

VINALHAVEN ROUTE SAFETY ASSESSMENT REPORT

MAINE STATE FERRY SERVICE

OCTOBER 30, 2018



OVERVIEW

In response to safety concerns raised by the captains who regularly operate the Maine State Ferry Service (MSFS) Vinalhaven route, MSFS management, along with the six captains who regularly serve the Vinalhaven route, presented a proposed Vinalhaven schedule change to the residents of the community at a public meeting on September 19, 2018. In part, this proposed schedule change included reverting to the pre-2010 Vinalhaven winter schedule, which would make the last winter trip of the day back at 3:15pm (rather than 4:30pm) and keep Vinalhaven crews operating in daylight conditions year-round.

Following that meeting, the MSFS and the MaineDOT Commissioner received numerous public comments in opposition to the proposed change of the last trip back to 3:15pm¹. On September 26, 2018, a letter and petition was submitted by Vinalhaven Select Board member, Phil Crossman, to the MSFS, MaineDOT Commissioner, Governor, state legislative delegates, federal legislative delegates and others, listing hundreds of Vinalhaven residents opposed to the proposed schedule change².

In addition, on September 24, 2018, the MSFS was contacted by the US Coast Guard (USCG), which had received a request on behalf of the Town of Vinalhaven to look into the Vinalhaven route safety concerns presented by the ferry service – particularly the LED lighting conditions posing increased night time navigational issues for captains traversing the approach to Carver’s Harbor in Vinalhaven.

On Monday, October 1, 2018, the MaineDOT Commissioner and MSFS management met to further discuss the MSFS safety concerns of the Vinalhaven route and the public comments received in opposition to changing the Vinalhaven winter schedule back to the pre-2010 schedule. After discussion, the MaineDOT Commissioner asked the MSFS Manager to conduct an emergency risk assessment of the Vinalhaven route (with participants from the USCG and the Town of Vinalhaven) to:

- (1) Identify potential hazards of the ferry vessel route from Rockland to Vinalhaven for passengers, vessel and crew while underway/cruising (scope was narrowed to winter month conditions, and focused on hazards presented during the 30-minute approach to/from Carver’s Harbor in Vinalhaven);
- (2) Identify any heightened risk presented during operations after dark;

¹ See Exhibit A – MSFS response to aggregated public comments

² After submission of the petition, the Vinalhaven town manager later clarified by email that: “The letter along with petition was sent on behalf of the community via the Board of Selectmen per their Monday September 24th meeting. The petition was available for anyone to sign. Those that were unable to physically sign the document did so by proxy via email and other written/verbal consent. Signatures included year-round, registered voters of Vinalhaven, property owners of Vinalhaven, users of the MSFS, etc... The petition is a general interest petition for any and all the proposed changes would effect.”

- (3) Compare the risk of scenarios presented during day light hours vs. night time hours, considering if outcomes would be different depending on which MSFS vessel is serving the route at the time (primary and spare) and the skill-level of the captain serving the route (full-time vs. relief);
- (4) Explore and recommend mitigation measures that would alleviate overall risk along the route, and particularly those associated with night time operations.

BACKGROUND INFORMATION

23 MRS § 4401 provides that it “is the duty of the Department of Transportation to operate a ferry route...between the mainland and towns of North Haven, Vinalhaven, Islesboro, Matinicus Isle and Swan’s Island for the purpose of transporting vehicles, freight and passengers to and from these towns...”

The MSFS ferry crossing from Rockland to Carver’s Harbor in Vinalhaven is the service’s longest daily route (1 hour 15-minute crossing time) and undoubtedly the most navigationally challenging. Even in good weather and visibility conditions, the last 30 minutes during the approach around the southwest side of the island to access the harbor are demanding due to the narrow and shallow channels, particularly in Lawry’s Narrows and The Reach.

Over the last 30 years, Vinalhaven captains have identified 10 ferry boat groundings in the Narrows and Reach during the approach to Vinalhaven³. For comparison, during the same time there was only one grounding on the approach to North Haven.

The risks associated with navigating the Vinalhaven route are especially heightened – even in daylight hours – on certain tides and when there is heavy boat congestion around the island. This congestion is not only a summer/recreational boating issue, but it exists year-round, particularly in the early morning and late afternoons/early evenings, due to the presence of the large Vinalhaven fishing fleet.

When strenuous winter conditions such as wind, snow and rough seas ensue, the probability of accidents, including collisions, groundings and allisions, along this already difficult route increases even more. Addressing a mechanical failure or any type of emergency (such as a man overboard) that occurs during the approach to Vinalhaven becomes especially challenging, due to the lack of vessel maneuverability in narrow channels.

Prior to the decision in 2009 to change the schedule to allow for a 4:30pm last boat trip in the dark, Vinalhaven Captains and MSFS management expressed safety concerns about adding nighttime navigation to fatigued crews at the end of a 12-hour day at sea. Since the change to the schedule, the addition of LED lighting in and around the harbor over the last several years has caused increasing issues with night blindness, further heightening the risk of the route in winter darkness conditions.

Furthermore, the number of off-hour emergency trips made by the ferry crews at the request of the town and EMS personnel has continued to rise. This demand requires careful consideration of the USCG 12-

³ Groundings in Lawry’s Narrows: M/V Everett Libby (1), M/V Governor Curtis (2), M/V Charles Philbrook (2) and Groundings in The Reach: M/V Governor Curtis (3), M/V Everett Libby (1), M/V Charles Philbrook (1).

hour rule and allowable exceptions. Conflicting opinions exist regarding the USCG emergency exemption to operate outside work hour restrictions and this remains the subject of much debate (not only on Vinalhaven, but across the entire service). These concerns have been consistently noted by captains to MSFS management and Vinalhaven Town Officials over the last decade, and requests have been routinely made by captains to change the schedule back to the pre-2010 schedule and clarify the parameters of the 12-hour rule exception for emergency trips.

