

October 27, 2023

Rear Admiral Wayne R. Arquin  
Assistant Commandant for Prevention Policy  
U. S. Coast Guard  
2703 Martin Luther King Jr. Ave SE, Stop 7509  
Washington, DC 20593-7509

Subj: National Towing Safety Advisory Committee Final Report – Task 21-03 – Report on the Anticipated Challenges Expected to Impact the Towing Vessel Industry

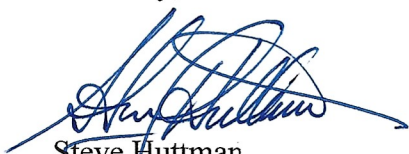
Dear Admiral Arquin,

I am writing today to forward the final report and recommendations of the National Towing Safety Advisory Committee (NTSAC) for Task 21-03 - Report on the Anticipated Challenges Expected to Impact the Towing Vessel Industry. At the fall meeting held in New Orleans, Louisiana on September 27, 2023, the Committee unanimously approved the enclosed report

The Subcommittee Chair, Capt. Matthew LaGarde and Co-Chair Capt. Ray Richmond worked with the subcommittee members to prepare a detailed roadmap for the challenges facing the Towing Industry. We look forward to future tasking to the committee which may result from this report.

The members of the National Towing Safety Advisory Committee greatly appreciate the support and cooperation of the U. S. Coast Guard participating and assisting the subcommittee with the Task. We are grateful for the opportunity to provide to the Coast Guard the thoughtful advice and recommendations from the Towing Industry and Public as the Coast Guard conducts its regulatory oversight. Should you have any questions regarding the final report or recommendations, please don't hesitate to call or email.

Sincerely,



Steve Huttman  
Chairman, National Towing Safety Advisory Committee

Encl: (1) Final Report – Towing Safety Advisory Committee Task 21-03 – September 27, 2023

cc: Capt. Matthew LaGarde Task 21-03 Chair  
Capt. Ray Richmond Task 21-03 Co-Chair  
Mr. Matthew Layman – DFO – National Towing Safety Advisory Committee  
Ms. Laura Wilcox – Vice Chair – National Towing Safety Advisory Committee



**NATIONAL TOWING SAFETY ADVISORY COMMITTEE  
(NTSAC)**

**TASK 21-03**

**Report On the Anticipated Challenges Expected to Impact  
the Towing Vessel Industry**

(Short Title – Towing Vessel Industry Forecast)

**Final Report**

NTSAC Subcommittee Task 21-03 (Towing Vessel Industry Forecast)

To: National Towing Safety Advisory Committee

From: Capt. Matthew LaGarde, Chair  
Capt. Ray Richmond, Co-Chair

RE: FINAL REPORT - NTSAC TASK 21-03 – TOWING VESSEL INDUSTRY FORECAST

At the December 7, 2021, National Towing Safety Advisory meeting a subcommittee was tasked with developing a forecast of items that will affect the towing vessel industry in the near term and the future as outlined in Task Statement 21-03 Report on the Anticipated Challenges Expected to Impact the Towing Vessel Industry.

Capt. Matthew LaGarde was nominated as Chair and Capt. Ray Richmond was nominated as Co-Chair of this Subcommittee. Both nominations were approved by NTSAC members without dissent. A subcommittee was formed, and work progressed through the end of 2022. At the September 2022 meeting of NTSAC held at the San Jacinto Maritime Technology and Training Center the committee was briefed on the draft report.

Subcommittee participants include members of NTSAC, industry, and Government Agencies. A complete list of meetings held, and participants is attached as Enclosure (3) to this report.

