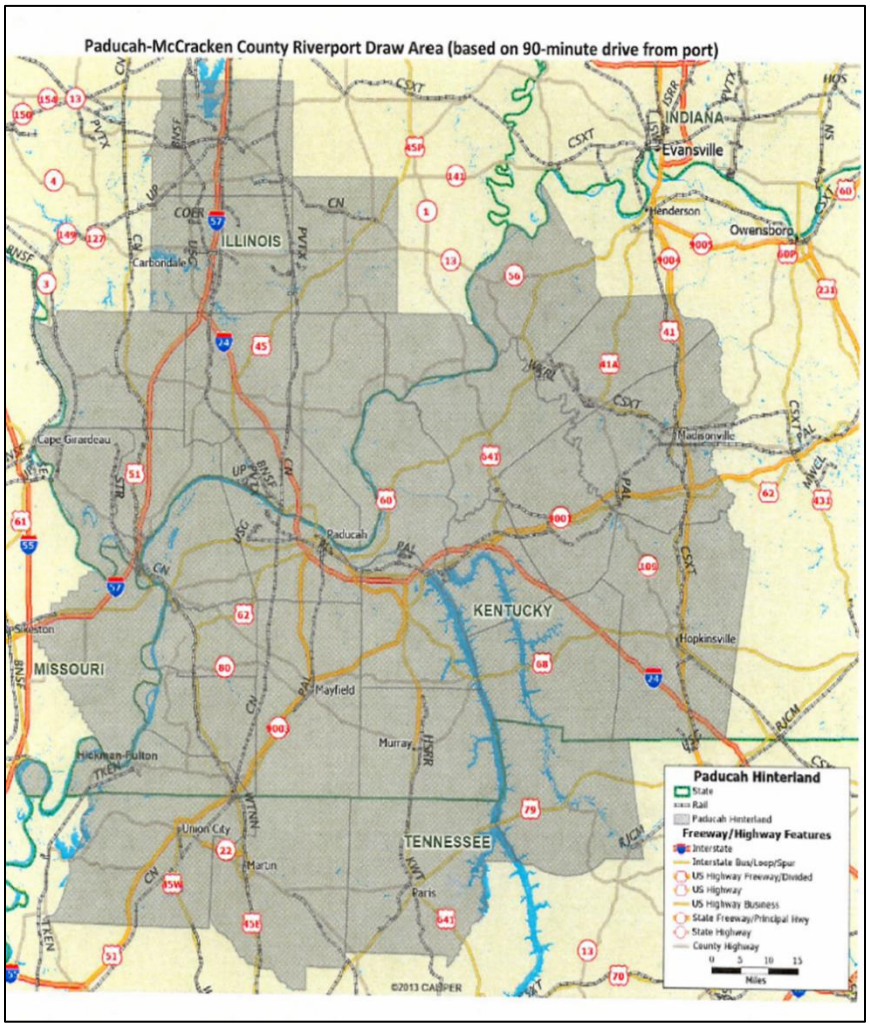
B. Supporting Economic Vitality at the Regional Level

PMCRA is investing significantly to address aging assets that will benefit the regional economy and reduce stress on other publicly owned infrastructure. The Riverport catchment area is estimated to be a 90-minute drive from the port. According to the Kentucky Transportation Cabinet's Kentucky Riverports, Highway and Rail Freight Study, the competitive market area for the PMCRA includes 32 counties in four states (17 in Kentucky, 10 in Illinois, 4 in Tennessee and 1 in Missouri).

PMCR Support Nation Infrastructure Projects

With the focus on infrastructure investments by Congress and the Administration, ensuring that key commodities can be efficiently and reliably delivered will be tantamount to effectively implementing infrastructure improvements. Last year, bulk cargoes moving through the PMCR supported I-24 reconstruction, the USACE Kentucky Dam project, the TVA Shawnee Power Plant, Ash Facility project and numerous other infrastructure, manufacturing and residential construction projects in the 4-state region.