RISK ASSESSMENT STRUCTURE

The risk assessment team was comprised of the following participants:

Dale Doughty	MaineDOT Director of Maintenance & Operations
Mark Higgins	MSFS Manager
Capt. William Dickey	MSFS Captain, M/V Thompson
Capt. Kevin Hopkins	MSFS Captain, M/V Philbrook
Capt. Dave Weferling	MSFS Captain, M/V Thompson
Capt. Aaron Sheridan	MSFS Captain, M/V Philbrook
Capt. Dan McNichol	MSFS Port Captain
Jennifer Smith	MSFS Policy Director
Lt. Matt Odon	USCG, Chief, Waterways Management Division
Lt. Tom Whalen	USCG, Marine Safety
CWO Hans Schultz	USCG, Commanding Officer Rockland Station
PO Nolan Ammons	USCG, Waterways Management Division
Andy Dorr	Vinalhaven, Town Manager & MSFS Advisory Board Primary Member
Lindsay Davis	Vinalhaven, MSFS Advisory Board Secondary Member
Lee Osgood	Vinalhaven, Commercial Lobsterman
Dennis Damon	MSFS Mainland Advisory Board Member

Risk assessments were conducted as follows:

October 10, 2018 – The assessment team (not present for this trip were Dale Doughty, Lt. Odom, Lt. Whalen, Capt. Hopkins and Capt. McNichol) rode the M/V Thompson on the regularly schedule 10:30am trip from Rockland to Vinalhaven.

The team observed daytime, mid-tide conditions and discussed the risk assessment scope. Route hazards were identified, and the captains spoke to the unique navigational challenges presented during the 30-minute approach to Vinalhaven. During a lunch meeting on the island, the team began reviewing hazard scenarios and discussing the increased risks of scenarios presented during trips in darkness.

October 15, 2018 – The assessment team (not present for this trip were CWO Hans Schultz, PO Nolan Ammons, Capt. Weferling, Capt. Sheridan and Dennis Damon) rode the M/V Philbrook, leaving the pen in Rockland at approximately 6:30pm. They travelled first to North Haven and then into Vinalhaven.

On this trip, the team observed nighttime, mid-tide conditions, along with high winds, rain and rough seas. The Captain acknowledged that the conditions presented likely would have caused a cancellation of a 4:30pm regular trip, but that the conditions could be common during winter day trips. The team was able to observe one commercial fishing boat with LED lighting, as well as the deck lighting conditions that often cause night blindness issues inside the wheelhouse on trips in the dark.

The team discussed the remaining hazard scenarios, and again discussed the additional hazards that the Captains feel contribute to heightened risk during the last 30 minutes of the approach to Carver's Harbor in the darkness, during winter months. In-depth conversations were had about nighttime navigation issues, night blindness, and crew fatigue. In addition, discussions were had about passenger safety onboard and in the event of an emergency, including passenger egress from vehicles and enforcement of existing USCG regulations and MSFS policies.

MSFS ROUTE SAFETY ASSESSMENT FINDINGS

Since the route risk assessments were conducted, input from the Vinalhaven team participants was received outlining their collective view on the route hazards and potential mitigation⁴. While we agree that the mitigation efforts they present should be further explored, we find that the most effective mitigation efforts presented (modify the channel, add a lookout, shorten crew day, shorten crew week, provide more training) would have significant resource or funding impact to the entire service and would likely impact the current rate structure. Some could also have further unintended schedule impacts and/or take several years to implement.

We respectfully disagree with the Vinalhaven participant's overall opinion that the 4:30pm winter trips should continue at this time. In addition, while we respect their individual observations in respect to the hazards and risk associated with the route, several of the opinions they present differ significantly from those of our licensed, professional captains and from the input we received from the USCG participants.

All MSFS captains and vessels are tasked with executing navigational decisions in ever-migrating conditions and hazards. However, the vessel approach to/from Carver's Harbor in Vinalhaven presents heightened navigational challenges for the Vinalhaven crews, for an extended period of time, in any and all conditions. Even in the best daylight conditions, the difficulty of navigating the Vinalhaven approach is much higher than any other daily route serviced by the MSFS. The unique challenges associated with navigating the Vinalhaven route (especially as the vessels have increased in size over the years) has been acknowledged by MSFS captains and ferry service management for years as primary reason the last trip time in the winter months should remain during daylight hours.

All MSFS daily routes are serviced over a time-frame of roughly 12-hours per day, but the number of trips and crossing times vary significantly from island to island. The crews on the two Vinalhaven vessels have some of the longest working/underway time and the longest trip crossing – almost every day they push up against the 12-hour USCG limit on maximum time allowed at sea.

⁴ See Attachment B - Letter from the Town of Vinalhaven dated October 23, 2018.

To keep pace with the six trips per day for each vessel, Vinalhaven crews get only ½ hour off the clock in the middle of the day. Limited time dockside currently inhibits enhanced crew training and vessel maintenance; at least once per week crews are required to work through their mid-day break period to complete their basic USCG required drills. In comparison, the crews on the North Haven route often have more than two hours of non-loading/underway time to rest, attend to the condition of the vessel and perform drills (in addition to their ½ hour off the clock break).

During the long approach to/from Vinalhaven, captains and crews must stay continuously focused. Regardless of the conditions, tides, etc., substantial experience and acute awareness is required to navigate Lawry's Narrows and The Reach in a 150-foot passenger vessel. The risk of human error compounds with every passing hour, as fatigue sets in on the captains and crew, and the risk of an accident that would have a significant and detrimental impact to the vessel, the environment and the lives of passengers and crew, escalates as the day wears on.

It was noted that experience is critical in navigating a large passenger vessel into Carver's Harbor (even being equated to requiring a pilotage). The MSFS Port Captain explained to the assessment team that the pool of intermittent captains he feels are qualified to navigate the challenging route is more limited than the rest of the service routes, particularly in nighttime or winter conditions.