Respectfully Submitted,

Matthew Lagarde  
NTSAC Task 21-03 Chair

Enclosures: (1) Task Statement 21-03  
(2) Towing Industry Challenges – Severity vs. Time chart  
(3) List of Meetings and Participants

**FINAL REPORT – NTSAC TASK 21-03**  
**TOWING VESSEL INDUSTRY FORECAST**

The following list has been collected from discussions and comments from many different industry events, meetings, and discussions throughout the year. Many of the concerns brought up by the industry are present now and the concerns center around these issues continuing to be a challenge to the towing industry moving forward in coming years. There are a couple of timing categories identified. Some items identified could fit into more than one category:

- **Current issues** that may be temporary in nature or are triggered by ongoing specific issues which may include crewing, drug testing, state pre-emption of federal requirements, etc.
- **Ongoing Issues**--concerns that are ever present such as cyber-security, world market outlooks, weather events and the general cost of doing business.
- **Future Concerns**--those issues that have not become an issue yet, but the industry foresees a potential impact on business. These issues may be items such as drydock availability, USCG inspector scheduling availability for COI renewals, alternative fuel, and energy supply issues, etc.
- **Unforeseen future events** such as another pandemic or some other world event that could not have been reasonably anticipated.

Clearly the US Coast Guard does not have authority for all aspects of these concerns, however the tasking was to list the concerns as the towing industry sees them and from this established list the Coast Guard may create additional taskings for work on the specific areas of concern where they see potential for impact or change.

We have divided the list into five main categories. The relevant items in each category are listed below for quick reference. (The short list):

1. Infrastructure
  - a. Channel Encroachment
  - b. Dredge Availability
  - c. Program Funding
  - d. Moveable Bridges
  - e. Drydock Availability
2. Crewing/Manning
  - a. Availability
  - b. Experience
  - c. Credentialing
  - d. Drug Testing
  - e. Ongoing COVID-19 Pandemic Issues

3. Regulatory
  - a. Technology Development—Fuels, Automation, Autonomy
  - b. Environmental—Emissions, Ballast, VGP
  - c. Blue Water creep for Inland Mariners
  - d. State Pre-emption of Federal Regulations
4. Operating Costs/Margins
  - a. World Markets and Trade
  - b. Supply Chain Issues
  - c. Inflation
  - d. Climate Change
5. Security
  - a. Cyber Security
  - b. Jones Act Threats
  - c. Physical Security

Nearly all the above items identified above can be assigned to the **1–5-year category** with a great deal of these issues are a current concern but we anticipate they will continue to be a concern over the next Five years unless something significantly changes.

The committee only a couple of issues which we expect to materialize or become a significant issue after the beyond five years or will continue to be a significant issue well beyond the **five-year mark**. These items are:

1. Alternative Fuels—While they are in use and in development now, we do not expect widespread adoption across the industry in the very near term.
2. Climate Change—While we are seeing noticeable changes in weather patterns from floods to droughts, to hurricanes and tornadic activity, we anticipate further changes further out in the future include continuing ongoing changes coupled with possible sea level rise and other long-term effects.
3. World Markets—Also driven by numerous factors from world weather, global conflicts, treaties, tariffs, etc. but is largely a function of how we do business. Traffic patterns, operating revenue, the relative size of the barge fleet needs is all subject to global trade needs and opportunities.
4. Autonomous Vessels-

The following is a detailed description/discussion of the items that the committee identified as an issue for the towing industry within the 1–5-year forecast period. The period of the item is identified inside of the parenthesis next to each subject:

**1. Infrastructure**

a. Channel encroachment. (Current Issue)

- (1) The US Army Corps of Engineers (USACE) in large part is the regulatory authority for construction projects along the navigable waterways, particularly where channels are maintained as part of a federal project or there are flood protection concerns. The USACE's primary concern is the engineering of the waterway, with some navigation input through the public notice process. As waterways become more congested there is more and more development in areas that have not yet been developed, in many cases because there may be navigation challenges with the area. In sharp river bends and on points as well as areas where vessels may need to stop for inclement weather such as fog. In coastal areas there have been challenges with pipelines being proposed to run in the waterway adjacent to the channel to minimize right-of-way issues and or offshore wind turbine farms adjacent to safety fairways, where they are close to populated areas and easily serviceable. The USACE as a regulator focuses on the construction of the project itself and not always on the operational impacts of what work takes place at the berth or the fleeting area after the project is completed.
- (2) There needs to be a more consistent way for input across the nation for navigational impacts of proposed projects adjacent to waterways with a process to evaluate operational intentions of the project. This may include more regular in-depth collaboration between the USACE, US Coast Guard, Navigation Interests in the Area, Local Harbor Safety Committees, and other stakeholders as part of the permitting process.

