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Marine News

Volume 31 • Number 5

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Inland Waterways

Barging industry pushes through historic black swans

Port of Pittsburgh
Executive Director Bucci weighs in

Propulsion Performance
R&D fuels innovation at Voith

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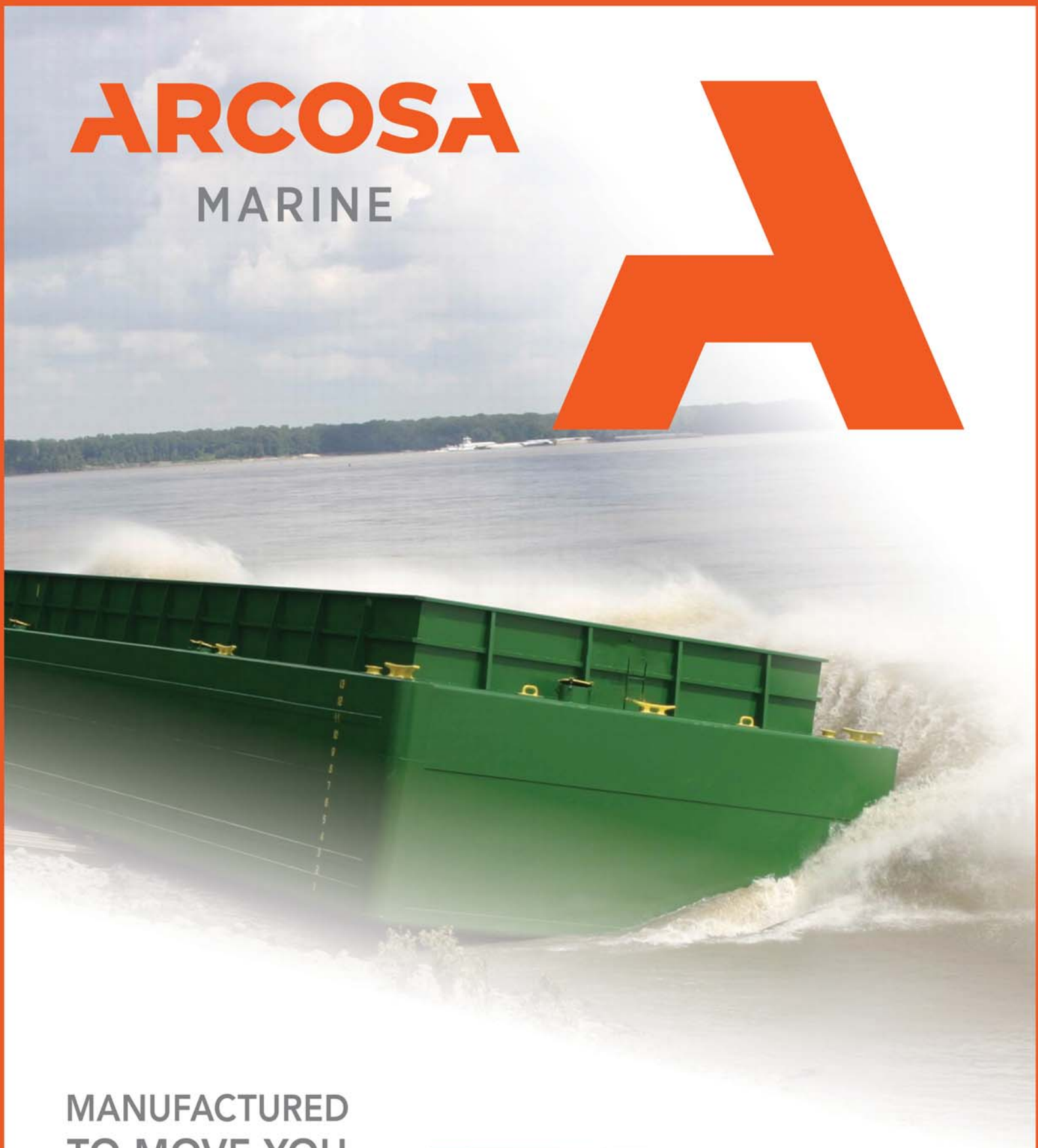

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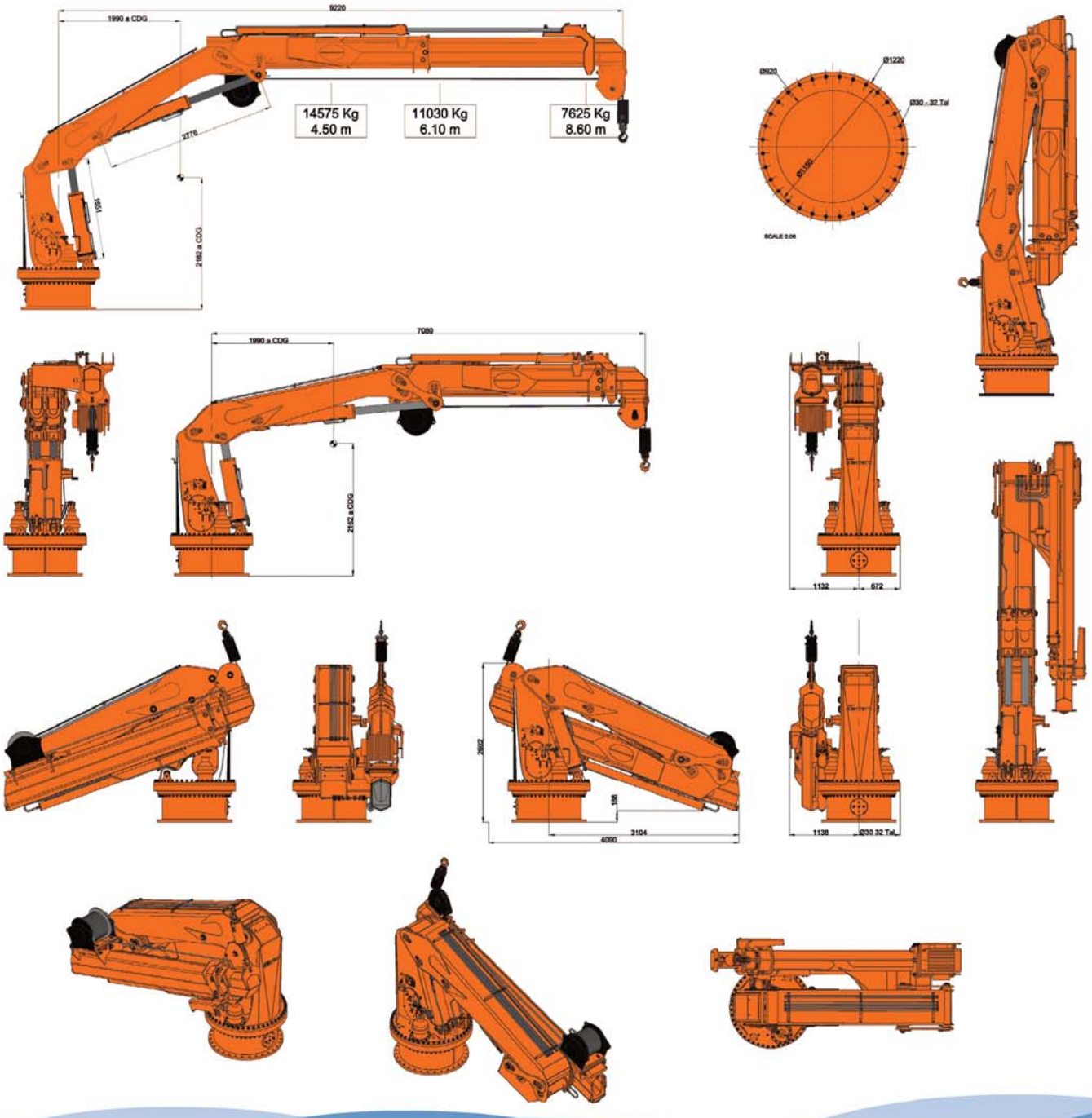

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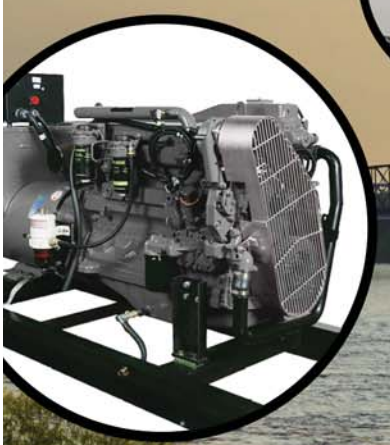

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INLAND MARINE EXPO

EDITOR'S NOTE

Perhaps now more than ever safety concerns are paramount as the spread of COVID-19 continues to take an immediate toll on human health. Meanwhile, the pandemic's impacts are being felt more widely and deeply by businesses large and small as the economic challenges posed by the crisis grow in scale and complexity.

The global maritime industry has witnessed firsthand both the health and economic impacts of the coronavirus outbreak, responding to historic widespread supply chain disruptions, major market shifts and extensive mariner safety issues. Globally, much work still needs to be done to address all three.

The U.S. inland shipping sector, however – though not immune to the pandemic, especially in terms of market demand – has to date largely maintained course to ensure vital cargoes continue moving, thanks to swift, proactive action by an industry well prepared to handle adversity.

Business as usual has become a thing of the past as operators adjust to new procedures geared toward protecting crews and waterborne commerce. "It's apparent that we will realize a new normal. Our way of operating has been changed," Peter Stephaich, chairman and CEO of Campbell Transportation, said in our Q2 inland waterways report, starting on page 30. He expects safety measures such enhanced crew screening and testing protocols, as well as improved use of technology in day-to-day operations, will stick around.

The industry today has a chance to seek opportunities to be better and more productive, writes Deb Calhoun, Waterways Council interim president and CEO, in her column starting on page 20 that. While Calhoun writes specifically about critical waterway infrastructure improvement projects, the sentiment rings true universally. Within every challenge is an opportunity to improve.

Improvement is a theme found in a number of stories in this edition, from the port upgrades underway at the Port of Pittsburgh discussed by the port commission's executive director Mary Ann Bucci (page 12), to R&D efforts led by Dr. Dirk Jürgens, head of R&D at Voith Turbo Marine (page 44).

We at ***Marine News*** continually strive to improve as well, and I welcome your suggestions.

Eric Haun, Editor, haun@marinelink.com

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EIA Quarterly Coal Report

The U.S. Energy Information Administration's Quarterly Coal Report (QCR) provides quarterly data on U.S. coal production, exports, imports, receipts, prices, consumption, quality, stocks and refined coal. Its latest report, published April 1, 2020, includes data on fourth quarter 2019 U.S. coke production, consumption, stocks, imports and exports. All data for 2018 and previous years are final, while data for 2019 are preliminary.

U.S. coal production during the fourth quarter of 2019 totaled 165.2 million short tons (MMst), which was 8.9% lower than the previous quarter and 14.3% lower than the fourth quarter of 2018. Production in the Western region, which represented about 56.6% of total U.S. coal production in the fourth quarter of 2019, totaled about 93.5 MMst (14.2% lower than the fourth quarter of 2018).

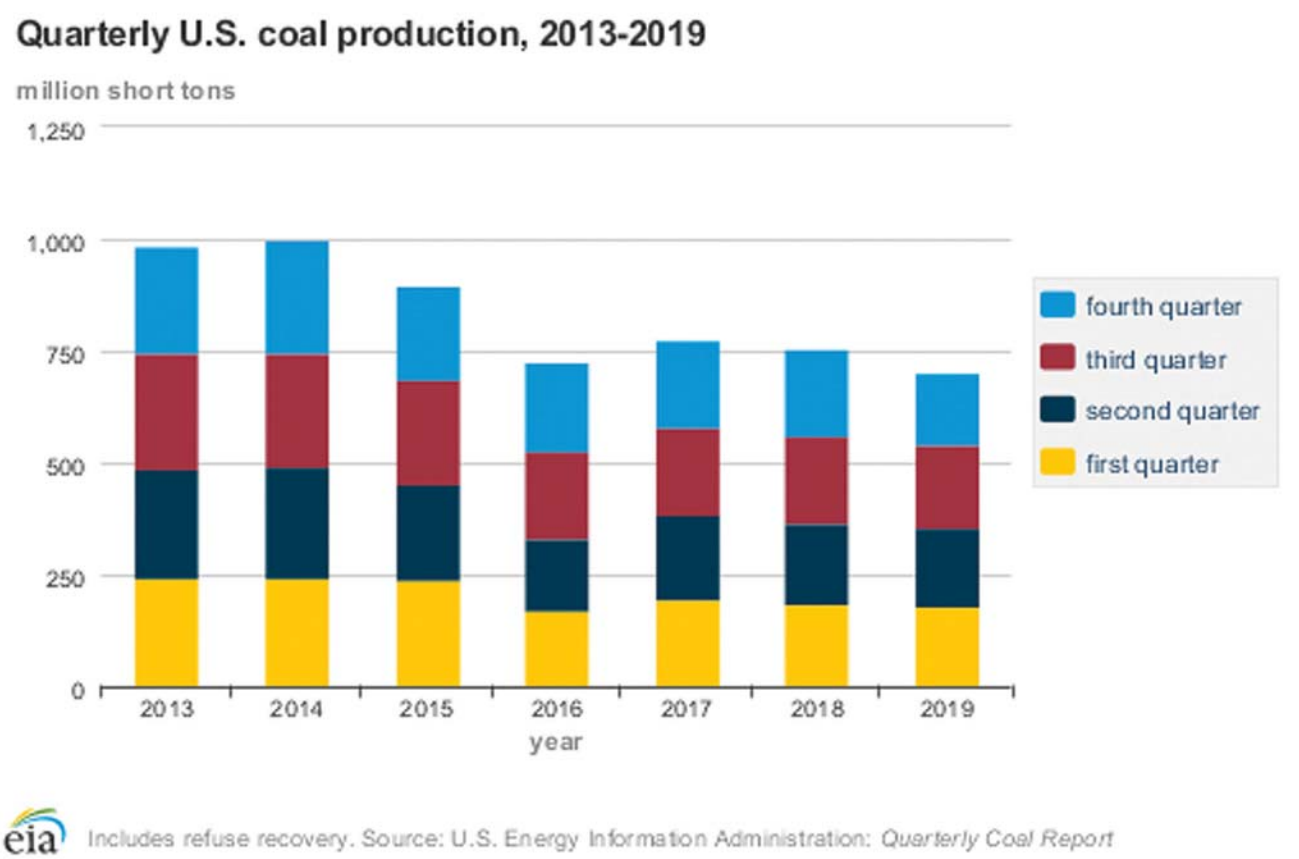
In the fourth quarter of 2019, U.S. coal exports (20.4 MMst) decreased 6.9% from the third quarter of 2019. The average price of U.S. coal exports during the fourth quarter of 2019 was $93.94 per short ton.

The United States continued to import coal primarily from Colombia (77.2%), Canada (12.9%), and Indonesia (7.9%). No imports from Australia were recorded for the fourth quarter of 2019. U.S. coal imports in the fourth quarter of 2019 totaled 1.7 MMst. The average price of U.S. coal imports during the fourth quarter of 2019 was $75.66 per short ton.

In the fourth quarter of 2019, steam coal exports totaled 7.8 MMst (8% lower than the third quarter of 2019). Metallurgical coal exports totaled 12.6 MMst (6.2% lower than the previous quarter).