The MSFS has been fortunate to have highly experienced captains available; combined the captains regularly assigned to the Vinalhaven route have more than 140 years of MSFS service and decades of experience specifically navigating the route. MSFS has also been fortunate to have many island residents serve the route in other crewing capacities – as familiarity with the route ultimately enhances safety.

We find that as captains and crews retire or move on, and more intermittent captains and crews are required to service the route, it will be vital that the MSFS reviews if training requirements specific to the route will need to be implemented to ensure vessel and passenger safety.

USCG participants provided valuable guidance around the federal 12-hour work restrictions. They explained that a 12-hour workday is the maximum allowable amount under federal regulations, but not necessarily the best practice. For example, the USCG has set standard maximum underway limits for its crews in boats larger than 40 feet: 10 hours in seas four feet or less and 8 hours in seas four feet or more. The USCG provides very firm guidelines to its personnel for exceeding those limits, including crew endurance training, mandatory rest periods and risk assessment matrixes, to avoid the serious risks caused by crew fatigue.

USCG participants also discussed issues around complacency and the assertion that because there has not been an accident at night on the Vinalhaven route, that is proof the run is safe. They provided feedback that operating under that assumption can actually increase risk. They provided insight on current USCG and maritime industry standards around the need for continual risk assessment of ever-changing human and environmental factors and creating risk matrixes that prompt captains and crews to consider all hazards (human and environmental) on every trip, prior to determining if a boat should get underway.

After conducting the Vinalhaven route assessments, receiving guidance from the USCG participants, and further researching the impact of crew fatigue in the maritime industry, the MSFS recognizes that crew

work schedules across the entire service should be reviewed. MSFS will work to implement adequate crew endurance policies and appropriate trainings to mitigate crew fatigue risk.

On the Vinalhaven route specifically, we find that the current potential impact from crew fatigue on any given day creates increased risk for the 4:30pm trip in winter months. Given the already heightened risk factors over other routes due to the long and navigationally challenging approach to/from Carver's Harbor in a 150-foot vessel, we find the additional risk of navigating in the dark while approaching the 12-hour maximum work limit, during migrating winter conditions, with known lighting issues causing night blindness, against the collective opinion of our licensed, professional captains, to be unacceptable without further study and implementation of sound mitigation measures.

The USCG participants reinforced this finding, noting that they would always support a decision by a company to increase the safety of operations. They agreed that additional assessment of the human and environmental risk factors would be a prudent decision by MSFS management. In addition, they noted that enforcement of USCG and other federal regulations is the duty of the vessel captain, and the decision to make a trip – scheduled or not – always rests with the licensed master of the vessel.

While there may be a combination of several mitigation measures that could eventually balance the risk of winter/nighttime trips to acceptable in the future, the MSFS finds no solutions that can be thoroughly vetted and implemented in the short term to alleviate management and captain's safety concerns. At this time, the MSFS finds that moving to a 3:15pm winter schedule for 17-weeks (Nov-Feb) will provide better consistency in scheduling for our customers, as opposed to increased cancellations of both the 2:45pm and 4:30pm trips based on a rigid weather/condition matrix.

We also find that the risk assessment underscored our need to more thoroughly review the safety of our entire operation and identified several areas where enforcement of existing USCG regulations and policies must commence immediately to ensure the safety of our passengers and crew, including the following:

- During discussions about night blindness issued created by passengers/vehicles on deck when opening doors, starting vehicles, etc., the USCG noted that 46 CFR 78.40-5 explicitly requires that ***“automobiles or other vehicles have their motors turned off when the ferry is under way, and the motors shall not be started until the ferry is secured to the landing.”*** This is a long-standing USCG regulation and a policy standard across the US passenger vessel industry. MSFS Policy numbers 301 and 501 currently address the “engines off” rules, but are not consistently being enforced across the service, as many passengers remain in vehicles, on deck, with engines running, particularly in the winter months. The MSFS must immediately take steps to enforce this USCG regulation/MSFS policy to ensure the safety of passengers and crews while underway.
- During discussions about emergency evacuations in the event of an accident, the USCG noted that 46 CFR 78.40-1 provides that ***“vehicles shall be stowed in such a manner as to permit both passengers and operators to get out and sway from them freely in the event of fire or other disaster.”*** Due the varying age and size of the MSFS vessels, along with the continuing trend of larger and wider vehicles utilizing the ferries, we acknowledge that at times passenger egress from vehicles is limited as we strive to maximize deck space to move as many people as possible each crossing.

The MSFS must immediately take steps to ensure passenger egress from vehicles on deck so that passengers can safely exit their vehicles in an emergency.

DETERMINATIONS

The safety of the passengers, crews and vessels should at all times take priority over all other factors when making operational decisions. Considering heavily the input and guidance provided by the USCG during the risk assessment, the MSFS will proceed as follows:

- Effective November 4, 2018, Vinalhaven route schedule will revert to the pre-2010 daily schedule for 17-weeks during the winter months (November-February) to allow the last trip to be made in daylight hours⁵. At this time, the schedule will not be modified (as originally proposed) to eliminate the middle trip of the day. Rather, the 6-trip schedule (with four on Sunday in Jan-Apr) will remain consistent for the coming season. Review of the winter schedule will be made annually to assess if future enhancements to MSFS policies and procedures have mitigated the heightened risks associated with the route and to assess usage/capacity data to inform trip schedules year-round.
- The MSFS will take immediate action to enforce the long-standing USCG regulation and internal policy of vehicle engines off on deck while underway until docking across the entire service.
- The MSFS will take immediate action to ensure passenger egress from vehicles across the entire service. Recognizing vessel deck space is inconsistent across the fleet, the MSFS is issuing new policy guidance to clarify deck loading procedures and provide discretion to vessel captains to require passengers to exit vehicles while underway if necessary to maximize deck capacity, when needed, and/or to ensure passenger safety for any other reason⁶.
- The MSFS will take immediate action to educate customers across the entire service on the engines off policy, including utilizing terminal message boards, providing information during ticket purchase, while in lineups, and when boarding vessels.
- The MSFS will engage the USCG to review the existing 12-hour rule exception letter to clarify the rules and procedures around MSFS vessel off-hour emergency trips.
- The MSFS/MaineDOT will identify and allocate funding to conduct a thorough, service-wide Operational Safety Assessment (OSA), which will include participation from MSFS management, vessel captains and stakeholders, as well as the USCG. The OSA will provide potential mitigation strategies, along with the associated impacts of those strategies and include (but not be limited to) review of the following:
 - Crew work hours and fatigue;
 - Crew training;