b. Dredge availability and funding (Current Issue)

- (1) Dredging is a key component of maintaining navigational channels across the nation including coastal ports, river bars, ship channels, canals, and rivers. There is ever increasing need to employ dredges after severe weather in and "emergency" deployment to restore navigation after a weather event. There has been an ongoing challenge with the number of dredges available when and where they are needed in a timely manner. The USACE often puts out bids for emergency dredging where they receive no bids on the project because there are no dredges available. Often, they must break a dredge off one project to respond to a critical need. Another challenge is the start/stop funding for projects and year to year funding crunches and limits. Funding can be held up over failure to pass budgets in DC year to year. Federal dredges are not permitted to compete with commercial dredges.
- (2) Consistency of funding for channel navigation is one identified problem. The USACE budget begins October 1st and ends September 30th. The months where inland river dredging issues and expenditure needs reveal themselves,

typically in July and August, are well into the back end of the fiscal year where money is generally already either allocated or spent.

- (3) Dredge availability is another identified problem. Assuming budgeting provides for dredging in the months it is needed, there needs to be equipment available and ready for the work. It is predictable that somewhere on the inland river system in the months of July and August we will need a dredge. This should be anticipated, and equipment should be staged and ready. The average age of the USACE dredges according to their sources is 70 years old. The Water Resources Development Act (WRDA) 2022 Section 8133 has language providing for the use of contract dredges if government equipment is not available or serviceable, but the equipment should be pre-identified, contracts should be in place and should be ready to work on short notice.

c. Consistent program funding (Ongoing Issue)

The Federal Waterways are dependent on regular and timely maintenance of channels and structures to maintain safe navigation. These structures/features may include dams, locks, revetment, jetties, channels, turning basins, etc. Many of the structures in use today are well past their operating life expectancy and/or were designed decades ago for a different set of navigational needs based on vessels and trade needs back when they were designed. The USACE is largely responsible for maintenance of these structures often with less and less resources and higher costs to maintain them. This has resulted in many of the federal projects being maintained in a less than ideal condition. Reliability has suffered and as a matter of course, the entire Marine Transportation System is impacted, often with unpredictable and unplanned outages. The political environment in DC is making it more and more difficult to ensure year to year budget passage to provide the consistent support necessary to maintain the navigable channels. This may also include State and Local Operation & Maintenance (O&M) funding for bridge and other project maintenance.

d. Moveable bridges (Current Issue)

- (1) There has been an intent in recent years to utilize remote technology to operate moveable bridges. The USACE is the regulatory body responsible for permitting the bridges, but the USCG has responsibility for oversight of the operation of the bridges. This would include bridge opening schedules and deviations as well as ensuring they are properly lit and marked. To our knowledge there is no regulatory requirement for training, certification, or credentialing of bridge operators. With the current labor challenges, the appeal of having a single person have the ability to remotely operate several bridges from a single location makes sense, but limits the opportunity for the bridge operator to serve as a “lookout” for the bridge as it lowers or turns, to ensure that the bridge is properly aligned for a passage and that if there is an issue with the bridge it is realized in enough time to notify the approaching marine traffic and perform on-sight troubleshooting if possible (i.e. resetting breakers).