U.S. coal consumption totaled 131.8 MMst in the fourth quarter of 2019, which was 21.4% lower than the 167.8 MMst reported in the third quarter of 2019 and 22% lower than the 169.1 MMst reported in the fourth quarter of 2018. The electric power sector accounted for about 91% of the total U.S. coal consumption in the fourth quarter of 2019.

In the fourth quarter of 2019, coal stocks grew to 158.8 MMst from 139.9 MMst at the end of the third quarter of 2019 (a 13.5% increase). Stocks in the electric power sector increased to 128.5 MMst from 111 MMst at the end of the third quarter of 2019, the highest level since the fourth quarter of 2017.



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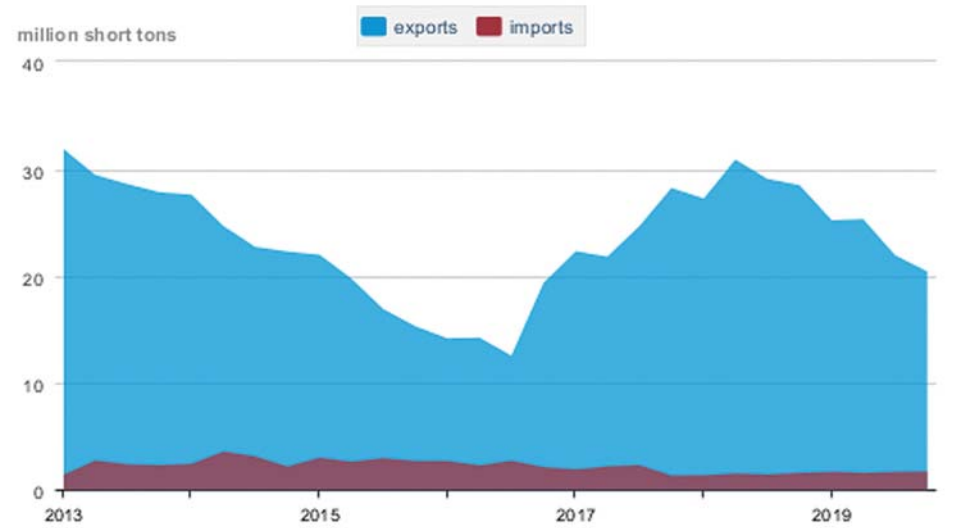
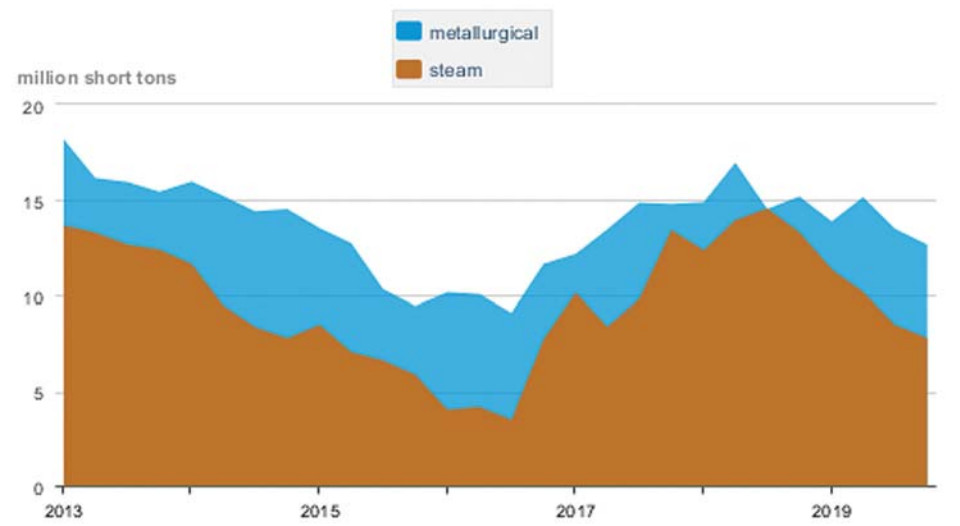
Quarterly U.S. coal exports and imports, *2013-2019*



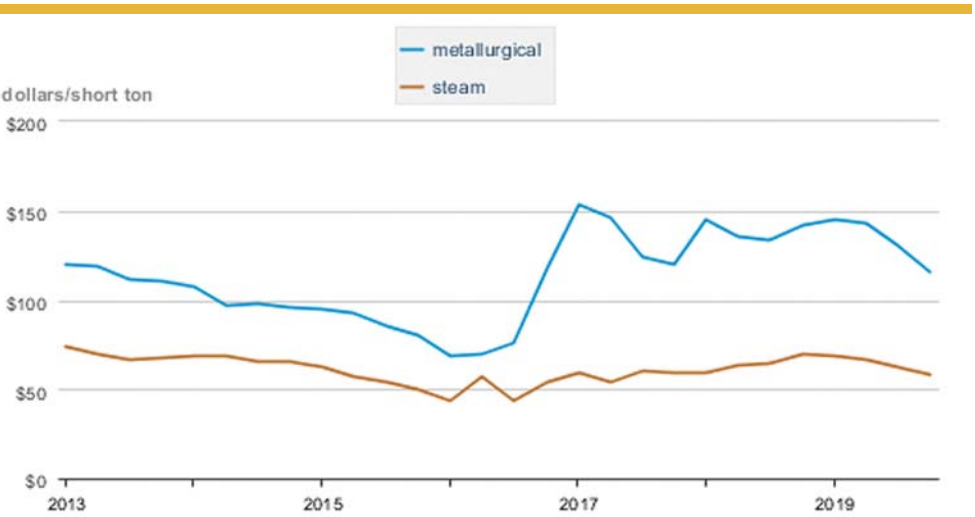
Source: U.S. Energy Information Administration: *Quarterly Coal Report*

Quarterly U.S. steam and metallurgical coal exports, *2013-2019*



Source: U.S. Energy Information Administration: *Quarterly Coal Report*

Average quarterly price of U.S. steam and metallurgical coat exports, *2013-2019*



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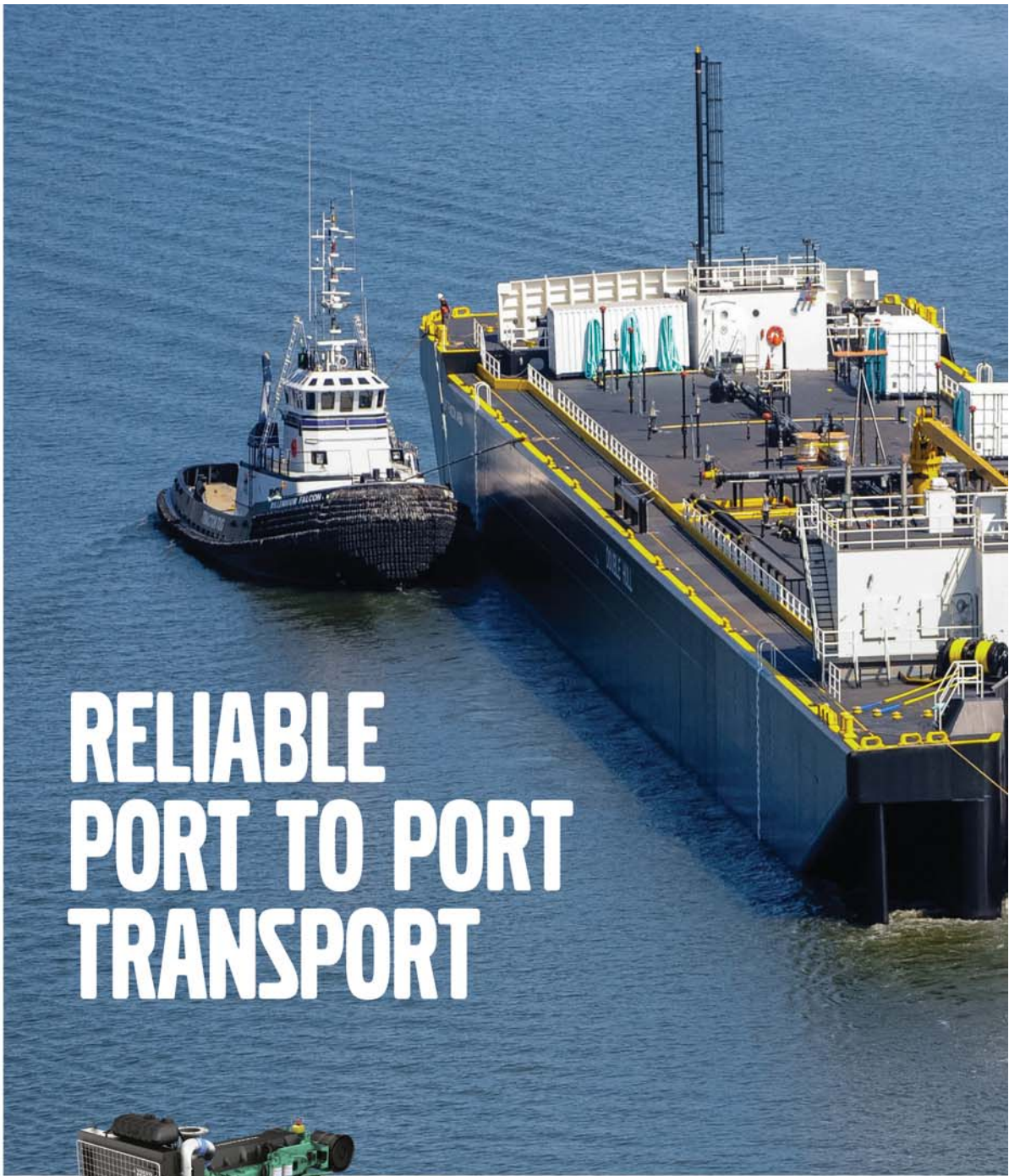

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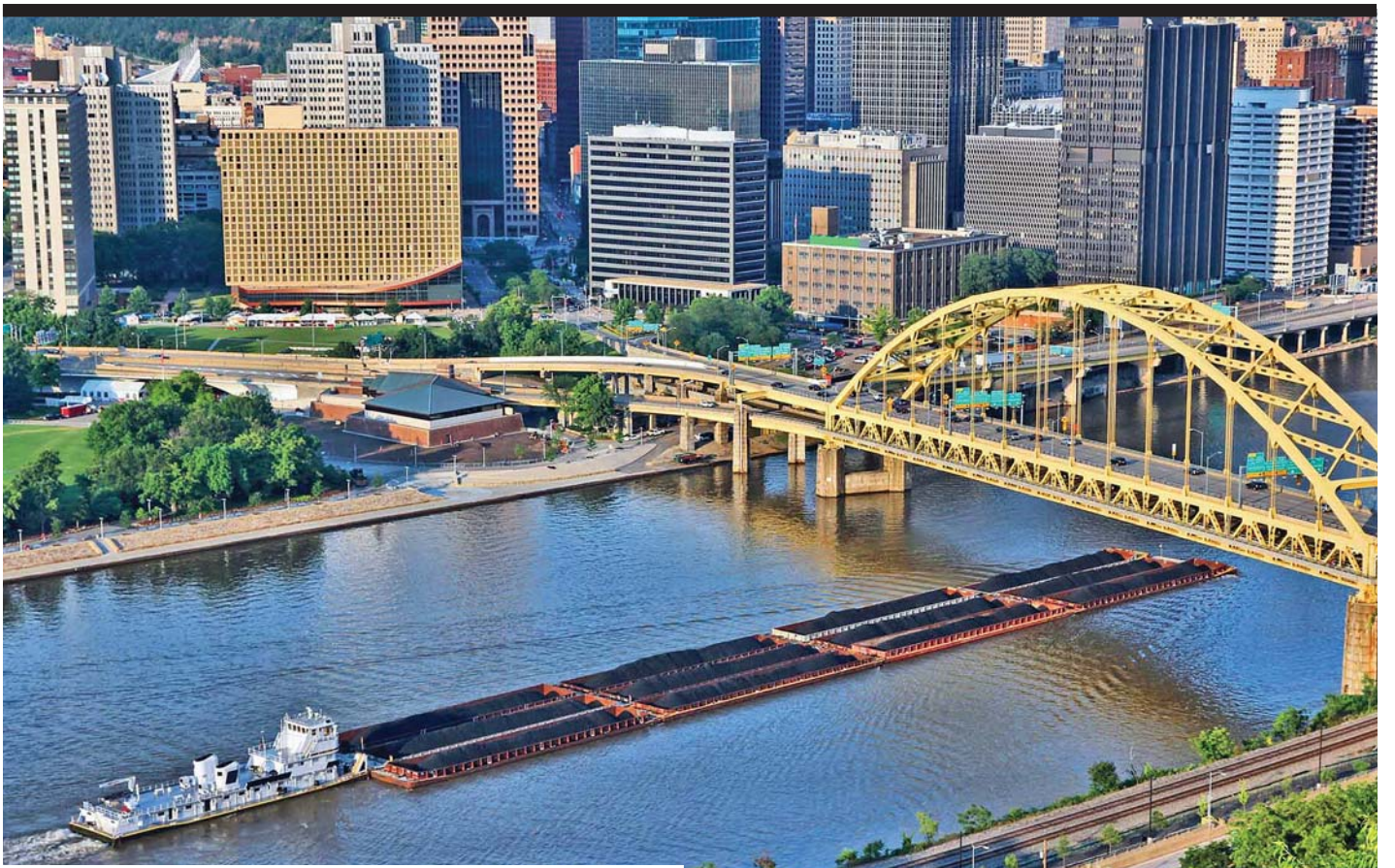

All images: Port of Pittsburgh Commission

Mary Ann Bucci

Executive Director, Port of Pittsburgh Commission

Mary Ann Bucci has spent her entire career in many different aspects of the logistics profession, selling container space on international vessels for SeaLand Service, leasing railcar equipment for GE Railcar Services, and negotiated rail rate for Aristech Chemicals. Having spent the last 19 years advocating for the inland waterways system, specifically for the Port of Pittsburgh District, Bucci weighs in on some of the top issues and key projects underway at one of the nation's busiest inland ports.

Please describe the Port of Pittsburgh Commission's role in supporting waterway commerce, and what are your primary responsibilities as Executive Director?

At the Commission, I report to a 15-member Board that is appointed by the Governor of the Commonwealth of Pennsylvania. I propose strategies and design programs to carry out the mission of the Commission, manage the staff and resources of the Commission, gather public support to assist in carry out the mission and ensure the effective execution of the Commission's priorities consistent with the financial,

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ethical and legal constraints of the Commission. In my role of supporting waterway commerce, I organize and participate in tours, programs and press conferences to educate our elected officials, stakeholders, community agencies, and the recreation boating community on the federal funding issues for lock and dam projects.

Please give a "by the numbers" rundown of the Port of Pittsburgh.

The Port of Pittsburgh Commission is 200 miles of navigable waterway in 12 counties. There are approximately 160 terminal facilities and 17 sets of locks and dams located on the Allegheny, Ohio, and Monongahela Rivers. In 2017, our locks handled 86.5 million tons of cargo. The busiest locks perform as many as 300 commercial lockages per month. In 2018, 21.6 million tons of inbound, outbound and intra-port cargo was moved in the Port District.

What about jobs and GDP?

We are currently working with Texas A&M Transportation Institute on an Economic Impact Study to gather the latest data. It is premature for me to quote any statistical data at this time, but our report should be completed late summer, early fall.

Aging river infrastructure is a major concern for those operating on the United States' inland waterways. Where are your top infrastructure concerns for the Port of Pittsburgh today, and what's required to address them?