Exhibit 12: Paducah-McCracken Riverport Catchment Area

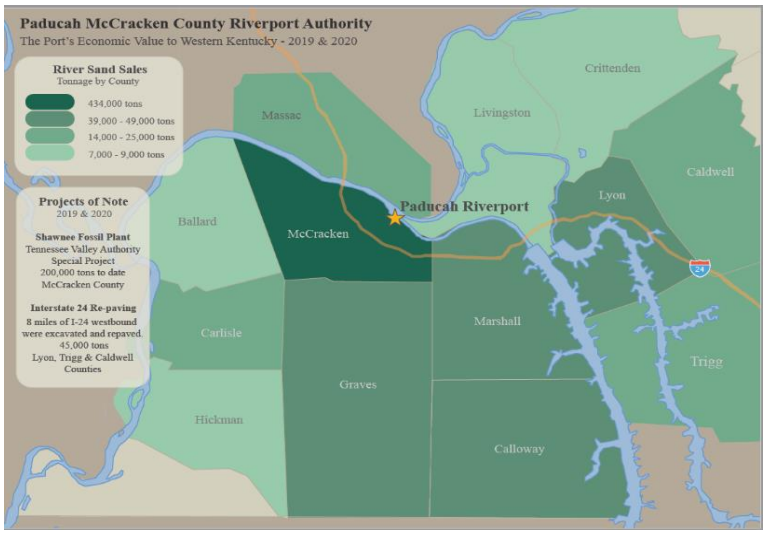


The next phase of these major infrastructure projects are continuing and will generate significant commodity transfers at PMCR in support of the on-going work. The following discussion summarizes the work expected now and over the next 5 years.

Kentucky Lock and Dam

U.S. Army Corps of Engineers (USACE) announced in January this year that it is dedicating $110.1 million to the Kentucky Lock and Dam project in its Fiscal Year 2021 Work Plan. According to the Army Corps, the Kentucky Lock's shipment delays are among the longest in

Exhibit 13: PMCRA 2019-2020 Economic Value to Western Kentucky - Pine Bluff Sand and Gravel Co.



the country, hindering the more than $5 billion worth of commodities that flow through the lock every year.

According to the USACE, "the Nashville District of the Corps is working on design and acquisition for the next phase of the project and plans to bid the Downstream Lock Monoliths Contract this year. This contract will structurally finish the new lock's chamber and place all the remaining concrete for the new 110-foot by 1,200-foot navigation lock at the TVA project.

The contract period will be roughly 60 months and includes limited rock excavation, placement of about *400,000 cubic yards of concrete* [emphasis added] in the construction of 51 lock monoliths, fabrication and installation of downstream miter gates, grouting the lock wall foundation, backfill of one million cubic yards of soil, and fabrication and installation associated with mechanical features of the new lock".[2]

State Highway Programs

In the next three to five years the four states (KY, IL, MO and TN) have $915 million programmed in the 32 counties in the PMCR competitive market area (CMA) with $315 million of that scheduled in 2022.

In the FY 2022 – 2027 Illinois Department of Transportation Highway Program, the ten Illinois counties included in the PMCRA CMA have just under $560 million scheduled during the 6-year program with $149 million programmed in the current year. Kentucky has just under $350 million programmed in the 17 counties in the PMCRA CMA between FY 2022 and FY 2026 which includes $46 million programmed in the current year. Missouri has $33.5 million programmed in the current 3-year STIP for Mississippi County, the only Missouri County in the CMA, including $3.6 million in FY 2022 and Tennessee has $87.1 million in its current 3-year STIP for its four counties included in the CMA which includes $2.6 million in FY 2022.

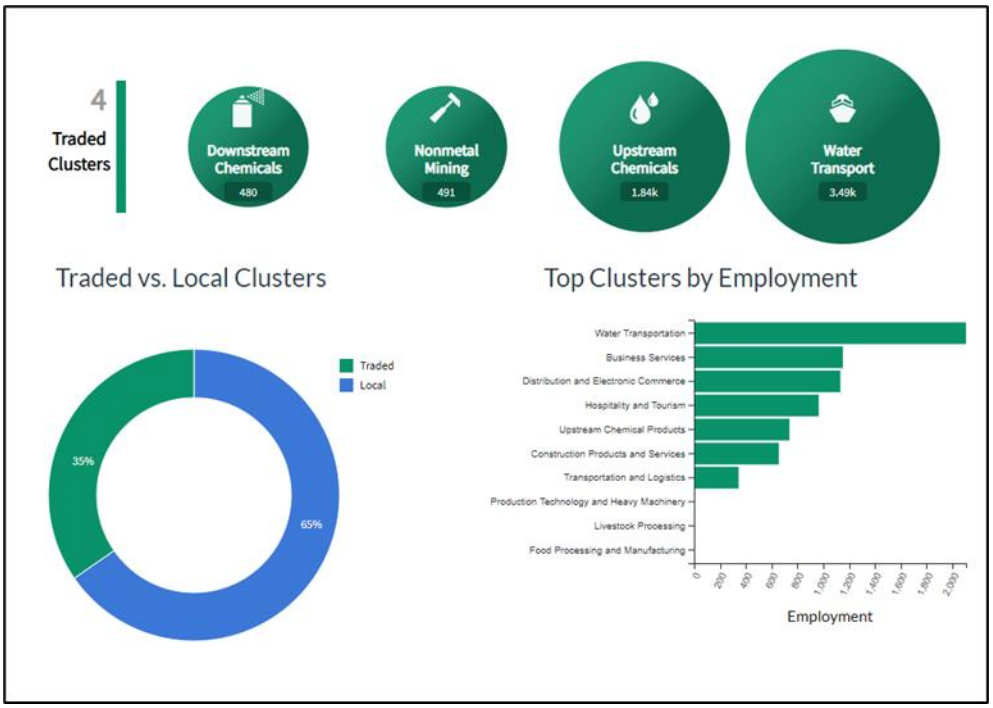
The Project will ensure these and other construction projects can be implemented with minimal supply chain interruptions for materials. The regional agriculture industry, which relies on fertilizers and other agricultural products that move through the bulk yard, will also benefit from