⁵ See Attachment C - MSFS Vinalhaven Winter Schedule Effective 11/4/18

⁶ See Attachment D - MSFS Policy No. 100 Effective 11/4/18

- Individual route risk assessment;
 - Passenger safety;
 - Vehicle Egress;
 - Lineup and loading procedures;
 - Compliance with existing USCG and other regulations;
 - ADA compliance; and
 - Passenger vessel industry standards and best practices.
- The MSFS/MaineDOT will identify and allocate funding to implement a service-wide Safety Management System (SMS).

CONCLUSION

The MSFS strives to serve its customers in the safest and most reliable manner. Over the last six months, new MSFS management has reviewed its asset management strategies to address its aging vessel fleet and shore side infrastructure. MaineDOT has committed to investing millions of dollars in new vessel construction, much needed rehabilitation of infrastructure across the service, and the creation of a technologically driven asset maintenance program - impressive measures being taken to improve efficiencies, safety and customer service for our users.

Along with the commitment to invest in new vessels, infrastructure and technology, it is critical that the MSFS and MaineDOT take this opportunity to embark on a renewed effort to review our operational safety practices service-wide. The last MSFS OSA was conducted a decade ago, and maritime and transportation industry standards on training, safety and risk assessment have evolved. It is important that the MSFS take a fresh look across the service to ensure our training, safety and risk assessment measures are appropriate and in line with standard operating procedures across our industry.

In respect to the Vinalhaven route, the MSFS and MaineDOT acknowledges that the change back to a 3:15pm last boat trip for 17-weeks during the winter will present major inconveniences for some of our customers. However, it is prudent that the MSFS and MaineDOT step back and assesses all hazards and potential mitigation of the route to protect the lives of our passengers and crews. Public safety is the paramount consideration.

Finally, the MSFS must do a better job communicating to its customers the risk factors that impact this service and the regulations and procedures that exist to safeguard our customers, vessels and crews.

MSFS made a presentation on proposed Vinalhaven schedule changes to the public on September 19, 2018. The meeting was not a formal public proceeding so no recording or official minutes of the meeting were taken. However, the MSFS did take notes and aggregated the suggestions and comments with the written correspondence received by the MSFS and MaineDOT after the meeting. Following is the MSFS response to those aggregated comments:

1. **The decision to move the last winter boat time from 4:30p.m. to 3:15p.m. is arbitrary and should not be done to address fiscal constraints.** The MSFS decision to move the last winter boat time back to 3:15p.m. is based solely on valid, long-standing, and increasing safety concerns of the MSFS captains, not fiscal constraints. Maintaining the safety of our passengers and crews is the most important factor in all operating decisions of the MSFS.

The proposal to eliminate middle boat trips from Jan-Mar was based on low capacity during those time periods. Although the revenue being collected under the new flat rate fare structure appears to be sufficient to meet projected costs for the current fiscal year, the service must look to mitigate unnecessary expenses to combat rising fuel costs, maintenance costs, personnel costs and/or decreased ridership.

Particularly given that Vinalhaven is the only island to be served by two boats, working to maintain reasonable usage levels during the winter months is fair to all users across the service. Since the service is subsidized 50% by taxpayer dollars through the Highway Fund, expecting a minimum level of average ridership across the service is also sensible use of taxpayer funding. ***MSFS will not implement the elimination of the middle trips in winter months at this time, but will reevaluate capacity/usage annually.***

2. **The 4:30p.m. night schedule has existed for 9 years now with no accidents, so there is no safety justification for moving the boat schedule now.** The MSFS can appreciate why some island residents continue to advocate for a 4:30p.m. last boat time year-round. However, for the reasons outlined in the MSFS risk assessment memo, MSFS finds that it would be irresponsible to continue the night runs of the Vinalhaven route in the winter at this time.

When MaineDOT inspects a bridge or roadway and finds it to be unsafe, we appropriately post or close the bridge or roadway until mitigation efforts to alleviate the risks to the public can be addressed. MaineDOT prioritizes safety across our entire transportation system, and users across the state are unfortunately inconvenienced every day by decisions made by our transportation professionals to ensure a safe and reliable transportation network. Until appropriate further assessments of the Vinalhaven route can be completed, and mitigation efforts can be identified to reduce the increased risks of night runs, the most prudent course of action is to alter the winter schedule so the last run is made during daylight hours.

3. **Safety concerns and related mitigation have not been adequately researched.** MSFS agrees that more research should be done to look at options for mitigating the risk to passengers and crew on the Vinalhaven route – and across all routes serviced by the MSFS. A comprehensive Operational Safety Assessment should be undertaken by the MSFS and

should include measures that can be taken to reduce risks during daylight runs (as well as look at ways that could make future night runs safe for the Vinalhaven route).