## NTSAC Subcommittee Task 21-03 (Towing Vessel Industry Forecast)

- (2) There have been several high-profile incidents including several National Transportation Safety Board (NTSB) reports including vertical lift spans of bridges that were not fully opened, were prematurely lowered, including onto the pilothouse of a boat on the Illinois River and swing bridges that were not properly lit and/or over-rotated and out of alignment with the fender works.
  - (3) We recommend that the Coast Guard consider initiating a rulemaking to ensure moveable bridge operators are suitably qualified, trained, and certified/credentialed and that guidelines are established for maintaining adequate “lookouts” for the bridge.
- e. Dry-dock availability (Current Issue)
- (1) There is ongoing concern within the towing industry as the bulk of the 6,252 US flagged towing vessels join the 5,018 inspected barges as inspected vessels and this year start the dry-docking requirements of Subchapter M, that there may not be enough capacity to meet the towing vessel industry’s needs and timelines. The two key changes from where we were prior to Subchapter M for the bulk of the fleet was that the need to dry-dock the vessel was predicated on loose schedules (which could be pushed back if necessary) and on damage repair whereas the vessel was lifted, fixed to the satisfaction of the owner/operator then returned to the water. Under the new provisions, the dry-dock needs to take place before the expiration of the Certificate of Inspection (COI) (drop dead date) and the return of the vessel to the water is dependent on conduct of a dry-dock examination. The conduct of this dry-dock examination is dependent on two things: 1) availability of the inspector, 2) agreement on expected condition. For the 1<sup>st</sup> item, as with a Third-Party Organization (TPO) surveyor or for the 30% of US Coast Guard option towing vessels, there may be limitations on the ability to get someone to look at the boat after hours and weekends which may delay the boat for hours to days, tying up the availability of the dock for the next scheduled vessel. Condition is a challenge as well whereas the industry is working off a very old guidance document from the USCG relevant to steel hull repair and what the operator believes is a complete repair may become an issue when the inspector shows up and may require several more days of work and would further delay other boats waiting on access to the dock.
  - (2) Recommendations may be to publish updates or rewrite NVIC 07-68 with consideration from reports by TSAC Task 13-07 and the American Waterways Operators (AWO).
  - (3) Attain an accurate evaluation on the number and geographic concentrations of suitable dry-docks nationwide.
  - (4) Another aspect of this concern is the overall availability of US Coast Guard inspectors for “boots-on-deck” vessel inspections for COI renewals which will begin in the next year. The industry perceived a challenge in scheduling



inspectors even with the implementation strategy of not boarding vessels with Bridging Program decals in the first couple years of implementations.

f. Infrastructure Supporting alternative vessel fuels/energy supply (Future Issue)

(a) LNG/CNG Fueling:

(b) Electric/Battery Recharging:

(c) Battery Safety:

(2) All these energy source issues are challenged by a lack of significant regulation surrounding installation, maintenance and safety involving this equipment as well as training requirements for utilization of the equipment. This item also falls into the regulatory category as well.

(3) There is currently no established network or plans for a systemwide network of support for alternative fuel/energy vessels.

**2. Crewing/Manning**

a. Availability (Current Issue)

(1) It is no secret that every business in all sectors from industrial to manufacturing to service industry and especially transportation is having a challenging time finding suitable and qualified labor. There are several factors that drive this challenge:

(a) Generational shift—younger people have a stronger desire to earn money through less physically demanding work and they focus more on higher learning, investments, and remote work. They also want to move up within an organization fast and credentialing process has limitations on speed of ascendency.

(b) Shift in work life balance—Post COVID, people are taking a different view of work life balance and spending more time with family, pursuing hobbies and interests, and not putting off “bucket list” desires.

(c) Drug testing—addressed below.

b. Experience (Current Issue)

(1) Because of the scarcity of great new hire candidates, companies are forced to be a little less selective of the candidates that they do bring onboard. This may also contribute to a higher overall turnover rate. If the towing industry cannot retain associates for long, we struggle to build institutional knowledge, especially where it concerns conditions that do not occur all the time such as major hurricanes, extreme high water and low water and ice storms. In many cases even the best training has trouble meeting the real work experience benefits.

(2) The more experienced mariners close to retirement that are having to train new associates over and over are getting burnt out on always working with new

people and are electing to retire if they are close to that age and able to. In some cases, they are leaving for comparable pay at shore side jobs close to home.