[2] https://www.usace.army.mil/Media/News/NewsSearch/Article/2548817/corps-will-dig-dry-conditions-with-finished-kentucky-lock-cofferdam/

federal investments. As a result of the Project, hundreds of construction and agricultural jobs will continue to be supported in the four-state region.

According to the U.S. Department of Commerce Cluster Mapping tool, of the top seven traded industries by employment in the Paducah Kentucky Economic area, three are directly tied to activities at the PMCR including the number one employer, water transportation along with construction products and services, and transportation and logistics. Upgrading the port's equipment and expanding facilities will support the strength of the area's traded clusters.

Exhibit 14: Summary of Industry Clusters for Paducah, KY



Source: https://www.clustermapping.us/region/economic/paducah_ky_il

The new equipment will expand the Riverport's capacity to handle additional volumes and commodities based on a recently completed market analysis. By providing direct offloading capabilities to an expanded laydown area, the PMCR can efficiently and cost effectively transload bulk commodities currently transported by other modes or further away.

One of the revitalized storage domes will save a current PMCRA customer $3.53 per metric ton while also eliminating double handling required move the material to PMCR's 20,000 square foot warehouse over half mile away after unloading from barges. The vacated warehouse space would then become available for other opportunities. The PMCRA is currently in negotiation for a new client for the warehouse space for the client's high-density bricks for steel refractories. The second dome with an estimated 2,100 short ton capacity, once revitalized, will increase fertilizer transload operations for the region based on current discussions with another client.

C. Addressing Climate Change and Environmental Justice Impacts

The area within the 1-mile buffer with an Demographic Index of 54% is in the 93rd percentile of the State of KY and in the 76th percentile in the EPA Region and the 77th percentile of the US. For low income, this area of 66% is in the 90th percentile of the State of KY and in the 91st percentile in the EPA Region and the 82nd percentile of the US.

People of Color Index at 42% (which is almost 3 times the State demographic mix,) is in the 91st percentile for the State, 60th percentile for the EPA Region and 60th percentile for the US.

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. Modernizing the cargo equipment will improve air quality which will benefit everyone in the area. Increasing the cargo volumes through the Riverport 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.

The following chart compares the Project Area to the State EJ Profile:

Exhibit 15: Demographic Data of Census Block and 1 mile Bufffer around Project

Comparison	Census Block Data 211450030100	State Percentile	Area within 1 mile Buffer	State Percentile
Demographic Index	50%	92	54%	93
% minority	40%	90	42%	91
% low income	60%	84	66%	90
% linguistic isolation	3%	86	2%	81
% less than high school	26%	86	28%	90
% under age 5	18%	69	7%	65
% over age 64	10%	19	12%	31

Source: EPA EJScreen

Within one mile of the PMCR, National-scale Air Toxics Assessment respiratory hazard is 0.65 which is in the 98th percentile for the State of Kentucky, the 90 – 95th percentile for the EPA region and the 90 – 95th percentile for the U.S. Given the demographic index for that area, the Project will result in reduced emissions for higher risk neighbors. The following chart illustrates the environmental risks within one mile of the PMCR. The Project will reduce dwell time due to the increased efficiency and reliability of the new equipment and the addition of a second working scale for trucks entering and leaving the facility. In addition, in the alternative future

Exhibit 16: EJ Screen Environmental Indicators

EJSCREEN Report (Version 2020)