A major lock or dam failure at any of locks or dams in our district. Our first priority is the need to complete the Lower Mon Project. This project has been ongoing for 26 years due to lack of adequate funding. The Water Resource Development of 2014 allowed the project to get back on track, and the project is now funded to completion. The anticipated date is 2023.

The second priority, is to receive a new start construction on the Ohio River (Upper Ohio Navigation Project). This project will build one new 600-foot lock chamber at Emsworth L/D, Dashields L/D and Montgomery L/D.

Which specific infrastructure improvement project(s) presently needed or underway will have the greatest positive impact?

The Upper Ohio Navigation Project will have the greatest positive impact. It is the gateway to the rest of the navigation system. The largest construction project, a cracker plant being build by Shell is located on the Ohio River. The facility would have never been built in this region without access to the river. Most of the components that went into building that facility

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moved on the inland waterways system as the pieces were too large for any other mode of transportation.

Across the country, river infrastructure competes with road and rail for critical federal funding. Why is it important for lawmakers to ensure rivers receive their fair share?

River infrastructure and industries are a key part of our integrated transportation system. As a viable transportation mode for certain products and goods, the rivers do compete for federal dollars with other modes and it is important for all of us to let our decision makers know the important role and impact our industries have for both the economy and the environment.

What policy matters would you like to see addressed in future WRDA legislation, and why?

In recent years, when changes have been made to the 50/50 federal cost share for particular projects, we've seen major infrastructure projects finally being completed and saving money in the long run. That is why a top priority of PortPitt and many other inland waterways groups is a change in WRDA to a 75/25 federal cost-share. We've advocated for such a change and are hopeful that the 2020 WRDA bill will include language closer to the 75/25 percentage so that we can get projects done quicker and save money over the long run. In addition, we oppose additional tolling or lockage fees or other charges for the users on the inland waterways system.

How has the COVID-19 outbreak impacted – or perhaps not impacted – operations at the Port of Pittsburgh? What have been the greatest challenges (if any), and what's being done to address them?

The rivers keep moving during this crisis and so do our river industry partners. Both the federal and state governments have recognized the importance of our transportation sector in moving products and goods, and we are so proud of all the work that continues on and along our Marine Highways in support of our commonwealth and country.

What short- and long-term effects on the Port of Pittsburgh do you expect to see stemming from the coronavirus pandemic?

There is a lot of unknown with the coronavirus pandemic. Short term, the products are moving. Long term, the shutdown at various plants could cause a downturn in shipping; and if many individuals, (lock and dam operators, barge operators, terminal operators) become infected with the virus, a lack of workforce could slow down the movement of freight along the inland waterways.

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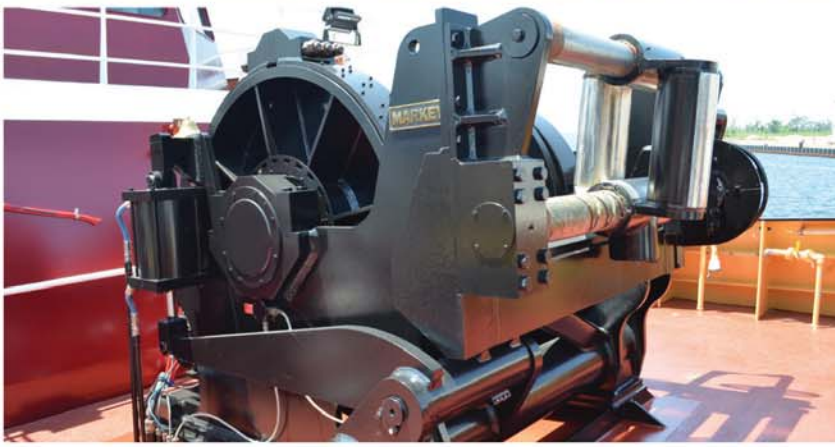

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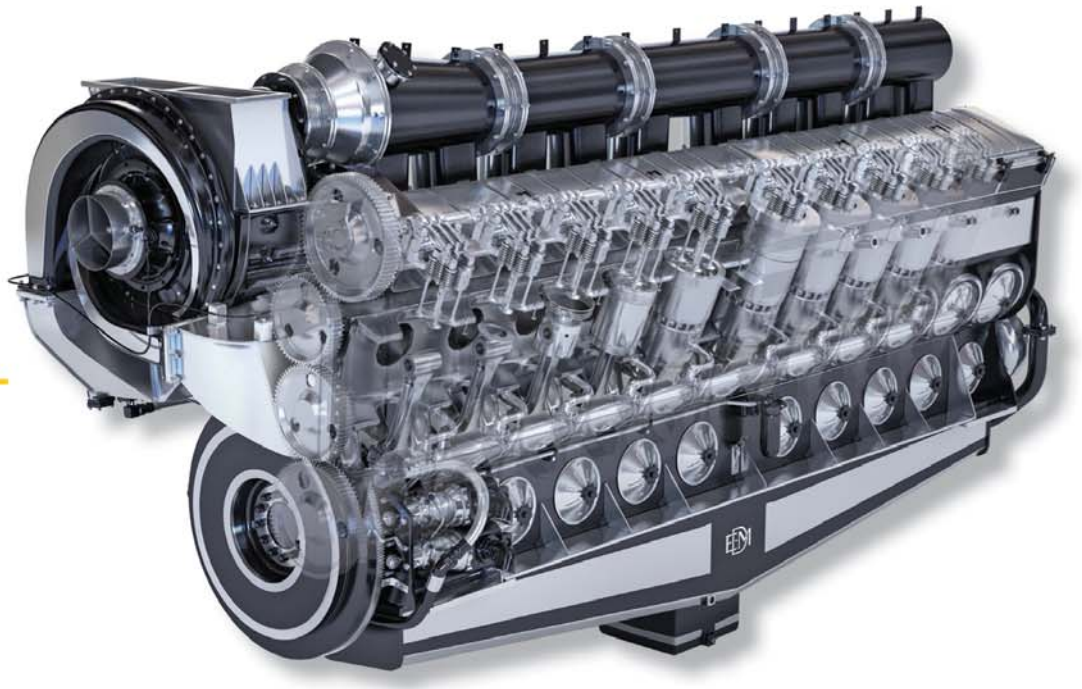

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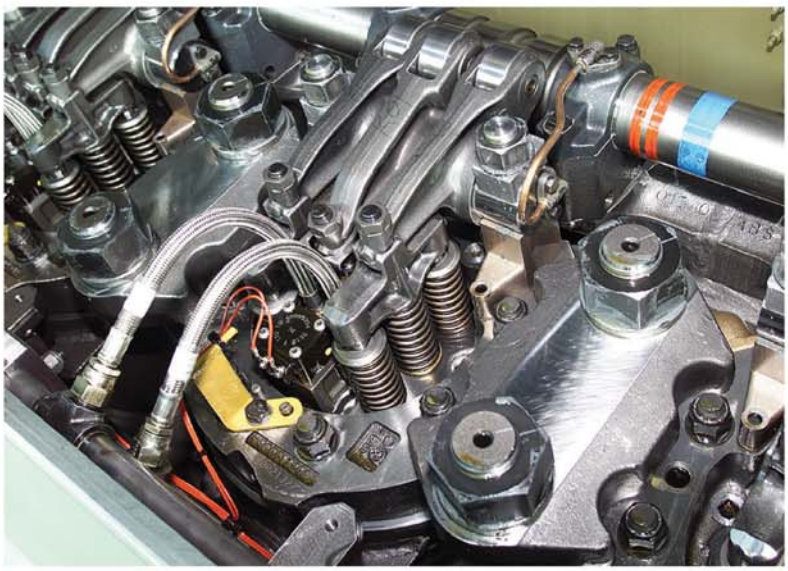

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Economic Recovery Should Include Infrastructure Investment

By Deb Calhoun, Interim President/CEO, Waterways Council, Inc.

Calhoun

As the nation continues to be impacted by COVID-19, there are silver linings to the crisis: family time and togetherness, gratitude for what we had before it was taken away, and a chance to seek opportunities to be better and more productive.

As funding bills related to the COVID-19 crisis move forward, there may be an opportunity for the nation to better itself by modernizing its infrastructure.

Congress has, to date as of this writing, passed three phases of a coronavirus relief package. Phase One, enacted March 6, provided $8 billion primarily for health-related needs and international programs. Phase Two, enacted March 18, provided paid leave, tax credits, expanded unemployment and nutrition assistance, and free COVID-19 testing. Phase Three, enacted March 27, provided $2.2 trillion to support the government's response to the pandemic and to help individuals and businesses impacted by the economic downturn. Phase Four was said to be a potential vehicle for infrastructure funding, with as much as $2 trillion touted by President Trump for this purpose, with indications of support from House Democrats. It now appears that Phase Four will not undertake infrastructure, but instead will provide more of what Phase Three offered, with around a quarter trillion dollars in additional relief for small businesses.

If infrastructure is to become part of a future emergency supplemental funding bill, the inland waterways fit nearly seamlessly into the reasons behind such an initiative – to jump-start the American economy and get American workers back on the job to build beneficial projects.

The majority of inland waterways' locks and dams were built in the 1930s during The New Deal to create a more reliable, efficient river transportation network and to stimulate the U.S. economy with an influx of new construction jobs. Infrastructure remains a bipartisan issue that both sides of the political spectrum agree is critical to American progress and success.

Our nation's lock and dam system keeps waterways channels and rivers navigable, generates hydropower for electricity, provides flood protection, supplies municipal and industrial water, offers national security, and creates recreational boating and fishing opportunities. Our inland waterways system transports commerce to and from 38 states, serving industrial and agricultural centers, and facilitating imports and exports at gateway ports on the Gulf Coast and in the Pacific Northwest. With the presence of the inland waterways transportation system, today's energy producers, manufacturers, constructors, American family farmers and other commodity

U.S. Army Corps of Engineers

shippers can compete in the domestic and international marketplace. More than 541,000 family-wage jobs depend on the inland waterways, and the cargo moving on the system does so in the most energy-efficient, environmentally friendly and safest way compared to other modes.

Currently, 18 projects valued at over $7.2 billion are authorized for construction, or currently under construction, on the inland waterways transportation system that could be eligible for consideration in an infrastructure package. Of those, six projects with a current total estimated cost of approximately $2.2 billion are or could be under construction, considered "shovel ready," in a short period of time.

In 2018, during the process to move a Water Resources Development Act (WRDA) 2018 in the Senate, Senator John Barrasso (R-Wyo.), Chairman of the Senate Environment and Public Works Committee, delivered remarks on the Senate floor on infrastructure that resonates today. "Over the past 50 years, our country has gone from a construction society to a consumption society – and as a result our bridges, roads, dams, and waterways have suffered....[this bill] grows the economy and creates jobs." he said.

The same could be said about an emergency supplemental funding bill. The inland waterways are the beneficiary of that funding, but the nation itself reaps the overall economic and quality of life benefits.

On the waterways, as we begin to see agriculture exports pick up the pace, we recall the August 2019 U.S. Department of Agriculture (USDA) study that quantified the cost-savings and competitive advantages that would accrue from investing in long-delayed improvements to inland waterways locks and dams on the Upper Mississippi and Illinois River system. The study, Importance of Inland Waterways to U.S. Agriculture, addressed the critical connection between the inland waterways and the competitiveness of American agriculture in global markets.

The study highlighted that

- *U.S. farmers enjoy a competitive advantage in global export markets in large part because of the nation's robust, resilient transportation and infrastructure network that moves corn and soybeans, the nation's highest yielding crops.*
- *The inland waterways system saves between $7 billion to $9 billion annually over the cost of shipping by other modes (based on all goods currently being moved on the water compared to the same volume transported by rail).*
- *Every dollar of waterways activity output results in $1.89 in additional U.S. economic activity directly related to the waterways.*
- *Compared to the status quo, increasing investment in the inland waterways system by $6.3 billion over a 10-year period (through 2029) and $400 million per year thereafter through 2045 cumulatively would grow the waterways' contribution to U.S. gross domestic product by 20% (to $64 billion) and increase waterways-related employment by 19%. Conversely, reduced investment would decrease the market value of those commodities by $58 billion, the study says.*
- *The inland waterways' infrastructure is aging and needs major rehabilitation and construction to restore its full capability, forestall major disruptions and provide opportunities for growth. For corn, delays on the Mississippi River could have up to a $0.24 per bushel negative impact.*
- *While the United States currently has a $5.35 per metric ton advantage over Brazil when shipping soybeans on the inland waterways system (from Davenport, Iowa, to Shanghai, China), aging U.S. waterways infrastructure will increase the price to the end-user, lower the demand for U.S. grains and soybeans, and make them less competitive in global markets.*

The nation continues to combat COVID-19 and protect its citizens from the virus and further harm. But when we turn the corner toward recovery, let's look to the future of America and to strengthening its critical infrastructure. A modern, more efficient inland waterways system will continue to deliver key commodities, but also the promise of a much stronger economy.

The Unsung Benefits of the Inland Waterways

By James Kearns, Special Counsel, Jones Walker LLP

Kearns

With developments in the current health crisis almost entirely consuming nearly all news reporting, one could be forgiven for thinking that the members of Congress are thinking about and working on little else, and that even if they were, the divisive partisanship of recent years would doom the prospects of much else getting done. Happily, that is not the case for the nation's inland waterways. Both houses of Congress are diligently working on maintaining the momentum of passing a Water Resources and Development Act (WRDA) every two years, trying not to break stride after passing such legislation in 2014, 2016, and 2018 with large bipartisan majorities.

The work on a Water Resources and Development Act for 2020 has provided yet another occasion to consider a fundamental and recurring question: Who are the true beneficiaries of the nation's inland waterways? This question is reflected in several of the things that WRDA 2020 is being asked to do, and to avoid.

At the top of the river industry's First-Do-No-Harm List is avoiding lockage fees or other forms of user fees that would be the functional equivalent of toll booths at the locks and dams throughout the river system. For the past several years, in both the current administration and the previous one, the President's budget has included a proposal for such fees in one form or another. The concept has a superficial appeal: why shouldn't barge tows pay tolls to help cover the cost of maintaining the waterways that they use just as trucks and cars pay tolls to help cover the cost of maintaining the highways on which we all drive?

The river navigation industry has consistently—and thus far successfully—resisted these repeated proposals primarily with two arguments. First, the industry will point out that it does, in fact, contribute to the cost of maintaining our nation's waterways infrastructure through the tax that is imposed on the fuel that is used by towboats on the rivers and that is paid into the Inland Waterways Trust Fund (IWTF), to support new and replacement construction and major rehabilitation of the locks and dams throughout the river system. The industry will further call attention to the fact that several years ago that fuel tax was increased by 45% at the river navigation industry's own request.

The second major argument made by the navigation industry is that, unlike the roads and highways on which people drive, the rivers provide many benefits in addition to transporting cargo and passengers. The commercial users are the only beneficiaries of the inland waterways system who pay a user fee in the form of the fuel tax. Those beneficiaries who receive flood control, water supply, recreational, and similar benefits do not pay a fuel tax or fee to contribute to the construction or maintenance of the system providing these benefits.

Each time that the process gets underway for creating the next WRDA, the river navigation industry goes on high alert to make sure that some form of user toll is not included—or better yet, is expressly prohibited—in the legislation that is finally enacted. "We are not the only ones who benefit from the inland waterways system," the industry says. "Let the other beneficiaries pay their fair share."