- (3) The less time a person spends in an industry the less we can stack learning or build upon previous learning or experience. The industry finds itself providing a different people the first round of training on a subject rather than delivering expanded and sequential training to a person throughout their career. Training classes, especially for entry level positions, has become a revolving door of sorts.
  - (4) The American Dream has also shifted. Working hard, buying a house, raising a family has given way to downsize, rent, travel and live in the moment.
- c. Credential throughput capability of National Maritime Center (NMC) (Current Issue)
- (1) The NMC has been struggling as of late to get credentials processed and out the door. Several years ago, they had a goal of getting credentials processed and printed within 30 days. They are currently taking several months to get credentials processed and have on several occasions had to publish a grace period on expiring credential due to NMC processing delays. These delays are becoming more frequent and the delays, especially with medical issues, are stretching out. This is complicating the personnel shortage by taking experienced mariners off the boats sometimes because of credentialing delays.
  - (2) These delays are not unique to the USCG. The TSA/TWIC original issues for new hires have been slow as well and the Transportation Security Administration (TSA) system does not always communicate well with the USCG Homeport New Hire approval system.
  - (3) Two specific credential issues mentioned by towing vessel industry were:
    - (a) Limited Engineering Credentials for STCW vessels which can be costly to obtain with little return on investment for the crew member.
    - (b) Facility Tankerman Credentials for folks working in cleaning plants and shipyards that do not have typical paths to a Person-In-Charge (PIC) credential.
- d. Drug Testing (Current Issue)
- (1) Drugs are becoming increasingly prevalent in our society. You can hardly go to any metropolitan area without smelling marijuana in the air. Many states have legalized use of the drug in one form or another for recreational and/or medical reasons. This societal acceptance of a drug still listed as an illegal substance by the federal government removes many people from the transportation labor pool. Where these folks can readily find work in retail, or construction they are not available to the marine companies. The social norms of marijuana use make it socially difficult for a person to not partake some circumstances. They would choose to pursue a different career path and fit socially.

- (2) We recommend that the Coast Guard evaluate the possibility of moving from a test that measures use vs. a test that measures impairment.
- e. Ongoing COVID/Pandemic issues (Current Issue) (Future Issue)
  - (1) COVID has not gone away and has had a serious impact on operations as well as precautionary measures. During the height of COVID, many mariners left the industry for many reasons including air travel restrictions for those folks that lived far from work, social distancing guidelines, mask requirement, testing requirements and even fear of catching COVID at work. On several occasions a mariner's relief was unable to report back to work because of illness, quarantine procedures or other reasons.
  - (2) Companies continue to be overly cautious with associates getting ready to come back to work. Any visible symptom or close contact may delay a mariner coming back to work taking one or more mariners out of the labor pool for up to several days awaiting tests or evaluation. The ability to easily get into a clinic to get tested is a challenge because all the clinics remain busy. Sometimes it is just allergies or a regular cold or Flu, but you never know. In any case it lessens the availability of qualified mariners.
  - (3) Federal Vaccine Mandate fears.

### **3. Regulatory**

- a. Technology development and innovation outpacing regulatory adaptation (Current Issue) (Future Issue)
  - (1) Autonomous vessels vs. Rules of the Road and manning—Understanding the USCG AUTOPOCO is working on aspects of this issue, as slow as regulation is promulgated and as fast as this technology is being developed and proposed for trials, the industry is interested in seeing some rule proposals or strategies for complying with current navigation and manning rules.
  - (2) Electric vessels—The industry has seen some interest in developing electric vessels but are also aware of issues with the technology including thermal runaway of the batteries. Also of interest is safety regulation surrounding installation and charging challenges as well as emergency response.
  - (3) Alternative fuel vessels—If Compressed Natural Gas or Liquid Natural Gas vessels become widespread throughout the industry in years forward, there may need to be an examination of the current regulatory regime including crew training relevant to the hazards associated with diverse types of fuel or energy sources.
- b. Environmental (Ongoing Issue)
  - (1) Ballast water reporting
    - (a) The EPA came out with two five-year Vessel General Permits—one in 2008 and one in 2013. The 2008 Vessel General Permit allowed many inland