1 mile Ring Centered at 37.063631,-88.577112, KENTUCKY, EPA Region 4

Approximate Population: 2,299

Input Area (sq. miles): 3.14

Paducah McCracken Co Riverport

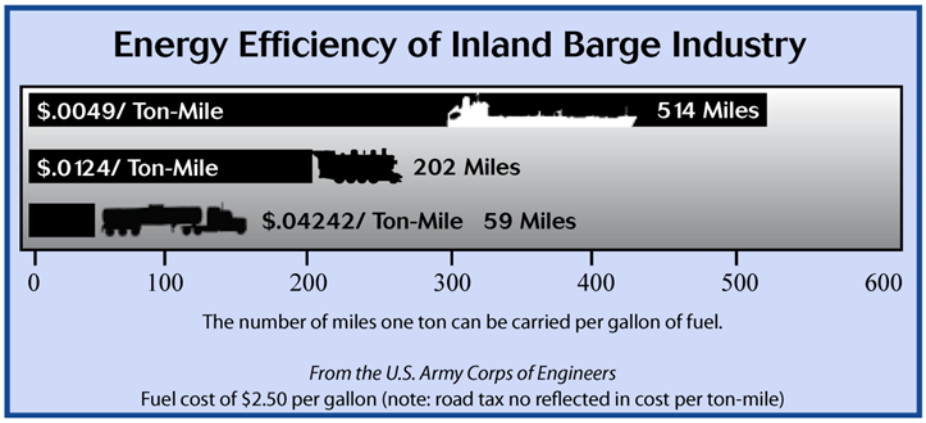
Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m³)	9.29	8.7	85	8.57	83	8.55	74
Ozone (ppb)	45.4	43.5	78	38	95	42.9	73
NATA* Diesel PM (µg/m³)	0.414	0.383	62	0.417	50-60th	0.478	50-60th
NATA* Cancer Risk (lifetime risk per million)	32	31	62	36	<50th	32	50-60th
NATA* Respiratory Hazard Index	0.65	0.44	98	0.52	90-95th	0.44	90-95th
Traffic Proximity and Volume (daily traffic count/distance to road)	390	300	78	350	76	750	62
Lead Paint Indicator (% Pre-1960 Housing)	0.37	0.24	81	0.15	88	0.28	68
Superfund Proximity (site count/km distance)	0.048	0.039	76	0.083	58	0.13	41
RMP Proximity (facility count/km distance)	0.2	0.67	45	0.6	44	0.74	38
Hazardous Waste Proximity (facility count/km distance)	1.4	1.3	69	0.91	80	5	57
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	0.087	3.7	83	0.65	93	9.4	88

scenario where the equipment is not replaced, periodic maintenance issues and ultimately failure will result in significant re-routing of the commodities, increasing movements by truck.

Increased truck VHT increases greenhouse gas emissions, particulate matter and noise in the region. Reducing GHG emissions can slow the rate of climate change—thus reducing impacts.

The new equipment will be at least 10% more energy efficient than the current equipment, reducing demand for electricity that currently is generated by coal fired plants in the area.

Exhibit 17: Efficiency of Barge Transportation



There currently is not a State of Kentucky Climate Action Plan, Equitable Development Plan or an Energy Baseline Study. There also are not any at a regional or local level.

However, there are Project measures to reduce Greenhouse Gas (GHG) which include:

1. Transportation - Supporting alternative-fueled technology and implementing systems that increase the efficiency of transportation and reduce energy consumption.

   The goal of the Project is to expand capacity and enhance the reliability of goods moving via the Marine Highway System. The Exhibit 17 illustrates the energy efficiency of the inland waterway barge industry. The Project also will improve the throughput of goods being transported to final destinations, reducing inside the gate congestion, decreasing truck fuel usage.

2. Energy Conservation and Efficiency - Employing energy strategies in buildings and exterior spaces that save money on utility costs, reduce GHG emissions and provide other community benefits.