4. **Safety of traveler's seeking alternative means of getting home will be diminished, rather than enhanced, putting more lives at risk.** It is the responsibility of the MaineDOT and MSFS to put the safety of the passengers and crews on its vessels first. It is the responsibility of an individual to determine his or her own risk tolerance/comfort level if they chose to make a night time voyage to the island using alternative means.
5. **Changing the schedule to save money is not acceptable – MaineDOT does not shut highways down if usership is down.** The decision to move the 4:30p.m. last boat to 3:15p.m. for 17 weeks in the winter is being done for safety, not because of fiscal constraints. Several other components of the proposed schedule change were made in an effort to mitigate future costs and conserve crew times. As discussed, the MSFS will not implement the elimination of the middle boat trip in winter months at this time. The Sunday winter schedules will be modified as proposed in an effort to capture more appropriate ridership.

It is important to note that, in addition to safety, MaineDOT does include vehicle traffic counts, types of usage and other economic impact factors in determining how to fund, upgrade, repair and build its entire highway system. All over the state highways and roadways are assigned corridor priority ratings, and the number of vehicles using a roadway is a major component in determining the priority and funding of improvements. In addition, MaineDOT factors bridge usage, community impact and proximity to an alternate route when making decisions on bridge repair or replacement, and bridges have ultimately been removed in communities when the costs associated with repair or replacement were not deemed in the best economic interests of the taxpayers.

6. **The 25%-30% of residents who use the ferry in the winter need it to survive.** MSFS acknowledges that our service is an integral lifeline for the communities we serve. As such, it is our job to provide the safest and most reliable ferry service to every island we serve, while best meeting capacity demands. It is also our responsibility as a state government agency to provide our service in the most fiscally responsible manner. MSFS believes the updated Vinalhaven schedule works to blend those responsibilities, while prioritizing the lives of our passengers and crews.
7. **Supply captains could wear night vision or LED protective glasses to reduce glare and continue night runs.** This concept should be explored more when an OSA is completed to see if there are any products available to assist all captains with nighttime lighting issues.

Currently, the USCG does not recommend or support the use of any product on the market, and there is not enough evidence that the LED/glare night vision glasses readily available on the market would reduce the challenging conditions faced on the Vinalhaven winter route (or any MSFS route) or increase safety. In our limited research, we found that the American Optometric Association, American Academy of Ophthalmology other eye experts have

expressed concern that these glasses actually reduce the amount of light transmitted to the eye and further impair, rather than enhance, vision.

8. **Lobster boat captains don't seem to be bothered by the LED lights.** We have done no research into the impact to individual captains on smaller lobster boats or any other commercial or recreational boats. The captains of the MSFS vessels serving Vinalhaven are in support of limiting winter operations to pre-dark hours for all the safety reasons already specified within. USCG Safety Bulletin 04-16 acknowledges an increase in navigational issues, particularly in New England, due to LED lighting on fishing vessels.

Captains of the lobster fishing fleet on Vinalhaven should be included and consulted when a thorough OSA for the MSFS is conducted in the future.

9. **One crew member could be designated to watch radar for the 30-minute, most navigationally challenging portion of the trip in some type of black out condition to mitigate night blindness.** The current crewing capacity of our boats would not allow for this option. In order to dedicate a crew member to man only the radar in some sort of black out condition so as not to be impacted by any night blinding issues, it would likely require a mate be added to each of the crews, along with additional radar. This would add significant personnel costs to the Vinalhaven route not associated with any other routes, and operational funding would need to be increased to cover the expense. In addition, crewing resources are already limited on our boats, and we would be forced to cancel night runs if a mate was unavailable. Much more research would need to be conducted to see if this could ever be a viable option given the impact it would have on the entire service.
10. **Change the crewing of the boat to daily split shifts of some sort to allow for less fatigued captains/crews on the night runs.** Crews hours and shifts are currently dictated by union contract and crewing resources are currently limited. Adding additional crews, reducing or changing current crew hours, etc. could come at considerable expense to the entire service. Much more research would need to be conducted to see if this could ever be a viable option.
11. **Modified winter schedule will increase emergency calls.** The MSFS has not been provided with the data that identified this concern. Although there would be one hour less in the day for 17-weeks in winter months for an ambulance from the island to come across on a regularly scheduled trip, we believe the winter schedule will provide less cancellations of regularly scheduled trips.
12. **Changing the last winter trip back to 3:15p.m. will impact the economy of the island.** We acknowledge that a change to the last boat time for 17-weeks in the winter could have an impact to residents and businesses on the island. However, the safety of our passengers and crews is the priority of the service, and mitigating the heightened risk of a catastrophic loss to life and property by going back to the pre-2010 winter schedule outweighs those impacts.

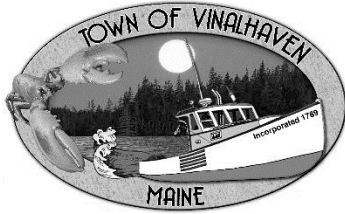
13. **Changing the last winter trip back to 3:15p.m. will have a negative impact on commuters to/from the island (with potential loss of residents in the future if workers cannot commute). See #12.**
14. **Changing the last winter trip back to 3:15p.m. will impact the ability of contractors to have a full work-day on the island, resulting in a loss of income and a loss to the construction trades that serve the island. See #12.**
15. **Changing the last winter trip back to 3:15p.m. will have a negative impact on island businesses (the bank hours were specifically mentioned due to some employees being commuters). See #12.**
16. **Changing the last winter trip back to 3:15p.m. will have a negative impact on school sporting events (sports teams will not be able to get home). See #12.**
17. **Changing the last winter trip back to 3:15p.m. will have a negative impact on the health and safety of Vinalhaven's older residents (impacting appointments, greater risk for being stranded overnight and deterring elderly from seeking healthcare off island). See #12.**
MaineDOT and rural communities across the state grapple with limited transportation services for underserved populations, particularly the elderly and children. The 17-week winter schedule still provides more than 6 hours of time off-island, and the expectation is that this schedule will provide less last trip and first morning cancellations, a benefit for the entire community.
18. **Changing the last winter trip back to 3:15p.m. will not allow residents sufficient time to go for medical appointment and get back in time for last boat (requiring expensive overnight stays). See #12 and #17.**
19. **Early boat times do not coincide with Concord Trailways bus schedule. Did anyone talk to Concord about altering their schedule? People using bus will be impacted, particularly college kids.** The MSFS will reach out to Concord Trailways to see if future bus schedules could be altered to coincide with ferry schedules. While not ideal, bus riders will still have the option to access the last North Haven boat at 5:15p.m. and then take the short private boat ride across to Vinalhaven.
20. **Does the North Haven boat have sufficient capacity to handle increased passengers who would have otherwise ridden the 4:30p.m. Vinalhaven boat?** Yes. Walk-on passage during winter months is very limited, and there is ample capacity to accommodate passengers.
21. **Changing the last trip to earlier will have a negative impact on education because staff who service the island from the mainland will have less hours on the island. See #12 and #17.** In addition, it is our understanding that school dismisses on the island at 2:45p.m., providing 30 minutes from dismissal to last boat departure during the 17-week winter schedule.