towing vessels to bypass all but annual reporting if using water from a municipal water source (potable water). The 2013 permit rescinded this exemption and required reporting of all ballast. This permit expired in 2018 with no replacement. Originally NVIC 07-04 allowed an exemption for reporting for vessels that travelled multiple COTP zones but only conducted ballast operations in one. NVIC 01-18 changed that exemption and required reporting for each COTP zone and provided some guidance on alternative reporting methods. This latter NVIC was published shortly before the 2013 VGP expired in December of 2018. Currently there is no permit for incidental vessel discharges pending further regulatory publication, but officially/unofficially operators have been instructed to “kind of keep on doing what you were doing until we figure this out”. EPA requires an annual ballast water report due by March every year. The USCG wants per COTP zone or per event reporting because they are required to collect the information for reports to congress.

- (b) The proposal to report ballast water intake annually to the USCG, as is also done with the EPA and this should meet their information collection burden and provide accurate information for their required bi-annual report to Congress. Five companies as of September of 2022 have an alternative annual reporting for Western Rivers operations only. We would like to see this being the norm rather than an alternative option.

(2) Emission regulation (Ongoing Issue)

- (a) While the industry agrees that the issue is important, Tier 4 EPA engines for retrofits in older towing vessels create some significant challenges. Older vessels were not designed with this additional equipment in mind. The regulatory process in general needs better input from industry on cost and suitability for the impact statements in the rulemaking.
- (b) This issue also overlaps into the State Pre-emption section whereas we have seen state attempts to ban sales of automobiles with combustion engines so it is reasonable to anticipate this effort will continue over into the marine environment which will affect towing vessels.

c. Blue water creep for brown water mariners (Ongoing Issue)

The towing vessel crew members and operating companies that operate exclusively on Inland Waters and Western Rivers feel as if there are a lot of requirements that have been implemented in recent years that have little or no relevance to the operating environment on protected waters. The towing industry’s concern is that there has been a “copy and paste” aspect to rulemaking whereas requirements are applied simply because they are in place elsewhere in regulation on other vessel types and navigation routes. For example, an International Maritime Organization (IMO) requirement for Safety of Life at Sea (SOLAS) vessels is adopted into US Regulation, and later gets applied to “all towing vessels regardless of routes”.

d. State pre-emption of Federal Regulations (Ongoing Issue)

This includes a patchwork of additional state standards above and beyond our federal requirements including Non-Discharge Zones (NDZ), additional emission requirements, escort tug requirements, etc.

**4. Operating Costs/Margins**

a. Volatile world markets (Ongoing Issue)

We operate in a world market. Imports, Exports and Domestic trade are in constant flux. What happens in Europe, South America, Asia, and Africa all affects what is moving, how much and where to. Domestic demand for Ethanol or chemicals changes what products are moving and how. Pipeline development changes things. Domestic Oil regulation changes things and seems to shift every 4 years. Trade agreements and tariffs can change the shipping outlook quickly and drastically. All of this must be constantly monitored, anticipated, and planned for. There is a lot of unrest in the world and there is really no telling what the next decade will bring.

b. Supply chain Issues (Current Issue)

The supply chain issues associated with COVID, world unrest, economic challenges and labor shortages will continue to be a challenge for quite some time but should normalize at some point. The market will find ways to supply hard to get items, for a much higher cost, or alternatives will be found. Supply chain challenges include Safety, firefighting, mechanical parts, and electronics. As the towing vessel fleet becomes increasingly dependent on electronic equipment and engine components, there is an ongoing increase in demand for the materials and equipment. Supply change challenges with critical equipment and safety items could result in non-compliance or deficiency issues with towing vessels while waiting to receive replacement equipment.

c. Inflation (Current Issue)

- (1) Cost of everything is outpacing freight rates. Fuel is the most challenging aspect and by far the largest operating expense. The rapid escalation of costs over the past year has had a significant impact on operating capital especially as the towing vessel fleet is finalizing a more expensive than expected implementation of Subchapter M and is beginning to implement the first round of dry dock events. Groceries, travel wages, parts, services, equipment, and steel process are all escalating quickly. The deadlines on the implementation for various expensive regulatory requirements are not wavering.
- (2) As the general cost of living goes up, pressure to increase the labor rates (wages) for our mariners also increases. Wages are the second largest operating cost behind fuel that the towing vessel industry faces.
- (3) It's no secret that increased operating cost makes it challenging to stay in business as well as limits opportunity for growth and improvement.