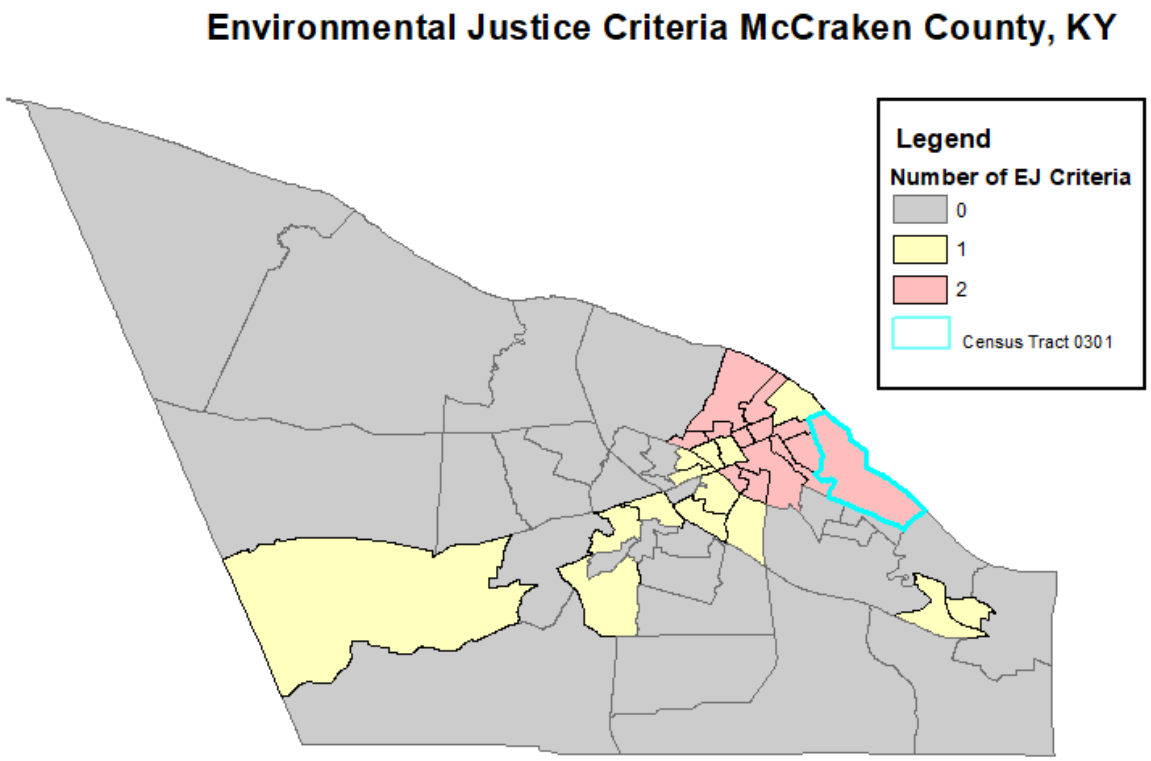
    The Project will modernize cargo moving equipment which is more fuel efficient than existing aged equipment.

Although Paducah and McCracken County do not have an Equitable Development Plan, the PMCRA recognizes the importance of equitable development that promotes economic opportunity and accessibility for disadvantaged populations, reduces disparities in negative industrial impacts, fosters healthy and livable communities and increasing the number of jobs equitably across the residents of the region.

D. Racial Equity and Barriers to Opportunity

As the map in Exhibit 18 (taken from the Environmental Justice report for the Project) shows, neighborhoods to the north and west of the PMCR are either predominantly made up of low-income residents and/or people of color. As a result of the report done, the PMCRA recognizes the importance of taking a two-pronged approach to maintaining and developing the Riverport - *Efficiency inside the Gate and Equity outside the Gate.*

Exhibit 18: EJ Criteria Map



The Project will address efficiency inside the gate and equitable outcomes outside the gate by reducing emissions and negative environmental impacts. The Project will also create economic expansion opportunities that can result in increasing jobs while supporting existing construction and agricultural jobs. The PMCRA is committed to equity outside the gate and as part of delivering this Project, it will engage with neighboring residents and their leaders to learn of their concerns about the Riverport and to work collaboratively on addressing the issues identified This approach builds on the work done by the United Way of Paducah-McCracken County in the *Impact Poverty Study.*[3] Advancing Racial Equity and Reducing Barriers to Opportunity, an Environmental Justice and Racial Equity Impact Analysis was prepared for the Project consistent with the Kentucky Transportation Cabinet's methodology for assessing potential EJ concerns for KYTC planning studies. The Project EJ report is included as Appendix D and the KYTC guidance is included as Appendix E.

As a result of the EJ and REIA, the PMCRA recognizes the need to develop strategies and policies, such as *Efficiency inside the Gate – Equity outside the Gate* to advance racial equity by engaging with area residents as previously discussed and in implementing the Project. In preparing the work for bid, the Authority will review the work items and identify Disadvantaged Business Enterprises certified in Kentucky that have available capacity to participate in the Project. Based on the analysis, a DBE goal will be established for construction and professional services contracting. This will mark the first time the PMCRA will work to proactively address past barriers to opportunities to participate in port infrastructure projects.