But how can that "fair share" be quantified in dollar terms? Extensive and detailed studies have been undertaken in an attempt to do that, a prominent example of which is "Toward a Full Accounting of the Beneficiaries of Navigable Waterways," prepared by Dr. Larry G. Bray, C. Michael Murphree, and Chrisman A. Dager of the Center for Transportation Research at the University of Tennessee, available on the website of the

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National Waterways Foundation. A rough estimate of what this "fair share" might be is already found in the current cost-share of projects that are financed from the IWTF of 50% from the IWTF and 50% from general revenues in the U.S. Treasury. In effect, the river navigation industry pays one-half of the project's cost from the fuel taxes that the industry paid into the IWTF and the "public"—all other beneficiaries of the system of locks and dams—pays the other half from the general revenues in the nation's Treasury.

In the current development of WRDA 2020, one of the major requests of the inland waterways industry is to change the cost-share for lock and dam projects financed from the IWTF to 25% from the IWTF and 75% from general revenues. This would conform to the cost-share that is currently provided for certain projects to improve the country's deep water ports. One of the arguments made for making this change is that it would in fact make more efficient use of the funds in the IWTF by allowing work to proceed more smoothly and continuously, avoiding costly delays and cost over-runs. A prime example of this effect is the dramatic improvements that were made in the costs and schedule for constructing the Olmsted Locks and Dam by changing the 50-50 cost-share to one in which 85% of the costs were funded from general Treasury revenues and 15% from IWTF.

But it is also true that, while the deep water ports are vital points of import and export for our nation's commerce, studies such as the one by Dr. Bray and his colleagues show that the inland waterways infrastructure provides many more benefits to the public than simply moving cargo in the stream of commerce. If the deep water ports warrant a 75-25 cost share because of their economic benefit to the nation, then it is no less so for both the economic and non-economic benefits provided by the inland waterways.

Other provisions being requested for inclusion in WRDA 2020 further reflect the extent to which the inland waterways provide benefits beyond the carriage of cargo and passengers. For example, requests have been made for changes to the process by which projects are approved for implementation by the U.S. Army Corps of Engineers (USACE).

When USACE considers a potential project for the inland waterways infrastructure, it first performs a benefit-cost analysis (BCA) to compare the economic benefits of alternative ways to carry out the project to the investment cost of those alternatives. In many cases that planning process will be done in cooperation with a local sponsor that will be involved in the project and that is hoping to achieve benefits from it that meet the special needs of the local community and local conditions. The outcome of this planning process is a Benefit to Cost Ratio (BCR), in which future benefits and costs of the project are taken into account by computing their present values using a discount rate. The discount rate for USACE to use in calculating the BCR of a proposed project is specified in Section 80 of WRDA 1974, to be adjusted annually; it is currently 2.75% for fiscal year 2020. Under current law, USACE may recommend for authorization only projects that have a BCR greater than 1.

However, in two respects the Office of Management and Budget (OMB) has imposed stricter requirements for projects to be included in the President's annual budget proposal to Congress. First, OMB Circular A-94 requires that a discount rate of 7% be used in calculating a project's BCR. Because of the long period of time for which the BCR is calculated, the present value calculations are very sensitive to the discount rate that is used. OMB's higher discount rate typically has the effect of reducing a project's BCR. Further, OMB has required that the BCR be greater than 2.5 in order to focus only on projects that generate the highest returns.

This reliance on BCR computations means that the prospects for a project to be authorized and funded depend heavily on how the benefits of the project are determined, since the costs can generally be quantified and estimated with a fair degree of confidence. In determining the BCR for navigation projects, USACE currently takes into account only the economic impact on those who use the inland waterways for navigation. Many of the other benefits that result from these projects are not taken into account. While some of these additional benefits might be difficult to quantify in monetary terms, there are certainly secondary and ancillary economic benefits that could be quantified for inclusion in the BCR calculation. Many economic impact studies are prepared that do this.

A related problem arises from the current requirement for the project alternative that has the highest net benefits (project benefits minus project costs) to be designated as the National Economic Development (NED) plan. A cost-sharing local sponsor may prefer an alternative plan, which is called the Locally Preferred Plan (LPP). The LPP might cost more or less than the NED alternative, but the LPP often places less importance on some of the benefits that are the basis of the NED plan, while instead it seeks to achieve subjective, non-quantifiable benefits that are important to the local community and for local conditions and but which the NED plan does not take into account. Under current law, the LPP is acceptable only if the local sponsor agrees to fund additional costs that are not part of the NED plan. These additional costs can be economically prohibitive for many smaller local sponsors, leaving them with a choice between a project that does not have the benefits that would be particularly useful to their local situation, or no project at all.

It is hoped that WRDA 2020 will help change current law and policy to better recognize the many benefits of inland waterways infrastructure projects.

Canal Barge Adds High-HP Towboat Built by Conrad

By Eric Haun

Conrad Shipyard in April delivered the 6,000-horsepower towboat, H. Merritt "Heavy" Lane, Jr., to Canal Barge Company (CBC). Built at Conrad's Amelia, La. shipyard, the Subchapter M-compliant vessel measures 166 feet by 49 by 12 and is powered by EPA Tier IV-compliant Electro-Motive Diesel (EMD) engines.

"We believe that the Heavy is the first high-horsepower boat on the U.S. Inland Waterways to utilize an EPA Tier IV engine package," said David M. Lane, CBC's Senior Vice President of Marketing, adding that the need to add high-horsepower tonnage was a driver behind ordering the newbuild. "There are a limited number of higher-horsepower inland towboats of a young enough age that are available for acquisition, so in this case we believe that there was a strong business case to build new for the future."

"We are always on the lookout to add well-conditioned boats to our fleet and, where those are unavailable, build new equipment according to our anticipated future needs," Lane said.

In fact, in addition to Heavy Lane, Canal Barge also has two Farrell & Norton design 4,400-horsepower towboats on order/under construction at present at Steiner Construction in Bayou La Batre, Ala.

"These new construction projects represent the first upriver line haul service towboats to be constructed by CBC in several years. With measured planning and adaptation of CBC's preferences and culture, these new assets will integrate well into the system," Lane said.

Conrad Shipyard

"We are excited to bring online this new state-of-the-art towing vessel, which is the first 6,000-horsepower EMD of its kind on the inland waterways," H. Merritt Lane, III, President and CEO of Canal Barge Company, said in a statement. "The Heavy Lane will clearly be the flagship of our growing towboat fleet."

The inland towboat H. Merritt "Heavy" Lane, Jr. will work the Lower Mississippi River system primarily, and has the flexibility and versatility to move liquid and dry cargos according to business need, David Lane said.

According to the shipbuilder, the vessel design is based on a proven concept that has been enhanced to modern standards through advanced engineering analysis targeting improved efficiency, crew accommodations and noise reduction.

Designed by naval architects MiNO Marine, the Heavy Lane has a unique hull form to ensure adequate water flow to the propellers in all operating conditions. The design allows the transfer of full power through the propellers, minimizing propeller vibrations transferred to the hull due to unsteady water flow. The design also reduces the potential for flow-induced vibration, ensuring greater crew comfort and reduced noise.

For even greater crew comfort, the superstructure is divided into two sections, one floating and one fixed, and all living accommodations are located in the floating section which sits atop air bellow vibration isolators designed to minimize noise and vibration transmission from the operating machinery. Floating floors in the joiner work reduce vibration as well.

Robert A. Sampey II, Conrad's Vice President Business Development, said Conrad has previously built several barges for CBC, but the new towboat is the first powered vessel it has delivered for the operator.

Sampey said the inland vessel market remains a point of focus for Conrad as evolving customer needs, Subchapter M and EPA Tier IV requirements drive design changes. "With our in-house engineering staff, and our strategic partnerships with engineering firms we believe we are well positioned to support our customer's needs," he said.

Conrad is currently building another 6,000-horsepower towboat for another customer to be delivered toward the end of the year.

Outfitting the

H. Merritt "Heavy" Lane, Jr.

Builder: Conrad Shipyard
Designer: MiNO Marine
Owner: Canal Barge Company
Delivered: April 15, 2020

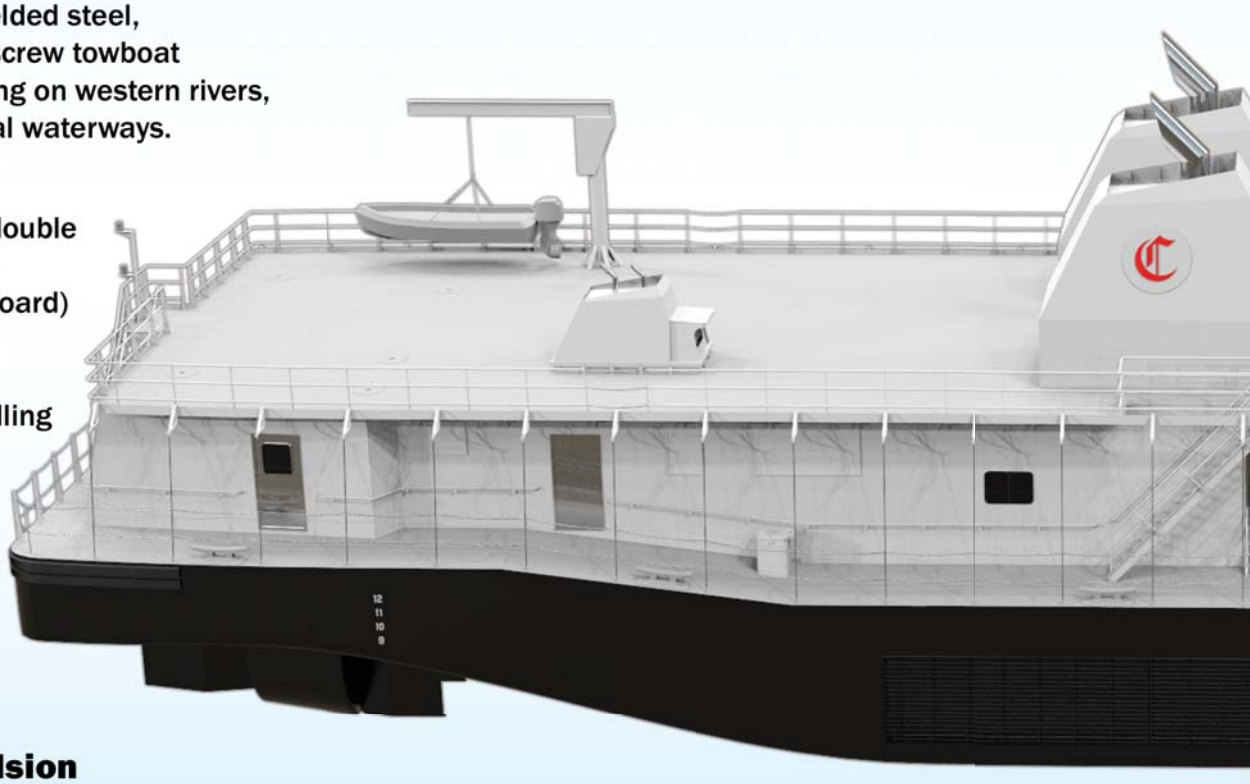
Length: 166'
Beam: 48'
Depth: 12'4" molded at CL
Maximum draft: 10'6" full load
Eye level above DWL: 38' 9"
Eye level above LWL: 40' 3"
Gross tonnage: 1,190

Hull construction

The vessel is an all-welded steel, diesel-powered, twin screw towboat suitable for push towing on western rivers, inland and intracoastal waterways.

Deck equipment

Four Wintech 60-ton double drum electric winches (two on bow, two outboard)
Wintech five-ton electric capstan
Rotating jib boat handling crane (1-ton capacity)



Crew comfort

Trelleborg house suspension system
Vibration reducung isolated joiner system
Sound insulation

Power and propulsion

Main propulsion: Two Electro-Motive Diesel (EMD) Model 12ME23B, EPA Tier IV, marine diesel propulsion engines, 12 cylinders, turbocharged, 3,000 HP at 900 RPM continuous service rating. (Marine Systems, Inc. supplied)
Ship's service power: Two Cummins Diesel Engine Model QSB7-DM 170 KW, six-cylinder, 1,800 rpm, four-cycle, turbocharged and after cooled
Gearboxes: Reintjes WAF 4545 H, 4.429 : 1 reduction (Karl Senner supplied)
Propellers: Sound Propeller CF-3 110" Dia by 113" Pitch .90 DAR, 11" Bore (Texas Wheel Works supplied)
Steering system/controls: Two Becker S-C 2250/334 E steering rudders, with Flanking Rudders,
Two Rice Type 37 Kort Nozzles

Modern Towboat

Other equipment/systems

Holler fire protection, EMI Alarm and Monitoring, Jotron Sound powered phone, Furuno Navigation Aid equipment, Carlisle and Finch Xenon Search Lights Fernstrum GRIDCOOLER® Keel Cooler

Accommodations

Three 2-man staterooms (shared head)
Two 1-man staterooms (shared head)
Cook's room
Engineer's room (private head and office)
Guest room (private head)
Pilot's room (private head)
Captain's room (private head)
Galley + mess area (seating for eight)
Laundry

Tankage (approx. gallons)

Diesel fuel: 132,000
Potable water: 21,400
Oily water: 2,000
Dirty oil: 2,400
Ballast (total): 27,300
Urea (total): 15,000
Engine lube oil: 1,400
Gear oil: 950

Classification/certification

The vessel is designed and built in accordance with:
Current USCG rules as applicable, as well as all regulations incorporated by reference.
USCG Subchatper M for vessels towing hazardous cargoes.
Design and construction, but not classed in accordance with current latest edition of ABS "Rules for Building and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways" as if to be classed +A1 Towboat, River and Intracoastal Waterway Service.

Black Swans Impact US Barging Markets

By Eric Haun

The combination of the coronavirus pandemic and oil price freefall have affected most maritime markets, including inland waterway shipping. Looking at U.S. river transport in particular, the impacts of these two black swan events vary greatly depending on the type of cargo being carried.

David Grzebinski, CEO of the America's largest tank barge operator, Kirby Corp., said in a March conference call that petrochemical customers have driven the market higher as plants and refineries look to shore up their supply chains amid current market upheavals, noting the economic impact of supply shortfalls or having to shut down a plant are "pretty huge" compared to the cost of barging.

"Our utilization levels have been in the 95% range in recent weeks," Grzebinski said on the March 23 call. "This morning we were 97% utilized, which frankly is as busy as I've ever seen it."

But that's not to say fleet utilizations are guaranteed to remain high as further market instability ensues.

"Make no mistake, if this U.S. economy goes into recession – and we may already be there – [refineries and petrochemical plants] will probably cut down their volumes."

Should that happen, Grzebinski said one strategy the company could deploy to cut costs is to dial back chartered-in horsepower, citing moves made by the company in 2008-2009 as an example.

"We charter in a lot of our towboat horsepower, and we have the ability to shed that horsepower if demand falls," he said. "At the end of 2008, we probably had 100 charter boats chartered in. By the summer of, '09 we were down to 50-55 charter boats. And that actually allowed us to cut a huge amount of costs. And then, by '10 we ramped it back up.

"Right now, we've got about 90 charter boats, so we have the ability to cut charter boats if we need to . . . That's probably the number one thing we could do in terms of shedding costs."

Campbell Transportation Company

"Although it's very tough to predict the full impact of the coronavirus in a recession, we think our marine transportation businesses are well positioned to weather this potential depressed market conditions. We anticipate that our volumes could decline, but we believe as in past cycles that our marine customer contracts in our variable cost structure will help to minimize the impact on the company." Grzebinski said.

The story is entirely different for dry cargo barging, which was a challenged market even before the recent oil price crash and before the novel coronavirus was discovered in December 2019.