22. **If a change to the last trip is made in the winter, then the MSFS should make the first trip earlier.** The last trip is being made earlier in the winter for 17-weeks on the Vinalhaven route so that the captains do not operate in heightened risk conditions in the dark. Moving the first trip to earlier would have the same consequence due to limited daylight that time of year.
23. **Why can't Captains tell lobsterman to turn off blinding lights? Is there anything the municipality can do restrict the use of LED lights?** Captains routinely call private boats and ask them to turn down lights, with some responding and some not. We would be happy to work with the municipality in finding ways to mitigate the LED light issues around the island, and will include stakeholders from the fishing community when we conduct an OSA.
24. **Are there new rules that should/could be implemented for passengers/vehicles to mitigate safety concerns on night trips?** Yes. Areas of immediate concern with enforcement of existing USCG regulations and MSFS policies were identified during the route risk assessment. The MSFS will take immediate action to enforce those policies year-round, across the entire service, as laid out in the route assessment. Additional mitigation measures will be more thoroughly explored in an OSA.
25. **Could we base our schedules more around the tides to mitigate safety concerns and only run night boats when tides allow for favorable conditions?** This option could be further explored in the future with the community and as part of an OSA. However, MSFS believes that this sort of daily changing schedule could be confusing – typically a consistent schedule is better for customer planning and crewing.
26. **Other islands – especially those in Casco Bay – have ferry boat runs ate into the evening.** The routes between the mainland and the islands in Casco Bay are very different from the Vinalhaven route - similar to how the route to North Haven has less risk than the Vinalhaven route. Further research during the OSA – and a possible peer review – with Casco Bay Lines is warranted to see what best practices they have implemented for reducing risk in nighttime operations.
27. **The ferry service should be adding another ferry, not reducing service.** As discussed, the modification to the winter last boat time is due to safety. Although it reduces the hours of last service by an hour, it will not reduce the number of trips to/from the island.

The island of Vinalhaven is scheduled to receive another new ferry in the fall of 2019, which will increase the overall deck space capacity of the service to Vinalhaven by 23% per day. The addition of this larger vessel will help relieve the current maximum capacity issues that are experienced during summer months, but may exacerbate lower capacity in winter months. Winter schedules will be reviewed annually to assess if demand/capacity is being properly utilized in the most cost effective manner.

28. **Why is the winter schedule from November to the end of March? Could the winter schedule be reduced in some way to capture only when a 4:30p.m. final boat time would truly run in the**

dark for the last 30 minutes? This was a good suggestion, and one that we factored into the final schedule. The original proposal had the fall schedule being Nov 1- Dec 31 and the winter schedule begin Jan 1 – Mar 31, with the thinking that it would be easier for customers and crews and remember the schedule change dates if they were based on calendar months. However, after reviewing public feedback about the impact of the change from 4:30p.m. to 3:15p.m., the MSFS will narrow the window of the earlier last boat time to 17-weeks. The final schedule reflects these changes.



Town of Vinalhaven

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October 23, 2018

Mark Higgins
MSFS Manager
PO Box 645
Rockland, ME 04841
mark.a.higgins@maine.gov

Dear Mark,

Please accept this letter as a reflection on the safety assessment conducted this month by the MSFS for the route between Vinalhaven and Rockland. Three community members served on the Route Assessment to observe the conditions/concerns posed by the MSFS and to provide a community perspective. Being that the scope is limited to safety concerns only, here is our opinion based on the two trips.

- 1. Identify potential hazards of the ferry vessel route from Rockland to Vinalhaven for passengers, vessels and crews while underway/cruising – narrow scope to winter month conditions and focus assessment on hazards presented during the 30-minute approach to/from Carver's Harbor in Vinalhaven during winter months.*

While en route to Vinalhaven, the final 30 minutes to Carver's Harbor may present challenges during certain weather scenarios. Increased risk during extremely low or negative tides reduce the water depth and thus create more hazard regardless of the time of year. In our opinion, the risks that are identified have been present since the route was established and we do not see an increased hazard or risk, unless there is concern for the condition of the vessels, on-board navigational equipment, or the personnel operating the vessel.

- 2. Identify any heightened risk presented during operations after dark.*

There are risks of operating after dark as visibility is significantly reduced. There are equipment and tools on board the vessels to help operators navigate as we saw on the night of the 15th. The presence of lights from other vessels on the water pose a risk to night blindness, but various captains have different tolerance levels.

If the lights are head-on and are not shut off, the vessel should be prepared to stop if necessary until the hazard passes. What was experienced on the 15th was a simulation of a boat coming in to sell and the lights were on the starboard side of the vessel. At that angle, we did not perceive there to be a hazard to navigation, but rather an improvement as it lit the water in front of the vessel 4 or 5 boat lengths. Should your eyes wonder to the starboard side of the vessel and you look at the oncoming lights, you will need to re-adjust your eyes. Other risks of operating after dark appeared to be limited to lights on board the vessel which we could be mitigated by new SOPs and/or the various suggestions highlighted in scope 4.