This Project does not require the purchase of any right-of-way, which will avoid displacing residents which would negatively impact underserved populations in the area.

Also of note, a recent Environmental Assessment conducted by FEMA for work to repair and stabilize the shoreline of the City of Paducah's Riverfront Park concluded that project, which lies 2 miles from the Riverport, would not have adverse impacts on minority or low-income populations with project benefits being available to all populations.[4]

E. Leveraging Federal Funding to Attract Non-federal Investments in Infrastructure

A. The Port's efforts to maximize the non-federal share of the Project

The Project is being supported locally by McCracken County, the City of Paducah and the PMCRA. Additionally, federal investments will leverage multiple private sector contributions towards the Project cost. The broad base financial support for the Project is indicative of the

[3] Impact Poverty Study (1).pdf
[4] https://www.fema.gov/sites/default/files/documents/fema_oehp_paducah-riverfront-park-project-dr-4428_1-27-2021.pdf

importance of the Project to the regional economy and in support of American construction and agricultural jobs.

This investment builds on the previously awarded investment from the State of Kentucky Riverport Initiative (KRI) and the PMCRA to replace the first leg of the system that moves products from the river to the port to truck for final delivery. This illustrates commitments at all levels of government in the Project area to ensure the PMCR is a viable and reliable supply chain partner for key traded sectors of the area economy. The federal investment is necessary to complete the funding package for modernizing port operations and expanding the available capacity to accommodate future demand.

B. Fiscal Constraints that affect the Ports ability to increase the amount of non-federal revenue dedicated for transportation infrastructure

Kentucky Revised Statutes prohibits the use of fuel-tax revenues for non-highway projects. The PMCRA is not an authorized taxing authority; therefore, it does not have access to revenues generated from any taxes and cannot fund large scale capital improvement projects. In order to become an authorized taxing authority, the PMCRA must receive approval from the City of Paducah and McCracken County governments, as well as receive public approval by a county-wide vote. Public-Private Partnership funding opportunities are limited by the Kentucky Constitution; Section 164, to a 20-year period, thus negatively impacting opportunities for private partnership funding on our maritime Project.

The only state funding available for maritime projects in Kentucky is the designated $500,000 set aside for riverports in the general budget that requires passage by state legislature during biennial budget session. These funds are available to all seven public port complexes in Kentucky – the Hickman-Fulton Riverport, the Paducah-McCracken County Riverport, the Eddyville Riverport, the Henderson County Riverport, the Owensboro Riverport, the Meade County Riverport, the Louisville-Jefferson County Riverport, and the Greenup-Boyd County Riverport – thus requiring our capital improvement projects to be self-funded or by grant opportunities like the PIDP grant.

The PMCRA has been the recipient of two recent Marine Highway Project grants and has demonstrated the ability to effectively manage federal funds generally and MARAD grant funds specifically. This PIDP application clearly demonstrates a business case for leveraging new private funds to improve the nation's transportation network. A federal investment will produce a lasting return on investment for the entire region.

PMCRA has a track record in generating additional revenues by focusing resources on developing infrastructure to better utilize marine highway capacity. Federal investment in the Bulk Yard Revitalization and Expansion Project will likewise leverage additional revenues for further developing the nation's Marine Highway system to safely and efficiently move freight.

V. Project Readiness

The PMCRA Bulk Yard Infrastructure Revitalization and Expansion Project is prepared to proceed upon receipt of a PIDP grant award, if successful. The Project schedule is dependent on the PIDP grant award. If the PIDP grant is awarded for the Project, we estimate completion within 24 months without inclement weather conditions or equipment supply chain issues. The PMCRA has been in contact with multiple equipment suppliers and does not anticipate supply issues that have plagued other industries since the pandemic.

See the Project schedule for the anticipated timeline.

A. Technical Capacity

The Port has experience with implementing capital projects and with the administration and implementation of Federal Grants. The Port has consulting engineers that will work with Port staff to prepare the components for bid, construction and equipment procurement. The Port has years of experience implementing Federal and State Grants. Since 2004, the Port has received and administered over $1.7 million in grants from three federal agencies (Homeland Security, Delta Regional Authority and MARAD) and the State of Kentucky. See Appendix F for a detailed list of the grants, equipment acquisitions and building projects between 2004 and 2021.