The US' second-largest dry cargo

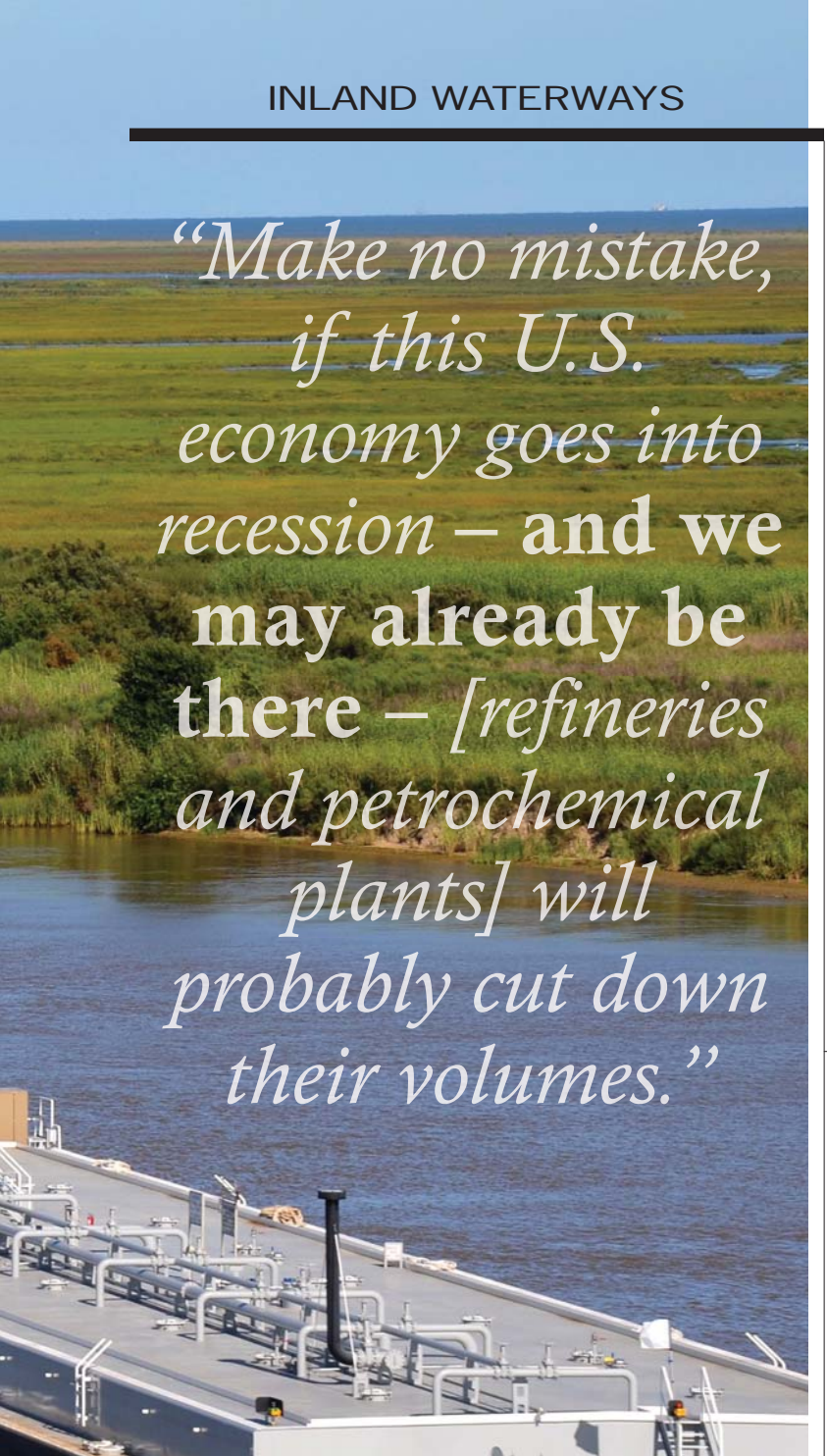
© hildeanna / Abobe Stock

barge owner, American Commercial Lines (ACL), filed for Chapter 11 bankruptcy protection in February, citing in court documents a "confluence of environmental, macroeconomic and industry-specific factors" that have created a "perfect storm" negatively affecting its business.

"Like many others in our industry, over the last four years ACL has been affected by challenging market conditions, the weather and the closure of key areas of the river system for extended periods of time," said ACL President and CEO, Mark Knoy, in a statement on February 4.

Among factors listed was unusually high levels of rainfall and flooding that have severely hindered inland waterway shipping, resulting in increased operating costs and reduced revenues. "For the quarter ended September 30, 2019, ACL estimates that it lost approximately $18 million in revenue as a result of the high water conditions and periodic river closures. ACL's operating costs increased by an estimated $86 million during the nine months ended September 30, 2019 as a result of this flooding," the company said.

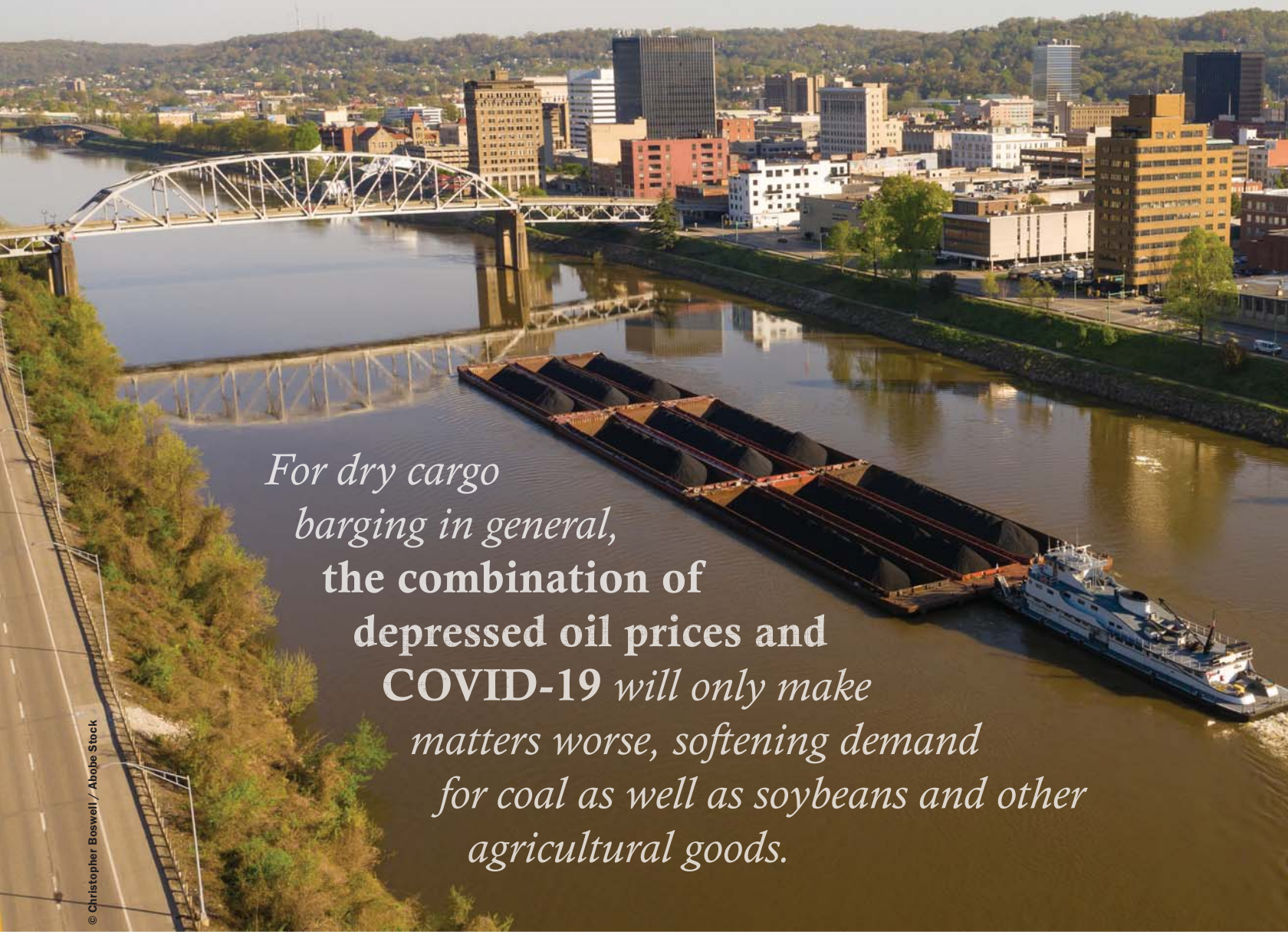
ACL also pointed to a barge capacity glut brought on by declines in domestic coal shipments as well as decreased demand for soybeans and other goods as a result of the U.S.-China



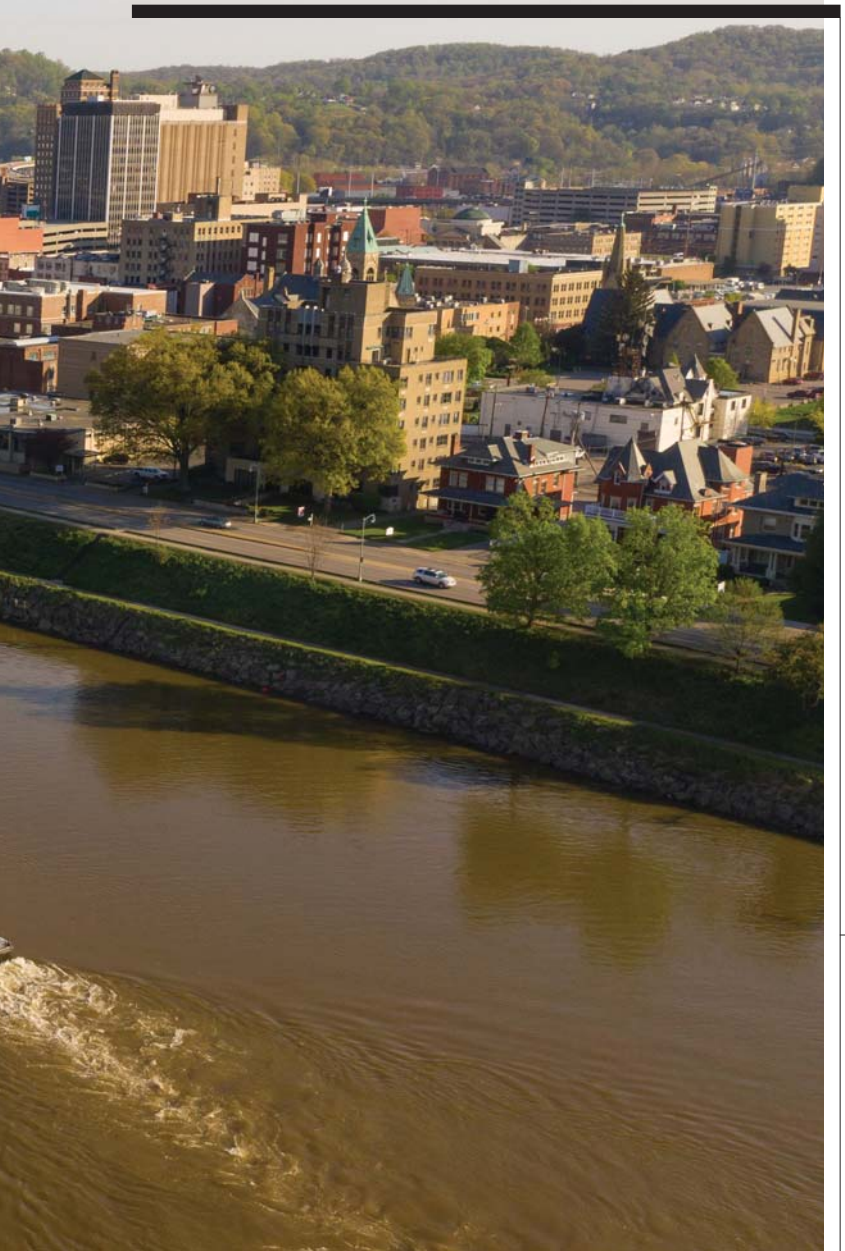
trade war – two issues that, like challenging weather conditions, are expected to continue into the future.

According to BIMCO, U.S. exports of dry bulk goods to China have fallen by 18.9 million metric tons, 9.1 million of which can be attributed to lost soy bean exports.

BIMCO's chief shipping analyst Peter Sand said, "'Phase One' of the trade agreement [signed by the U.S. and China in January] may reverse some of the lost volumes in exports to China but it will not necessarily provide a large boost to U.S. exports. . . It also comes in the midst of the coronavirus outbreak which is affecting both demand for the goods in China



For dry cargo barging in general, **the combination of depressed oil prices and COVID-19** *will only make matters worse, softening demand for coal as well as soybeans and other agricultural goods.*



and their production in the U.S., hampering higher exports."

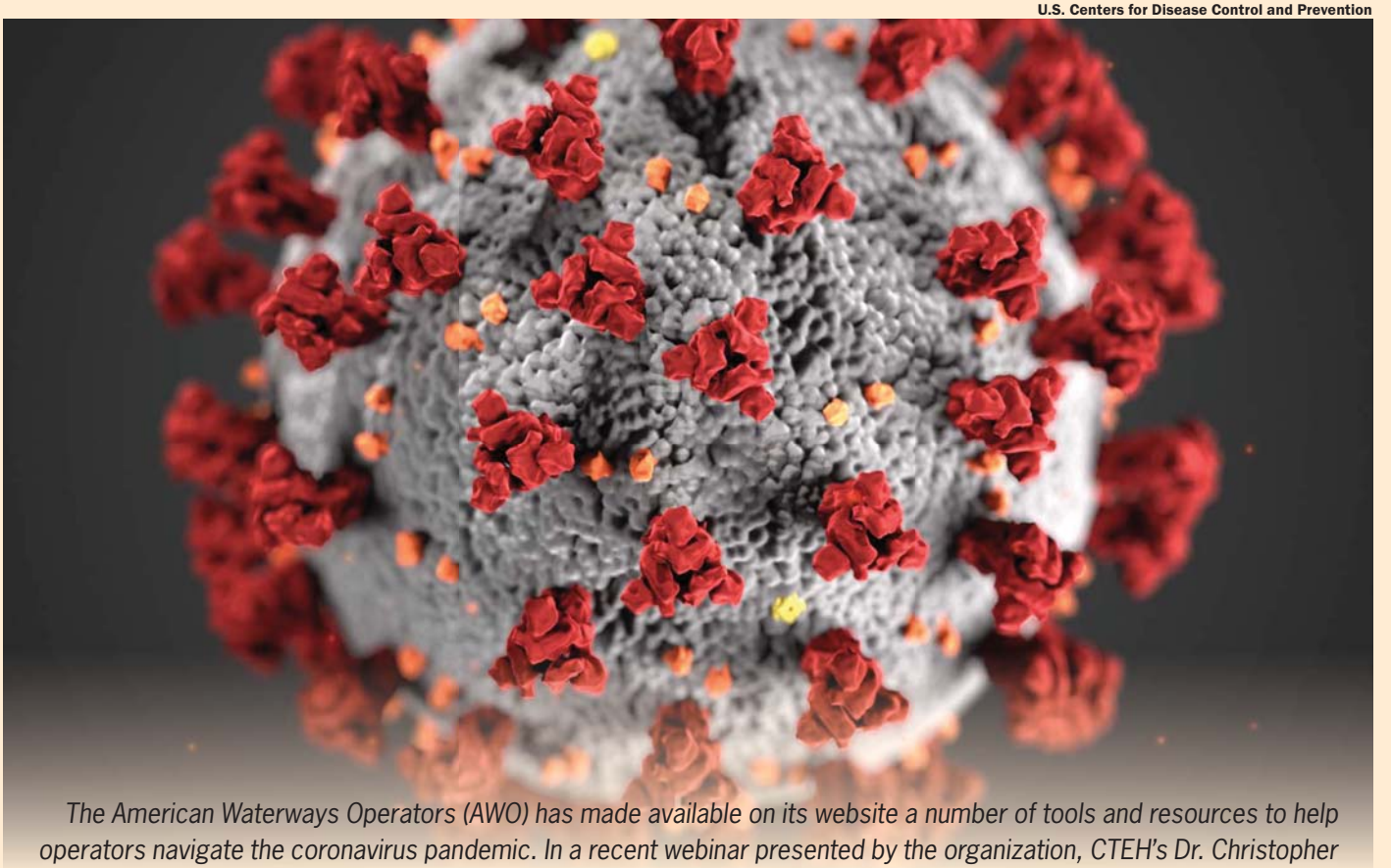
For dry cargo barging in general, the combination of depressed oil prices and COVID-19 will only make matters worse, softening demand for coal as well as soybeans and other agricultural goods.