d. Climate change (Ongoing Issue) (Future Issue)

High water events on the rivers are coming more often. Tornadic events are becoming more frequent. Hurricane and Typhoon events are becoming more frequent as well as more severe. Forecasting and communication is getting better but preparation and standing by even for non-events is a significant cost in labor, time, and loss of productivity. Local communities and government agencies are setting higher and higher bars for readiness and in many cases, we are preemptively closing waterways and locking down ports to avoid bad press if things do get bad.

**5. Security**

a. Cyber (Ongoing Issue)

Cyber-attacks will continue to wreak havoc on operating systems, financial markets, and individual people for years to come unless something significant changes. There is little recourse for someone to sit overseas and keep poking until they get a win from the safety of a basement where they cannot be touched. Every towing company dreads a ransomware attack, or an immobilization attack and as we become more and more reliant on connected electronics for everything this will continue to be a growing problem.

b. Jones Act threats (Ongoing Issue)

Discussion Points—The attacks on the Jones Act in Congress and from Administrative Actions are a constant threat to the sovereignty of the US towing vessel fleet. This is a never-ending battle that requires way more attention and energy than it should and redirects the focus of towing companies away from what they should be concentrating on (Safety, Training, Maintenance and System Improvement).

c. Crime in general (Current Issue)

(1) As inflation increases, and people suffer, they become more desperate and reckless. Workplace violence has become a bit more of an issue in recent years. While Maritime Transportation Security Act (MTSA) facilities and vessels have security plans in place to prevent unauthorized access, threats from within seem to be increasingly of a norm in society in general. The other aspect of maritime operations and terminals is that they do not always seem to be in the most prosperous neighborhoods.

(2) General societal normalization of violent or abhorrent behavior will bleed over into the workplace creating difficult situations for towing vessel employers. (Note rise in possession and carriage of firearms and general rise in workplace gun violence.)

**Enclosure (1)**

**NATIONAL TOWING SAFETY ADVISORY COMMITTEE (NTSAC)  
TASK STATEMENT TASK #21-03**

I. **TASK TITLE:**

Report On the Anticipated Challenges Expected to Impact the Towing Vessel Industry (Short Title: Towing Vessel Industry Forecast)

II. **BACKGROUND:**

The towing vessel industry is continuously evolving and adapting to change. This evolution is often catalyzed by external forces to include technological advancements, novel U.S. and International policy, turbulent economic cycles, natural environmental phenomenon, and shifting political and social dynamics.

While change is inevitable, the above-mentioned influences can create an unpredictable operating environment that can cause both public, private, and governmental institutions to take on a reactionary posture. In an effort to mitigate this uncertainty and to advance the strategic position of both the towing vessel industry and U.S. Coast Guard this task statement seeks to identify and forecast the challenges towing vessel fleets will confront in both the near term and long term.

III. **DISCUSSION:**

The purpose of this task statement is to baseline the current status of the towing vessel industry and forecast anticipated shifts and challenges the industry is expected to undergo in the years to come. This assessment of the towing vessel industry will set the foundation for subsequent NTSAC tasking. The analysis and final report associated with this task is not limited in scope and should seek to identify both broad far reaching industry challenges as well as granular operational specific impediments.

IV. **TASKING:**

NTSAC will prepare a final report for the U.S. Coast Guard that provides analysis and discussion on the following topics:

1. A 1–5-year forecast predicting the near-term challenges facing the towing vessel industry. The analysis and discussion should account for unique circumstances that differentiate and impact towing vessel operations.