1. Project Schedule

Exhibit 19: High-level Project Schedule

Year	2022						2023					
Month (By # Designation)	7	8	9	10	11	12	1	2	3	4	5	6
PMCRA Bulk yard Modernization and Expansion Project												
Obligation of Funding												
Environmental Review												
Concrete Hardening												
Scale Demo/Replacement												
Canopy												
Dome Roof Replacements												
Radial Stackers, Conveyor/Hopper, Electrical												
Ground Conveyors/Hoppers												
Generators												

Project Closeout												

A more detailed Project schedule is included in Appendix G.

2. Assessment of Project Readiness Risks and Mitigation strategies

Exhibit 20: Risk Matrix

Potential Risk Area	Risk Type	Current Status/ Proposed Mitigation	Risk Level
Technical Feasibility	Feasibility	Equipment price quotes have been obtained.	Low
Design Standards Conformance	Feasibility	The PMCRA has an engineering firm under contract to assist with design and implementation.	Low
Partner Approvals	Schedule	None anticipated.	Low
Local Jurisdiction Approvals	Schedule	None anticipated.	Low
Environmental Approvals	Cost, schedule	The project is expected to be CE.	Low
Funding	Cost, schedule	All non-Federal commitments have been made in writing.	Low
Public and Stakeholder Support	Cost, schedule	The broad range of support is demonstrated by the letters in support of the project.	Low
ROW	Cost, schedule	No ROW is required.	NA
Construction	Cost, schedule	The project is a small project in a region with multiple contractors available.	Low
Procurement	Cost of equipment and other components	Equipment price quotes have been attained and multiple vendors have expressed interest in the Project.	Low
Grant Management	Compliance	The PMCRA is the recipient of a 2017 and a 2019 Marine Highway grant and is familiar with MARAD requirements for grant funding.	Low

B. Environmental Risk

1. Information on NEPA Status

Based on the review of the preliminary analysis of the Project site, an Environmental Assessment is not anticipated as it appears that the Project will fit within the requirements of a Categorical Exclusion. Per guidance in Appendix 1 of the "Procedures for Considering Environmental Impacts," from MARAD (Maritime Administrative Order 600-1 dated July 23, 1985), this

Project would fall under the Categorical Exclusion category since it involves the "reconstruction, modification, modernization, replacement, repair, and maintenance (including emergency replacement, repair, or maintenance) of equipment, facilities, or structures which do not change substantially the existing character of the equipment/facility/structure.

2. Environmental Permits and Reviews

Until a site review is performed and design plans are completed, it is unclear if Section 106 or Section 7 will apply. Coordination with SHPO will be required and they will need to review the Project details (excavation, etc.) to determine if archaeological impacts could occur. Section 7 is not anticipated, but a site review is required to make this determination. Typically, this area could potentially contain bat species and mussel species which are endangered. However, since no tree clearing activities are anticipated, no in-water work is expected, and the scope of the Project involves previously disturbed areas, it is expected that environmental risk should be minimal.

It should be noted that any demolished equipment will be assessed prior to demolition activities to evaluate them for hazardous materials (i.e., asbestos, lead base paint, etc.). Proper disposal activities will occur. Any excavated materials can be assessed by a Toxicity Characteristic Leaching Procedure (TCLP) analysis to determine if any contamination exists and help to characterize waste for proper disposal.

3. State and Local Approvals

The PMCRA does not expect to undergo any additional environmental studies before the Bulk Yard Infrastructure Revitalization and Expansion Project begins construction other than those required by the NEPA process for the hardening of the laydown yard and potentially for the installation of the new scale if excavation is required.

The Project is supported by the State and the local agencies. Governor Beshear provided his backing for the Project. Letters in support of the Project from public officials and private sector businesses are included in Appendix H.

4. Information on environmental reviews, approvals and permits by other agencies

The PMCRA has been in constant communication with the MARAD office located in Paducah and with the Paducah City Engineer about the Project and does not anticipate any issues with approvals or permits. Given the Project is replacing equipment and construction work will take place completely within the existing footprint and/or previously disturbed areas without impacts on the local environment or residents, it is expected to receive a Categorical Exclusion, if required.

5. Dependent on or affected by USACE

The Project does not depend on Army Corps of Engineers investments. There is no direct relationship between the Project and the Army Corps of Engineers as all work will be upland and no wetlands have been identified on site. Based on aerial photography, a review of FEMA data as well as *Streamstats* and wetland mapper, no jurisdictional waters appear to exist onsite. In addition, it should be noted that the site is located behind the floodwall and protected from flooding activities. Therefore, no risks are related to actions by or the budget decisions of the Corps.

As noted above, the Project will support a nearby Corps project at Kentucky Dam that has been budgeted and let. Sand and aggregates needed for that project will be delivered through the PMCR. Without the investments in the Project, the transportation of those bulk commodities could be negatively impacted and forced to detour further from the Corps project site.