3. *Compare the risk of scenarios presented during day light hours vs night time hours.*
 - a. *Consider if scenarios outcomes would be different depending on which MSFS vessels is serving route at the time (primary and spare vessels)*
 - b. *Consider skill-level of all captains (full-time vs relief)*

The scenarios posed as part of this assessment were reviewed with the group, many of the scenarios were presented in weather that would more than likely cancel the boat anyways. While relatively significant, there was no consideration for the likelihood of the scenarios presented. For example, is it likely a boat will lose its steering and at the most critical part of the trip? Or how about the likelihood of a vehicle fire on deck? While we agree that those are all possibilities, we trust the crews in their ability to respond. Some captains have stated that their license to operate the vessel is not limited to day or night, but rather any time based on the conditions posed.

Recognizing there may be increased risks under certain conditions and respecting the captains and crew, to us the issue does not appear to be that of day or night, but rather vessel conditions and crew ability. There were inconsistent answers from operators throughout the process regarding the ability to operate under some of the scenarios. Some felt more ready and willing than others and some said no way. This metric of day vs night operation is relevant to any boat/crew MSFS operates as they each run similar length days and some later than the VH run.

4. Explore and recommend mitigation measures that would alleviate overall risk along the route, and particularly those associated with nighttime operations.

Issues/Hazard	Mitigation
1) Route Navigation on 30-min Approach	
Shallow water	Use alternate route
Narrow channels	Modify channel
Multiple course changes	Inspect and ensure all equipment is functioning properly Consider new/updated equipment
2) Migrating winter conditions	
Rough seas	Add a lookout
High winds	Slow the vessel
Rouge waves	Use spotlight if necessary
Floating debris	Contact vessels in the area
Tides	Use alternate route
Traffic/Congestion	Cancel trip
Limited visibility (Fog/Rain/Ice/Snow)	Consider a decision matrix tool to assist captains in making a call to cancel
Limited visibility (Window Icing/Foggy)	
3) Potential Mechanical Failures	
Loss of radar and other electronics	Create SOPs
Loss of propulsion	Preventative Maintenance
Loss of steering	Periodic training
Loss of power	Periodic drills
4) Crew Issues	
Fatigue (end of day and cumulative)	Shorten crew day
	Shorten crew work week
	Utilize relief captains/crews
	Consider after hour policies, if impacting performance
Inexperienced relief captains/crews	Provide more training
	Eliminate the outsourcing of temp workers to reduce this concern
	Use relief captains/crews as scheduled workers
Inexperience with spare vessels	Use spare vessels with more frequency
	Run drills during crew off-week with the spare vessels
	Review SOPs relative to each boat
	Review all equipment aboard vessels to ensure their operability
5) Onboard Safety Concerns	
Inability to evacuate vehicles	Allow passengers the room to exit vehicle
	Require passengers to exit vehicles during the trip

	Note high risk/vulnerable passengers while loading the boat so they are easier to identify in an emergency
Inability to see passengers on deck	Disallow passengers from the deck of the boat during certain (or all) conditions
	Use spot light if needed
	Ask ABs or OSs to walk vessel more frequently
Slip/fall on deck	More frequent application of anti-icing agent
	Install anti-slip material in common walking areas on deck
	Limit the time a passenger is able to walk on the deck of the boat (ie. While boat is in motion)
Conditions	
Passenger medical	Review SOPs
	Provide crew training
	Simulations with crew
6) Night Operation Specific Hazards	
Low to zero visibility	Slow the vessel, stop if necessary
	Utilize onboard navigation equipment
	Utilize spot light when necessary
	Cancel trip
Night blindness (vessels on water)	Slow the vessel
	Attempt to identify and communicate with vessel
	Report to USCG
	Request USCG presence during some night trips – an opportunity to enforce/educate boaters
Night blindness (vehicles on deck)	Require vehicles be turned off while boat is underway.
Night blindness (LCD/phone lights)	Minimize or eliminate use of phones while operating vessels
	Install lower light screens for navigation equipment
7) Other	
Distracted operation	Minimize or eliminate use of personal phones while operating vessels
	Minimize or eliminate passengers from entering wheelhouse

There are many mitigating options to the scenarios raised during this assessment, some can be implemented sooner than others and some may require a longer-term solution. We do not have the data showing past incidences and the time of day those occurred, but we are under the impression that no incidences have occurred recently and no reason to believe they were caused because they were operating at night. Operator licenses are not specific to day or night and some captains have taken offense to the thought of being told they cannot make a night run.

To operate with the fewest number of incidences is the goal, but to be prepared to respond to an incident is what personnel are trained for. No one can operate on “what-ifs” and if the MSFS is now looking to make a decision to run vessels because of what may happen with no regard for the likelihood, we may as well consider tying the vessels up. In our opinion, the conditions present during the assessment and our experiences riding the vessel and operating others, we did not see anything to indicate that the vessels were not capable of navigating the route, day or night. We truly do not believe there to be a reason the captains or crews are incapable of making the trip and continuing to use their judgement to cancel when necessary as they have since the MSFS has been operating is the most practical and safe option.