Keep it moving

In any market conditions, and even during a pandemic, vital goods still need to be moved on the U.S. inland waterways, and operators across the country are taking steps to ensure commerce flows continue.

Peter Stephaich, Chairman and CEO of dry and liquid river transportation provider Campbell Transportation Co., said,

U.S. Centers for Disease Control and Prevention



The American Waterways Operators (AWO) has made available on its website a number of tools and resources to help operators navigate the coronavirus pandemic. In a recent webinar presented by the organization, CTEH's Dr. Christopher Kuhlman, a board-certified toxicologist and industrial hygienist covered a wide range of maritime-specific COVID-19 emergency response issues, including the proper use of personal protective equipment (PPE) as well as best practices for screening crew members and disinfecting vessel areas.

Keeping vessels coronavirus free is a safety concern first and foremost, but there are also financial factors to be considered. If a crewmember were to contract the coronavirus, costs for sidelining the vessel mid-journey, quarantining the crew, cleaning the vessel and mobilizing another crew could run $40,000 to $50,000 per day, Canal Barge CEO, Merritt Lane, told Reuters, adding that the outage of one vessel could run into the hundreds of thousands of dollars.

"The long-term effects on our business are still undetermined. . . There is too much uncertainty at this point to provide definitive guidance on the long-term impact from COVID-19 on our markets."

the company has worked with customers to prepare for the impact of COVID-19 and to ensure essential goods are delivered safely. "Our vessels continue to operate, our shipyards continue to provide critical services, and our tankermen continue to transfer products. These are functions that are necessary to provide essential goods to the public."

"Our focus remains on the health and safety of our personnel and the public and therefore our response has been very proactive," Stephaich said, noting that good preparation and training practices have made inland marine transportation industry better suited than most to deal with emergency response.

In March, Campbell implemented an incident command team that has coordinated with health officials and authorities to ensure best practices to maintain the health and safety of company personnel throughout the undefined outbreak period, Stephaich said.

"Some of the changes we have made are social distancing requirements at all facilities, enhanced restricted access to vessels and facilities, work from home requirement for office personnel, and COVID-19 screening protocol prior to crew change of the vessels or shift change at facilities," Stephaich said. "These new processes have changed the way we work, but I'm happy to report we have managed through them effectively and have no reported cases of COVID-19 at any of our facilities or vessels."

While transport operations have continued on U.S. rivers through COVID-19, profound short- and long-term impacts are to be expected. "The inland marine transportation industry is not immune to the effects of COVID-19 on operations and demand for our services," Stephaich said.

COVID-19's immediate impacts are glaring, and short-term effects are beginning to come into focus. "It's apparent that we will realize a new normal. Our way of operating has been changed due to the threat of this pandemic," Stephaich said. "I envision enhanced screening and testing protocols will remain for an extended period of time. I also believe we have learned how to better utilize technology in our regular operations."

Looking further down the line, Stephaich said the outlook becomes hazy: "The long-term effects on our business are still undetermined. . . There is too much uncertainty at this point to provide definitive guidance on the long-term impact from COVID-19 on our markets."

"Certain industries we serve will likely be in a prolonged downturn due to the economic slowdown we are experiencing," he said. "Energy markets are being impacted due to reduced demand and an oversupply from the Russia and Saudi market disruptions."

"We still believe there is an essential need for low-cost transportation of bulk products in the future," Stephaich added. "That provides us with certainty that our high-quality equipment and personnel will still be in demand."

Port of Indiana-Mount Vernon

Mount Vernon Makes 'Next Generation' Terminal Upgrades

By Eric Haun

A recently completed a $2 million capital improvement project aims to attract more cargo to one of the nation's largest inland ports.

Situated 153 miles from the confluence of the Ohio and Mississippi Rivers, the Port of Indiana-Mount Vernon connects the Ohio River Valley region's agriculture, coal and manufacturing industries to the rest of the world via year-round access to the Gulf of Mexico and Great Lakes through the inland waterways system.

Each year, more than 3,600 barges, 160,000 trucks and 37,000 railcars typically pass through the port, moving approximately 5 million tons of bulk commodities and general cargo – more than any other port in the state of Indiana.

Recent upgrades including a new concrete floor and an overhead gantry crane at one of its 40-year-old general cargo terminal facilities are geared toward steering steel barges to Port of Indiana-Mount Vernon, port officials are hoping.

"We planned the capital improvement projects around a key component of our targeted marketing strategy to attract a steel-related facility to the Port of Indiana-Mount Vernon's 544-acre megasite," says Port of Indiana-Mount Vernon Port Director Phil Wilzbacher.

Wilzbacher says the "megasite" is one of the largest green field industrial sites available at a public port in America's

heartland. "The area is well-suited for a steel production facility because of the direct waterway access to two U.S. coasts, five Class 1 Railroad connections and major highway and interstate access creating substantial logistical savings," he says, adding, "The port has over $20 million of existing infrastructure and capacity to accommodate such a facility."

"Additionally, the port is home to 13 businesses that are recognized as innovators in their respective industries, including transportation, grain merchandising and processing, coal transloading, ethanol production, fertilizer and cement distribution, minerals processing, cargo handling and more – many of which are complementary to the steel industry," Wilzbacher says.

"The overhead gantry crane is the key component of the general cargo terminal that would support the operation of a steel company, as its capabilities and features are ideal to handle steel coils," Wilzbacher says. "Key requirements [when ordering the crane] included quality manufacturing, upgrades in electrical components and the capabilities of transloading cargo between any combination of barge/rail/truck/warehouse."

The new electric-powered crane manufactured near Milwaukee, Wis., by Zenar Corporation and assembled by Mount Vernon-based company TMI Mechanical Contractors spans 75 feet, has a 60-ton lifting capacity with twin, 30-ton hoists, and can travel the full length of the site's 790-foot crane way.

It will be operated by long-time port company and general cargo terminal operator Consolidated Terminal and Logistics Company (CTLC) to load and unload general cargo between barge, rail, truck and warehouse.

The new 53,000 square-foot concrete transit shed floor installed by southwest Indiana company Rivertown Construction in early 2019 can sustain load-bearing capacity to accommodate the maximum weights of any general cargo. Wilzbacher says the new floor brings the 40-year-old facility to a "nearly like-new condition", and could even be expanded to more than 200,000 square feet if warranted.

"Our terminal updates will also help enhance the Mount Vernon port's capabilities in handling container-on-barge shipments," Wilzbacher says. "We are looking forward to new opportunities for our current and future companies."

The upgraded general cargo terminal is currently fully operational, and terminal operator CTLC and Ports of Indiana are jointly marketing the facility to expand services by developing container-on-barge shipments to handle both domestic and international shipments using the inland waterway system in addition to steel coil shipments scheduled for the balance of 2020, Wilzbacher says. Iinquiries to handle super-sacks have been received as well as project cargo shipments, he adds.

"The next generation of the general cargo terminal will certainly carry the port to another 40 years," Wilzbacher says.

Kelly Hinkle

Reeling in the Benefits of Upgraded Boat Controls

A fisherman from a popular reality television series recently outfitted his vessel with a new electronic control system—giving him the edge in a high-stakes fishing competition.

The waters of the North Atlantic Ocean can be treacherous—especially for fishermen pursuing the elusive bluefin tuna. This pursuit is the subject of the popular reality television series, "Wicked Tuna," which chronicles the competition between commercial bluefin tuna fishermen in Gloucester, Massachusetts. The show has run on National Geographic since 2012, with its ninth season set to premiere March 1, at 9/8c.

Fishing for bluefin tuna—which can reach 8 feet in length and weigh 1,000 pounds—is not for the faint of heart. The fishing season is short, the tuna population is declining and the pressure to deliver boatloads of the popular fish remains high. Throughout these ups and downs, the fishermen have developed a special relationship with their boats. This bond extends to Dave Marciano, captain of the 38-foot Novi boat named Hard Merchandise, as well as the Falcon—the boat featured in a later spin-off series. Over the years, Marciano and his crew have competed against other boats to haul in as many tuna as they can and even wore the "Wicked Tuna" crown in the show's fourth season.

In 2014, a new spin-off series brought Marciano to the unrelenting waters of North Carolina's Outer Banks. There, the captain realized he couldn't compete with the other fishermen due to the setup of his older vessels, which included outdated boat controls. But all that changed—thanks to a unique collaboration with Emerson, a specialist in automation technologies.

"Wicked Tuna" and its spin-off series, "Wicked Tuna: Outer Banks," chronicle the competition between commercial bluefin tuna fishermen.

PFTV

The challenges of push-pull cable systems

When the bluefin tuna season ends in Gloucester, it's only getting started in North Carolina—drawing northern fishermen to the tumultuous seas of the Outer Banks. The ensuing competition between northern fishermen and their southern counterparts spawned the spin-off series, "Wicked Tuna: Outer Banks," which spotlights Marciano and several other boats from the original series.

Being a contender in this high-stakes competition requires the latest in boat control technology—something Marciano needed to upgrade. His vessel in this series, named the Falcon, integrated push-pull controls—a mechanically connected system that uses cables to connect control heads to the clutch and throttle. In this type of setup, cables are daisy-chained from one control location, or "station," to the next—making it difficult to add new stations. The force required to operate the levers also increases whenever additional stations are added.

"These heavy cable controls were cumbersome," Marciano says. "My arms got tired and sore having to constantly move the levers between stations. We were also limited in terms of how many stations we could add."

Fish by wire with an electronic control system

As fate would have it, Steve Vincent—Manager of Business Development Marine at Emerson—was a fan of the "Wicked Tuna" series. "When I watched the show, I noticed the boats still integrated mechanical levers," Vincent says. "But when you're at sea reeling in the large, powerful tuna, you need to be able to maneuver the vessel quickly and efficiently from different locations on the boat. You also have to orientate and change the position of the boat itself."

Vincent approached Marciano with the idea of upgrading the Falcon's mechanical control system. "Right away, he saw the benefits and possibilities," Vincent says.

Vincent works in the marine technology division at AVENTICS, which

Dave Marciano is captain of Hard Merchandise, as well as the Falcon—the boat featured in "Wicked Tuna: Outer Banks." PFTV

is part of the Emerson group and manufactures electronic and pneumatic components specific to the marine industry. He suggested equipping Marciano's vessel with the Marex OS III—an electronic control system for pitch propellers, jet propulsions and reversing gear systems. The system is easy to integrate, accommodates up to six control stations and eliminates the additional force required to manually operate control heads between stations.

"With this system, it doesn't matter how many stations are on a vessel," Vincent says. "You can change controls easily with one hand."

"Previously, on the Falcon, putting the boat in gear and giving it throttle each required a lever," Marciano adds. "It's nice to have the throttle and gear contained in one. We went from needing four control levers to maneuver the boat down to two. Now, even my daughter can operate the boat."

A flexible control system that improves maneuverability

The Marex OS III system includes several components, including various control heads, a freely configurable display, propulsion controllers, operating modules and other accessories. Marciano selected two different control heads—a taller one for the Falcon's helm and quarter deck, and then a lower-profile one for the transom where, according to Marciano, he often experiences "the heat of the battle."

Because the Marex OS III control system isn't specific to any particular engine or gearbox manufacturer, Marciano also took this opportunity to upgrade the Falcon's engines. "It ultimately didn't matter which engine he went with," Vincent says. "The Marex system works with them all—a feature that sets it apart from other control packages on the market."

In addition to its flexible design, ease of use and modular system architecture, the Marex OS III includes advanced features that have improved the vessel's maneuverability. For example, Marciano now has the option to control a trolling valve—an adjustable device incorporated into the hydraulic system that regulates the pressure between 0 and full operating pressure. This feature reduces the propeller speed at a given engine speed, enabling Marciano to achieve speeds that are lower than what is possible for normal gear engagement. As a result, Marciano can now drag bait slowly through the water behind his boat—a fishing method known as "trolling"—and also maneuver the boat in and out of the harbor with greater ease.

Hooked on the new controls

Integrating the Marex OS III has brought the Falcon up to speed with many of the other, newer vessels featured in "Wicked Tuna: Outer Banks." It has also had a positive effect on Marciano's livelihood. "This new system lets me maneuver my boat quickly and efficiently," the captain says. "I'm happy to say it's helped me catch more fish—which brings in more money."

Now, Marciano is in talks with Emerson about updating Hard Merchandise—the original "Wicked Tuna" vessel, which will be helmed by the captain's son. Marciano's plans for the boat include many of the same modifications the Falcon underwent, including integrating the Marex OS III electronic control system.

"As a fisherman, my biggest concern is always: can a product do what I want and is it dependable?" Marciano says. "And the answer to both of those questions is yes."

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Remote control trials using a Multraship Carrousel Rave Tug are scheduled to take place in the summer of 2020.

Voith

At Voith, R&D Drives Efficiency Gains and Other Improvements

Voith propellers can be found on a various vessel types, primarily fitted on tugs, ferries, yachts and offshore support vessels – "wherever the demands on maneuverability, efficiency, ship safety and comfort are high," says Dr. Dirk Jürgens, head of R&D at Voith Turbo Marine, part of the family-owned Voith conglomerate which employs more than 19,000 people in 60 countries.

The manufacturer's unique Voith Schneider Propeller (VSP) propulsion system can be built with up to 4 MW input power and enables thrust adjustments to be made quickly and accurately.

"The decisive feature of the VSP is its fast and accurate thrust adjustment; no other type of propeller comes close. The fast thrust adjustment and a different type of thrust adjustment (according to an X/Y logic and no turning of a thrust vector) bring immense advantages for maneuvering vessels or dynamically positioning (DP) vessels. These lead to more safety, operations in higher seas and lower fuel consumption," Jürgens said.

Voith VSPs have been chose for The Staten Island Ferry's three new 320-foot Ollis class newbuilds, designed by Elliot Bay Design Group and currently being built by Eastern Shipbuilding.