6. Environmental studies or other documents describing in detail known Project impacts and mitigation for impacts

As previously stated, the scope of this Project occurs within an area where infrastructure currently exists. Minimal land disturbance activities are anticipated. No significant environmental studies or mitigation is anticipated for this Project.

VI. Domestic Preferences

The PMCRA will bid the equipment purchases consistent with the requisite domestic preferences including Buy America and Buy American. Materials used for the construction components will be sourced locally.

The Project will support the continued supply of domestic materials for regional construction projects and support American construction and agriculture jobs.

VII. Determinations

Project Determination	Narrative Reference or Response
1. The Project improves the safety, efficiency, or reliability of the movement of goods through a port or intermodal connection to the port.	See Section V. A. on page 14.
2. The Project is cost effective.	Not applicable to this application because it is a small project at a small port.
3. The eligible applicant has the authority to carry out the Project.	The PMCRA was established in 1964 by the legislative bodies of the County of McCracken and the City of Paducah under an equal ownership agreement. City of Paducah

	Code of Ordinances Chapter 2 Article VI, Division 6 Sec. 2-443. - Powers and duties. The Riverport Authority established by this division shall have all the powers, functions, and duties authorized by the Kentucky Revised Statutes (KRS), and, in addition thereto, the City hereby delegates such other powers to the Riverport Authority which are necessary in carrying out its operations and activities. KRS 65.510 – 65.650 describes the powers and duties, specifically 65.520 allows Riverports to enter into contracts.
4. The eligible applicant has sufficient funding available to meet matching requirements.	Appendix I contains the July 26, 2021 balance sheet of the PMCRA which show the availability of matching funds.
5. The Project will be completed without unreasonable delay.	It is expected that the Project will be fully obligated by July 2022. See Project schedule in the project readiness section on pages 23-24.
6. The Project cannot be easily and efficiently completed without Federal funding or financial assistance available to the Project sponsor.	As shown on the current balance sheet, the PMCRA can generate matching funds, but does not have the available resources to complete the Project without federal investment. This Project would not be completed without the PIDP grant. 1. Project components will be prioritized and implemented based on available funding if the PIDP program provides less than the requested amount or is not awarded. 2. The Project schedule would have to be stretched at least 10 years or more based on funding availability locally. 3. The cost of equipment replacements if done as local funds become available are expected to increase significantly with inflation.

VIII. Conclusion

PMCRA is actively engaged in moving critical materials to benefit the regional economy and support the construction and agriculture industries in a four-state area. The PMCRA is operating equipment on borrowed time and recognizes that to efficiently continue serving the region, it is time to address the state of good repair and replace the equipment. At the same time, revenue generating opportunities require investments in expanding capacity at the Riverport. The Project

is aimed at addressing both issues, sustaining current economic activity and creating new opportunities for the future.

Exhibit 21: Truck on Only Operable Scale

Recognizing its place in the community, the PMCRA is developing strategies to address climate change resiliency and prevention. The Project is one-step in the process to improve the energy efficiency of operations. The Authority, through its planning for the Project, understands its role in addressing EJ and Racial Equity issues impacting its neighbors and will begin efforts to engage with the community and its leaders to learn more about the impacts created by port operations. The outcome of those conversations will lead to mitigating actions by the PMCRA to reduce impacts and improve accessibility.

Without support from the Maritime Administration's Port Infrastructure Development Program, the improvements included in the Project will face an uncertain future and result in untimely supply chain interruptions impacting the regional environment and economy. The PMCRA has worked diligently to garner broad support for the Project and to maximize local investments to leverage limited federal resources. The PMCRA appreciates the difficulty MARAD and USDOT will have in selecting awards for the PIDP and respectfully submits this application for the small port small grant category. Ultimately, federal investment in the Project will advance the national goals for efficient and safe freight movement, economic vitality, addressing climate change and environmental justice impacts, advancing racial equity and leveraging federal funding.

IX. Appendices

Appendix A: Port Tonnage Summary

Appendix B: Detailed Cost Summary

Appendix C: Funding Commitments

Appendix D: Environmental Justice and Racial Equity Impact Assessment

Appendix E: Methodology for EJ and REIA

Appendix F: PMCRA Grants, Equipment Acquisitions and Building Projects, 2004 -2021

Appendix G: Detailed Project Schedule

Appendix H: Letters of Support

Appendix I: PMCRA Financial Statements

Appendix J: Equipment Price Quotes