Sincerely,

Andrew Dorr, Town Manager, MSFS Advisory Board Rep
Lindsay Davis, Alt MSFS Advisory Board Rep
Lee Osgood, Operator/Fisherman for over 40 years

Cc: Vinalhaven Board of Selectmen

Vinalhaven Final Schedule Effective 11/4/18

May - October

VH	Rockland
7:00AM	7:00AM
8:45AM	8:45AM *
11:15AM	11:15AM **
1:00PM	1:00PM
2:45PM	2:45PM
4:30PM	4:30PM

November, December

VH	Rockland
7:00AM	7:00AM
8:45AM	8:45AM *
10:30AM	10:30AM **
12:00PM	12:00PM
1:30PM	1:30PM
3:15PM	3:15PM

Only Trips on Thanksgiving

No Service on Christmas Day

January, February

<i>Mon - Sat</i>		<i>Sunday</i>	
VH	Rockland	VH	Rockland
7:00AM	7:00AM	8:45AM	8:45AM
8:45AM	8:45AM *	10:30AM	10:30AM
10:30AM	10:30AM **	1:30PM	1:30PM
12:00PM	12:00PM	3:15PM	3:15PM
1:30PM	1:30PM		
3:15PM	3:15PM		

Only Trips on New Years Day

March, April

<i>Mon - Sat</i>		<i>Sunday</i>	
VH	Rockland	VH	Rockland
7:00AM	7:00AM	8:45AM	8:45AM
8:45AM	8:45AM *	10:30AM	10:30AM
11:15AM	11:15AM **	1:30PM	1:30PM
1:00PM	1:00PM	3:15PM	3:15PM
2:45PM	2:45PM		
4:30PM	4:30PM		

* Rockland boat on Tuesday may leave late due to fueling

**Rockland boat on Mon & Thur may leave late due to fueling

Maine State Ferry Service Policy No. 100

Effective: November 4, 2018

SUBJECT: VEHICLE AND PASSENGER HANDLING

- A. SCOPE: This policy is applicable to all employees who are part of the vessel loading and unloading process, including parking lot line attendants, able seaman, and Captains.
- B. PURPOSE: To define the responsibilities and procedure for handling vehicles and passengers during the loading and unloading of a vessel.
- C. SEPARATION OF VEHICLES AND PASSENGERS:
 - 1. A dangerous situation occurs when vehicles are loaded and unloaded. Crew members will keep passengers and vehicles separate as much as possible when loading and unloading.
 - 2. The centerline of vehicles will be unloaded first, followed by the majority of passengers. The remaining vehicles will then be unloaded.
 - 3. No passengers will be allowed to embark or disembark when vehicles are being loaded or unloaded directly from the vessel except as follows:
 - a. Upon request to a line attendant or able seaman, and following approval from the Captain, an oncoming vehicle may be allowed to disembark a passenger from the vehicle in the vicinity of the passenger cabin entrances prior to parking.
 - b. This request can be made to accommodate disabled, elderly, children or injured passengers.
 - c. When selling vehicle tickets, all ticket agents will make a reasonable effort to ascertain from the customer if the need for special loading accommodations exist and to explain the procedures available for assisting passengers.
 - d. Line attendants and able seamen will make a reasonable effort to ascertain from the customer if the need for special loading accommodations exist and will promptly relay any requests directly to the vessel Captain.
 - 4. Adequate space must be given for vehicle occupant exit needs.
- D. SAFETY PRECAUTIONS:
 - 1. After parking, all vehicle operators should be instructed by the able seaman to put the vehicle in the park position, or in gear, set the emergency brake, and shut off the engine.

2. Pursuant to 46 CFR 78.40-5, Captains “shall take all necessary precautions to see that automobiles or other vehicles have their motors turned off when the ferry is underway, and the motors shall not be restarted until the ferry is secured to the landing.” Once secured to the landing, the able seaman will signal to vehicle operators when it is appropriate to start vehicle motors.
 - a. If an operator is found to have turned on a vehicle motor while the ferry is underway and/or before secured to the landing, the Captain will give a warning to the vehicle operator. Warnings will be logged by the Captain, with the driver name and vehicle license plate number.
 - b. After issuing a warning, if an operator is found to have turned on a vehicle motor while the ferry is underway and/or before secured to the landing, the Captain may suspend the operator’s privilege to remain in his or her vehicle while the vessel is underway and require the vehicle operator to exit the vehicle and remain in the vessel cabin for all trips for a duration of up to 10-days. Suspensions will be logged by the Captain.
 - c. After suspension, if an operator is found to have turned on a vehicle motor while the ferry is underway and/or before secured to the landing for a period of up to a year from the original date of warning, the Captain will provide the information to the MSFS Manager, who will take necessary action against the vehicle operator, up to, and including, suspension of operating a vehicle on a MSFS vessel for a set period of time.
3. Pursuant to 46 CFR 78.40-1, “automobiles or other vehicle shall be stowed in such a manner as to permit both passengers and operators to get out and away from them freely in the event of fire or other disaster.”
 - a. The Captain has the sole discretion for determining appropriate egress from vehicles to ensure passenger safety.
 - b. When there is insufficient clearance to provide for safe egress, the Captain may require some or all operators and passengers to exit vehicles and occupy vessel cabins while underway.
4. Extra precautions must be taken to ensure that vehicles are properly secured during periods of foul weather.
5. Precautions will also be taken concerning ice on the deck before and during loading and unloading of vehicles. Supplies are available through the Rockland office to help alleviate these conditions. Snow and ice should be removed from the vessel as soon as practicable.

6. In order to prevent vehicle from going overboard, the vessel must have lines secured to the pen at all times during loading and unloading operations, leaving enough slack so that heavy loads coming aboard do not snap these lines. Failed to secure the vessel will result in mandatory personnel action.
7. Trucks should have chocks put under both front and rear wheels. All other vehicles at the bow and stern should be chocked. Before leaving the dock, all barrier chains must be in place fore and aft.

E. HEAVY VEHICLES:

1. Able seaman shall make sure that the total weight of all vehicles is under the weight limits as stated in the stability letter. If, for any reason, an able seaman feels a single truck makes the ferry load exceed these limits, he or she should notify the Captain.
2. If, for any reason, a Captain feels a single truck makes the ferry load exceed the weight limits as stated in the vessel stability letter, he or she should insist that a weight slip be provided to verify the truck's actual weight.
3. Captains and able seamen shall read the stability letter assigned to his or her vessel carefully to ensure they are in compliance in all respects.