Jürgens said Voith has done a lot to ensure VSPs drive the newbuilds, including numerous CFD calculations and "a gigantic model test program" in the Dutch research institute MARIN. Voith and the vessel owner together decided the ferries should be equipped with two large type VSP 36RV6 – as opposed to four smaller VSPs such as the VSP28 – achieving "the optimum in terms of robustness and power efficiency", Jürgens said. "Also, the electronic control of the VSPs and the switching of the gas

Dirk Jürgens studied Naval Architecture at the University of Rostock from 1983 till 1988. From 1988 until 1993, he worked as a research assistant at the University of Rostock and at the University of Hamburg. In 1994 he finished his PhD theses about the hydrodynamics of Voith Schneider Propellers. From 1993 unti 1999 he worked at the Ship Yard Blohm & Voss in Hamburg as manager of a R&D group for the development of propulsion and maneuvering devices. Since 1999 Dirk Jürgens has been the Manager of Research and Development of Voith Turbo Marine.

engines (two on each VSP) is realized by us. This is done via two very powerful fluid couplings (Voith Turbo couplings)."

"The challenges for the Staten Island Ferry are extremely high because a large number of passengers have to be carried. The ferry can also be exposed to extreme wind and currents, and ice also creates special loads on the propellers," Jürgens said. "It is precisely because of these challenges that the VSP is the right propeller."

R&D-DRIVEN IMPROVEMENTS

Jürgens said Voith is known for investing considerable resources in R&D in an effort to constantly improve its propellers and the vessels that run them. This is achieved with help from the firm's high-tech R&D "tools", including a relatively large circulating tank, powerful CFD department and ship handling simulator.

"In the last five years we have successfully launched numerous R&D projects and practice-relevant results are available," Jürgens said. "For example, we have improved the dynamic stabilization capability of Voith propelled vessels, based on model tests and complex numerical optimizations.

"We have installed the Voith Condition Monitoring Technology (CMS) on numerous ships and evaluate the data intelligently. We use this data on the one hand to further reduce the service costs for our propellers and also to find the optimal

The Staten Island Ferry

Voith VSPs have been chose for The Staten Island Ferry's three new 320-foot Ollis class newbuilds being built by Eastern Shipbuilding.

setting of the propellers to minimize fuel consumption and emissions."

Jürgens said a research focus that is especially important at the moment is the development of technology for autonomous and remote-controlled tugs. The VSP is ideal for these applications, he added. "On one hand the forces can be managed very logically (according to X/Y logic), and on the other hand it can allocate desired forces so quickly. Any sensor errors or errors in data processing can therefore best be compensated by the VSP."

Voith and its partners are at a stage where remote-controlled tractor tugs equipped with VSPs can be realized, Jürgens said. Trials using a Multraship Carrousel Rave Tug (CRT) are scheduled to take place in Rotterdam in the summer of 2020. In addition, a project is underway to prove a Voith ferry that will sail autonomously on the river Rhine.

Jürgens said the manufacturer is also making "serious improvements" to the VSP itself; the biggest step being a high-quality permanent-magnet electric motor built directly into the system itself. "The fully electrical VSP is then called eVSP," enabling operation using batteries, fuel cells or any hybrid solution, he said. "It will be a gearless VSP with a significant improvement in efficiency and many advantages for ship owners in terms of economical electric drive solutions."

The reduction of emissions is a central point of Voith's R&D activities, and the company has taken various steps to do just that, Jürgens said. "As our propellers are quite different from classic azimuth thrusters, we are motivated to be strongly involved in the optimization of ship hulls through our CFD activities and have developed modern optimization technologies. We see ourselves as partners of designers and shipyards for the integration of our propellers and are happy to support them in designing the hull so that it is optimal for Voith propellers...Efficiency improvements and hull optimizations as well as better DP performance contribute significantly to reducing emissions."

For Jürgens, "The biggest challenge is to make the step from technology development to practical implementation. Shipbuilding is conservative for good reason. Therefore, it is a Herculean task to realize the first application of a new technology. For us this means convincing the ship-owner that our innovative development works."

Weeks Marine Orders New Dredger at Eastern

Credit: Eastern Shipbuilding Group

Dredging contractor Weeks Marine has ordered a new trailer suction hopper dredger from Eastern Shipbuilding Group, to be delivered in the first quarter of 2023.

The new dredge, RB Weeks, to be constructed at Eastern's Allanton shipyard in Panama City, Fla. will be a sister ship to the Eastern-built twin screw TSHD Magdalen placed into service in 2018. The RB Weeks is named after the co-founder of the company and the husband of Magdalen Weeks.

The shipbuilding order, signed on April 16, 2020, adds to billions of dollars in capital investments made recently by the U.S. dredging industry, said industry group Dredging Contractors of America.

"This is the third major capital construction shipbuilding project in as many years for Weeks Marine. It reflects Weeks Marine's commitment to building dredges to serve the needs of the United States of America," said William P. Doyle, Chief Executive Officer of the Dredging Contractors of America.

In addition to RB Weeks and Magdalen, Weeks placed into service it new cutter suction dredge (CSD) JS Chatry, built at C&C Marine and Repair in Belle Chase, La., in August 2019.

"I spoke this morning with Lt. General Todd T. Semonite, Chief of Engineers and Commanding General of the U.S. Army Corps of Engineers informing him of the contract we signed with Eastern to build the new hopper dredge," said Richard S. Weeks, Chief Executive Officer of Cranford, N.J.-based Weeks Marine. "We work hand-in-hand with the Army Corps of Engineers in delivering the mission for our country."

"U.S. dredging companies are putting people to work and keeping them working doing America's dredging – American built – American owned – American crewed," Doyle said.

RB Weeks is also the third large scale hopper dredge over the past five years that Eastern has built and is constructing.

RB Weeks

- **Builder:** Eastern Shipbuilding Group
- **Designer:** Royal IHC
- **Dimensions (Overall):** 356' x 79'-6"'x 27'-3"
- **Main Engines:** (2) GE 16V250 MDC IMOIII/EPA Tier 4
- **Main Propulsion:** (2) Wartsila CPP in Nozzles
- **Main Gears:** (2) Siemens (Flender)
- **Bow Thruster:** (1) AC 730kW VFD Fixed Pitch Tunnel Unit
- **Main Shaft Generators:** (2) x 3400kW
- **Auxiliary Generator:** (1) GE 6L250 MDC (1423kW) IMOIII/EPA Tier 4
- **Emergency Generator:** (1) Caterpillar C18 (430kW) IMOII/EPA Tier 3
- **Classification:** Lloyd's Register, 100A1 Hopper Dredger, LMC, UMS
- **Flag & Regulatory:** USA, US Coast Guard
- **Hopper Capacity:** 8,550 yd³ (6540m3)
- **Accommodations:** 26 Person

McAllister Takes Delivery of New Tug Eileen McAllister

Credit: McAllister Towing

McAllister Towing has taken delivery of a newly built 6,770-horsepower ship-docking tug, Eileen McAllister, slated to enter service in Port Everglades, Fla. The 34th tractor tug in McAllister's fleet, Eileen McAllister was built by Washburn & Doughty in Maine and set sail for its new home port following delivery in April.

The 93- by 38-foot newbuild is powered by 3516E Tier IV Caterpillar engines with twin Schottel SRP 490 Z-drive units and Markey winches, achieving more than 84 metric tons during ABS bollard pull certification. Eileen will soon join sister vessel, Tate McAllister, as the most powerful tug in the Fort Lauderdale, Fla. seaport.

Captain Chuck Runnion, McAllister Towing of Port Everglades' Vice President and General Manager, said, "The Eileen McAllister was constructed specifically to meet the needs of handling the ever-increasing size of vessels calling into Port Everglades. This tug, along with the Tate McAllister, will be able to safely handle these ships and even larger ones with exceptional control and power."

The Eileen McAllister was christened at her launch by Eileen Buch, Eileen Duane Donovan and Eileen Fitzsimons. The three Eileens are direct descendants of James McAllister, who founded McAllister Towing in 1864.

Crowley Charters Newbuild Tug from Brusco

Credit: Leland Schmidt, courtesy Robert Allan Ltd.

Crowley Maritime Corp's marine services group has entered into a bareboat charter with Brusco Tug and Barge for an all new RApport-design tractor tug to serve Pacific Northwest and California ports, performing ship assist and harbor escort work.

The vessel, which Crowley renamed Hercules after delivery, was designed by Robert Allan Ltd., and constructed by Diversified Marine in Portland, Ore., for Brusco. The 82-foot, 6,000-horsepower tug is powered by twin Caterpillar 3516E (2240kw@1,800rpm) U.S. EPA Tier IV-compliant engines. The engines drive two Caterpillar MTA627 azimuth stern drive (ASD) thrusters with 2.7m Prop, and provide 81 tons of bollard pull while still remaining nimble while assisting ships.

Crowley noted the Tier IV engines are environmentally friendly and fuel efficient, while maximizing performance, and exceed federal and the State of California's environmental regulations.

"This high performing tug exemplifies our continued commitment to providing the best technology and performance in our fleet of tugboats on the West Coast. Our customers count on our fleet to be efficient and dependable, and Hercules adds another highly reliable asset," said Johan Sperling, vice president for Crowley's marine service group.

The tug will enter service in Puget Sound but is capable of handling operations in Crowley-serviced ports throughout California.

A high-performance Markey winch is a key feature of the deck machinery package and ensures optimal control of the ship while connected to the tug.

"The technology on the Hercules will ensure our customers get in and out of port efficiently to meet the demands of their supply chains, whether their vessel is a large tanker, a modern container ship, or other craft," said Porter Sesnon, general manager of Crowley's ship assist and escort services.

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Bollinger Delivers ATB to Crowley

Credit: Bollinger

Crowley Fuels took delivery of its new Alaska Class 483-foot, 100,000-barrel, articulated tug-barge (ATB) from Bollinger Shipyards. The first ATB in Crowley's fleet to be dedicated to the Alaska market, it will operate for Alaska-based Petro Star Inc., a wholly owned subsidiary of Arctic Slope Regional Corporation (ASRC) under a long-term charter. The barge is named Oliver Leavitt, and the tug is named Aveogan.

The ATB, to be classed by ABS, was constructed at the Bollinger Marine Fabricators facility in Amelia, La., with on-site construction management by Crowley Shipping.

Jensen Maritime designed the ATB to meet Ice Class and Polar Code requirements, which includes increased structural framing and shell plating and extended zero discharge endurance. The double-hulled design also features a barge form factor to achieve high-cargo capacity on minimal draft.

The 7,000-HP tug has twin Azimuthing drives and an Intercon C-series coupling system with a first-of-its-kind lightering helmet. The tug is fitted with two GE 8L250 main engines that meet U.S. EPA Tier 4 emissions standards. The generators on the tug and barge meet EPA Tier 3 and IMO Tier II emissions standards.

In addition, the ATB features a patent-pending closed loop, freshwater ballast system whereby the tug's ballast will be transferred to-and-from a retention tank on the barge to account for fuel burn. The design has been approved by the USCG and will eliminate the need to discharge tug ballast water into the sea.

The 128- x 42- x 21-foot tug is equipped with a fire monitor and foam proportioner, providing off-ship firefighting capabilities to the barge. The 400- x 85- x 32-foot barge is also outfitted with spill response gear and a hydraulic boom reel with 2,000 linear feet of inflatable boom to support spill response efforts.

Osage Takes Towboat Delivery from Master Marine

Credit: Master Marine

Master Marine, Inc. delivered a second towboat for Osage Marine Services, Inc. The newly built M/V Frank Mellor, like its sister ship, is a 67' x 28' vessel designed by Entech Designs, LLC. All USCG certificates for their Sub M compliance have been obtained.

The towboat is powered by a pair of Laborde Products, S6R2-Y3MPTAW Mitsubishi 803 HP Tier III diesel marine engines to be operated at 1,400 RPM coupled to Twin Disc 5321 gears. Laborde Products, Inc. is also providing electrical power with two Northern Lights M65C13.2S 65KW Tier III electronic controlled generators with RW Fernstrum, Inc. keel coolers throughout.

A pair of Sound Propeller Services, Inc. 70" X 48" X 7" four-blade stainless steel propellers will provide thrust through two J & S Machine Works Inc. 7" ABS Grade 2 propeller shafts with all Thordon Bearings, Thorplas bushings and shaft seals. RIO Controls and Hydraulic, Inc. supplied the steering system for the two 7" main and four 7" flanking rudders.

Schuyler Maritime, LLC provided all 18" x 12" rubber fendering around the entire perimeter of the vessel and push knees.

Gulf Coast Air & Hydraulics Inc. provided a pair of Quincy F325 reciprocating air compressors and ventilation fans. Outfitters International will provide a Daiken mini-split heat pump HVAC system in all interior spaces with Blakeney Marine providing all custom woodwork and interior finishes. Donavon Marine supplied the large Bomar aluminum windows and Dales Welding and Fabricators, LLC supplied the aluminum exterior doors. Wintech International, LLC delivered a pair of 40-ton deck winches.

New World, Inc. provided all of the electronics and communications, while the alarm system was supplied by Unlimited Control & Supply, Inc.

Each boat has 10,400 gallons of fuel, 4,359 gallons of potable water and 9,500 gallons of ballast water along with providing a maximum 7'-9" working draft. Each vessel has three crew staterooms for six crewman, 1.5 baths and a full galley arrangement.

Metal Shark Delivers Towboat to FMT

Credit: Metal Shark

Metal Shark announced its Bayou La Batre, Ala. shipyard has delivered its first newbuild, a 120' x 35' river towboat for Florida Marine Transporters, Inc. (FMT) of Mandeville, La.

The four-decked, welded-steel, USCG Subchapter "M"-compliant towboat Stephanie Pasentine, which bears the distinction of being Louisiana-based Metal Shark's first-ever steel newbuild and also its first inland towboat, was designed by John W. Gilbert Associates, Inc.

The vessel's twin Cat 3512C marine diesel engines deliver 2,011 HP each at 1,600 RPM and turn 100" x 69" stainless steel propellers through Twin Disc model MGX5600DR reverse reduction gears with a 6.56:1 ratio. Sleeping accommodations and facilities have been provided for a nine-person crew.

The new towboat is the first delivery in a three-vessel contract with FMT announced in late 2018, signaling Metal Shark's entry into the inland commercial sector following its acquisition of the assets of Horizon Shipbuilding earlier that year. With the purchase, Metal Shark, best known as a builder of welded aluminum vessels, assumed ownership of a fully developed 35-acre Alabama shipyard and began to expand into steel shipbuilding.

Metal Shark said it has significantly grown its Alabama operations since acquiring the yard. Under the direction of company VP Doug Barrow, formerly the General Manager of Great Lakes Towing Company and Great Lakes Shipyard, and new construction manager OW Brown, Metal Shark Alabama has grown from the 23 original employees acquired in the 2018 purchase to over 150 employees today.