NTSAC Subcommittee Task 21-03 (Towing Vessel Industry Forecast)

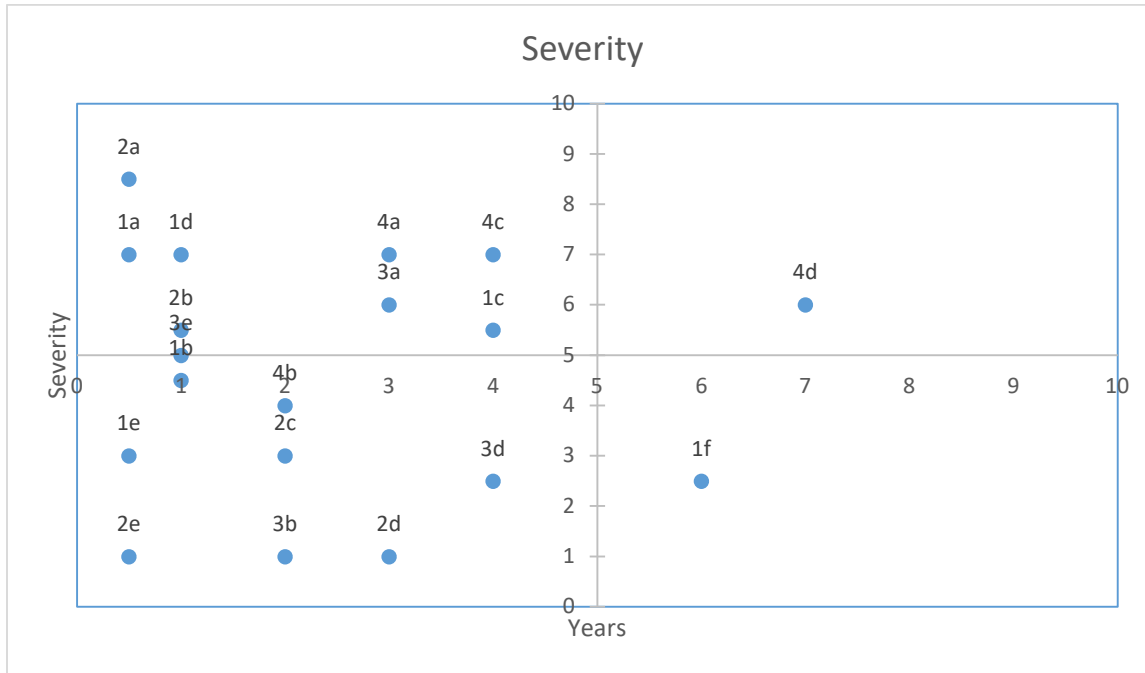
2. A 5–10-year forecast predicting the long-term challenges facing the towing vessel industry. The analysis and discussion should account for unique circumstances that differentiate and impact towing vessel operations.
3. Identify and assess potential sources of change that are predicted to directly impact the towing vessel industry. Focus areas may include but are not limited to such topics as vessel automation, alternative fuel sources, workforce retention, merchant mariner licensing, impacts of regulatory compliance, geographic specific challenges, etc.



**Enclosure (2)**

**Towing Vessel Challenges – SEVERITY vs. TIME**

The chart below shows the severity (Ranked 1-10) of the challenges identified in the Towing Vessel Industry forecast vs years (Current to 10)



1a Channel Encroach	2a Crew Availability	3a Tech vs Regulation	4a World Markets	5a Cyber
1b Dredge Availability	2b Crew Experience	3b Ballast water	4b Supply Chain	5b Jones Act
1c Program Funding	2c NMC Throughput	3c Blue Water Creep	4c Inflation	5c Crime
1d Moveable Bridges	2d Drug Testing	3d Emissions Regs	4d Climate Change	
1e Drydock Availability	2e Covid/Pandemic	3e Pre-emption		
1f Alt Fuel Infrastruc.				

**Enclosure (3)**

**NTSAC Task 21-03 List of Meetings & Participants**

Meeting Name:	AWO Executive Committee	GNOBFA Seminar	GICA	AWO Summer Safety Committee Meeting	Email Correspondance
Date(s):	March 22-23, 2022	April 28-29, 2022	August 4-5, 2022	August 16-18, 2022	
Location:	Washington, DC	New Orleans, LA	New Orleans, LA	Chicago, IL	

**TSAC Members**

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