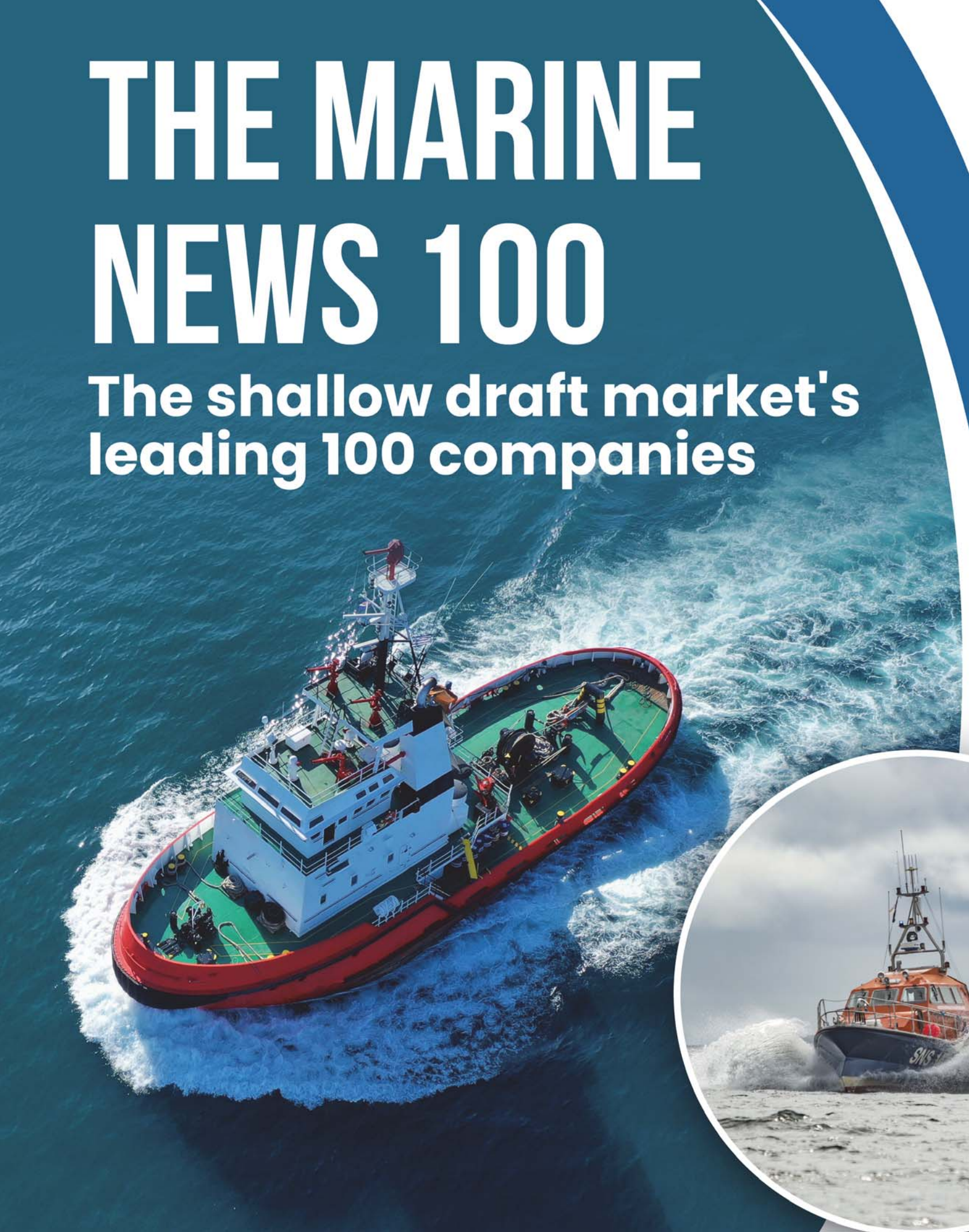
"Since 2018 we have invested in our Alabama operations by growing our workforce, engaging new clients, and implementing Metal Shark's well-proven serialized construction methodologies," explained Metal Shark CEO Chris Allard.

Multiple steel vessels are currently under construction at the yard, including two additional 120' x 35' towboats for FMT, as well as a 70-foot steel Z-drive tugboat for North Carolina DOT.

Metal Shark Alabama is also active in the vessel refit and repair sector, with several projects typically underway at any given time.

THE MARINE NEWS 100

The shallow draft market's leading 100 companies



Marine News

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Marine News, the leading voice in the North American workboat market, will once again profile 100 top companies, including workboat owners and operators, builders and repairers, and product and service providers.

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Like the workboat industry it serves, Marine News Magazine works hard, delivering the best news and editorial available for the North American shallow draft market. Tracing its history back to the turn of the century, Marine News is steeped in the tradition and history of the great companies that made our industry strong. Today, it remains the leading publication of the workboat Industry.

Admiral James Steele Gracey

Kuosa

Hobbs

Reiss

Merritt

Gonzalez

van den Adel

de Lange

Obituary:
Adm. James Steele Gracey

Admiral James Steele Gracey, USCG (retired), 17th Commandant of the Coast Guard, passed away on Sunday, April 5, 2020, in Falls Church, Va., at the age of 92.

Born in Newton, Mass. in 1927, Adm. Gracey graduated from the U.S. Coast Guard Academy in 1949 and Harvard Graduate School in 1956. His career included diverse tours both ashore and afloat, culminating with his role as Coast Guard Commandant from 1982 until his retirement in 1986.

Adm. Gracey is survived by his wife of almost 71 years, their daughter and son, three grandchildren and two great-grandchildren. He was preceded in death by his daughter.

Reiss to Lead NOAA's OPC

NOAA has selected Arthur John "A.J." Reiss, as the director of NOAA's Ocean Prediction Center (OPC) in College Park, Maryland. OPC provides marine forecasts and critical decision support services for mariners, ensuring the safety of lives and vessels at sea by alerting to hazards like hurricane-force winds and high seas.

Two Join MJP

Marine Jet Power (MJP) announced Cole Merritt and Peter Gonzalez have joined its business development team in the Americas. Merritt is Sales Manager responsible for OEM sales in North, South and Central America, and Gonzalez is as Aftermarket Sales and Training Manager responsible for aftermarket sales and training in the Americas region.

Thrustmaster Hires Fisher

Carl Fisher joins Thrustmaster of Texas as Government Sales Manager, focused on expanding the US Government market for Thrustmaster propulsion systems and technologies.

Callan Marine Names New COO

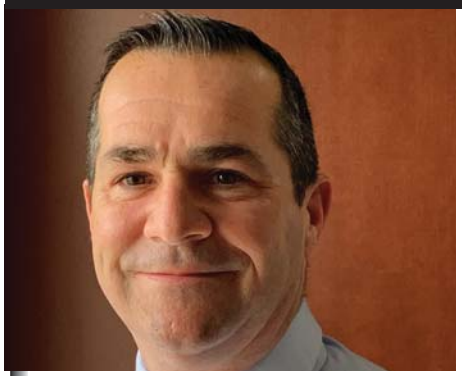
Callan Marine has hired Arie van den Adel as its new Chief Operating Officer. A 30-year veteran of the dredging industry, van den Adel has served as a Dredging Operations Consultant since 2018, managing a great variety of dredging projects around the globe.

AEGIR-Marine Taps de Lange as Managing Director

AEGIR-Marine has appointed Jaap de Lange as Managing Director. de Lange, who comes from a role at Damen Shipyards, will start his new role on June 15, succeeding Peter Zoeteman, who has served as a Managing Director ad interim since September 2019.

Gibbs & Cox Hires Hobbs

Naval architecture and marine engineering firm Gibbs & Cox announced Brian Hobbs has joined the company as Chief Information Officer. In his new role, Hobbs will provide executive leadership and oversight of the full spectrum of corporate information technology infrastructure, security, end user services, people and processes.



Kline

Jones

Muhlert

Kline Joins Martin & Ottaway

James "Jim" Kline, USCG (Ret)., has joined maritime consulting firm Martin, Ottaway, van Hemmen & Dolan, Inc. as an engineering and surveying consultant. Kline recently retired from a 25-year career at the United States Coast Guard (USCG) culminating in his posting as a master marine inspector in USCG District 1.

Hamilton Joins Ingram Board

James L. Hamilton has been elected as director of Ingram Industries, whose businesses include Ingram Content Group and Ingram Marine Group. An investment banker specializing in global transportation, Hamilton has served as the Global Head of Transportation for JP Morgan during the past decade and serves as Chairman of the USMMA Alumni Association and Foundation Board as well as other non-profit boards.

SENNEBOGEN Hires Jones

Jason Jones has joined SENNEBOGEN's executive teams as Americas Sales Manager, responsible for developing and leading the company's sales network in the U.S., Canada, Mexico and South America.

Muhlert Awarded SNAME Fellow Status

The Society of Naval Architects and Marine Engineers (SNAME) awarded the status of Fellow to Hans Muhlert, P. Eng. of Robert Allan Ltd.

In-Mar Solutions: Alu Pilot Chairs & Deck Rails

In-Mar Solutions offers a complete line of Alu Design & Services Marine Pilot Chairs and Deck Rails. There is a standard line in addition to the option for custom designs to suit specific needs. Sleek, modern design and maximum utility and comfort are emphasized.

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SCHOTTEL M-Series

SCHOTTEL's new M-Series medium-sized azimuth thrusters meet new challenges on the international maritime market. These include shifted engine power classes, new ice class rules and the growing trend towards electric or hybrid drive vessels. Combining the latest technologies in mechanical engineering, hydrodynamics, and digitalization, the medium-sized rudderpropellers are available in three sizes corresponding to the common engine power classes: SRP 210 (640 kW), SRP 240 (850 kW) and SRP 270 (1,000 kW).

Wärtsilä Adds Gate Rudders

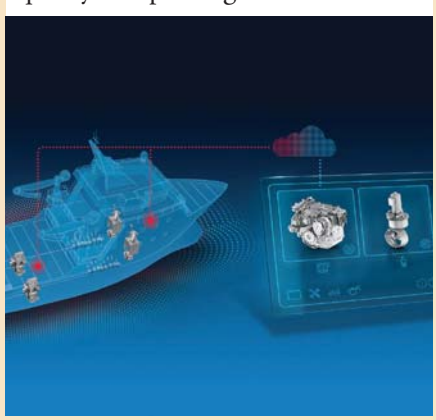
Wärtsilä announced it will include Japanese-designed gate rudders as part of its propulsion offering for newbuild vessels and retrofit. The Finnish-based firm said it signed a license and cooperation agreement with Kuribayashi Steamship Co for future development, sales and servicing of the gate rudders. As an authorized license holder and partner, Wärtsilä intends to fully integrate gate rudders within its propulsion product designs for all vessel classes and focus on global markets outside Japan.

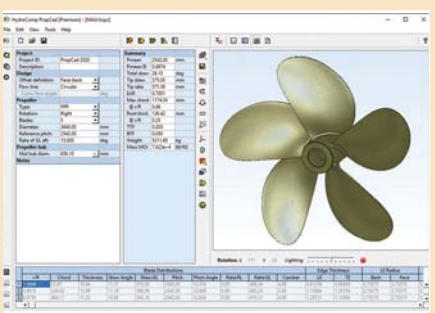
Kongsberg Thrusters for Electric Tug

Kongsberg Maritime will supply its KONGSBERG US255 L PM FP azimuth thrusters for a new fully-electric RSD-E Tug 2513 ship-handling tug being built by Damen Shipyards Group for the Ports of Auckland. The thrusters, supplied from Kongsberg's facility in Rauma, Finland will provide a bollard pull capability of 70 metric tons. With their integrated PM electric motors, maneuverability, tough modular construction and reliability, the thrusters combine minimal running costs with improved environmental credentials.

ZF Condition Monitoring

ZF has introduced an intelligent Condition Monitoring System for thrusters. The technology monitors the status of the thruster system and helps shipyards, shipping companies and fleet operators maintain the safety and efficiency of their ships as well as extend the service life of the propulsion system. In addition to that, a new oil cleaning system ensures oil quality and prolongs oil service life.





PropCad 2020

HydroComp's PropCad 2020 software for the geometric design of marine propellers automatically prepares 2D drawings, 3D CAD models, and more. All HydroComp 2020 products have been upgraded with a new internal code-and-control to increase speed and stability. Other improvements include a revised algorithm for CAD import, inclusion of the latest classification society rules and improved 3D rendering speed and visuals.

Engine Control Power Supply

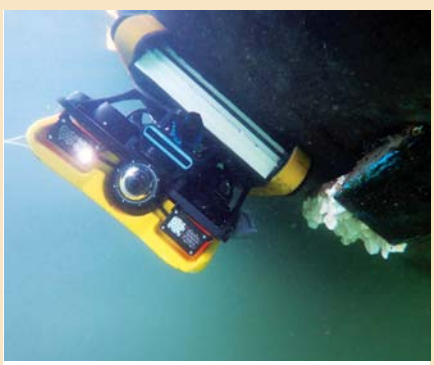
Powerbox released a new dual channel power supply for marine engine control. Based on a ruggedized platform for use in harsh environments, the ENMA500D24/2x27-CC provides two 27V/20A isolated outputs and a total power of 540W. The power supply is housed in a robust IP56 case, it is mechanically designed for efficient conduction cooling, and it complies with DNV/GL standards.

XHRS-1000

Designed specifically for inland rivers and waterways, Taylor Machine Works' new purpose-built XHRS-1000 reachstacker is suited to barge and other heavy-duty negative lift applications, with negative lift capability of 71 inches below grade to the tip of twist-locks. It has a 360-inch wheelbase and features hydraulic stabilizer jacks. With stabilizers down in Barge Mode, it is designed to stack 99,000-pound containers four-high in the first row, 84,700 pounds four-high in the second row and 72,600 pounds four-high in the third row.

MagnaShear

MagnaShear Oil Shear winch brakes are ideal for barge spotting operations. Designed for the constant stop/start associated with barge spotting, these rugged, durable brakes provide years of trouble-free, maintenance-free, no-adjustment service. Unlike dry brakes they do not have a sacrificial wear plate, but rather transmit torque through fluid in shear - leading to service life that is often 5-10 times that of dry brakes.



Hull Crawler

Greensea has developed a new hull crawler that easily attaches a remotely operated vehicle (ROV) to a ship hull without magnetics and allows the operator to "drive" the ROV and payloads over the hull for applications such as for hull inspection, surveying, non-destructive testing, and explosive ordnance disposal purposes. Initial hull crawlers are designed to work exclusively with the VideoRay Mission Specialist Defender ROV.

Cygnus 1 IS Gauge

Cygnus Instruments said its Cygnus 1 IS Ultrasonic Thickness Gauge now has IECEx Zone 0 Certification, making it the only manufacturer with the highest possible levels of Intrinsically Safe certification (ATEX and IECEx). The tool is easy to use, accurate and reliable, suited for use in Ex and hazardous areas. It requires no plant shutdown for use in the many potentially explosive atmospheres.

Antivirus Coating

A special coating from Japan's Nippon Paint and US-based technology company Corning Inc, has been developed to protect workers from picking up viruses from painted surfaces. Nippon Paint's Antivirus Kids Paint, developed specifically for frontline hospital use, incorporates Corning Guardiant Antimicrobial Particles – a nascent technology designed to safeguard against viruses from adhering to hospital surfaces. While the coating was developed specifically for hospitals and healthcare environments, it is also being looked at for use on board vessels.

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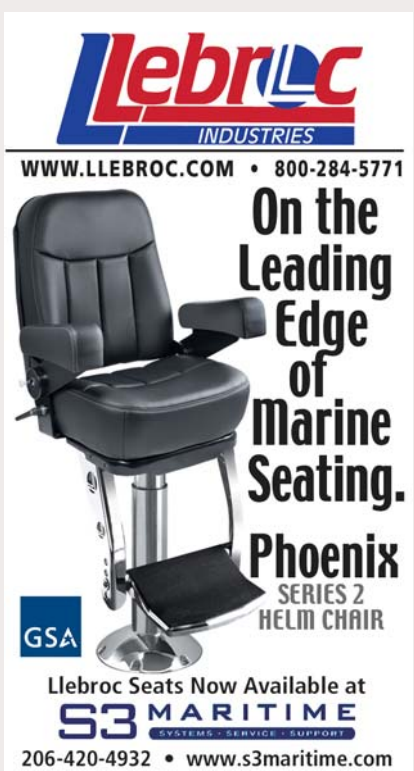

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