New England Fishery Management Council

On-Demand Fishing Gear Conflict Working Group Report

Recommendations for Reducing Gear Interactions between On-Demand Gear Used in the Northeast Lobster/Jonah Crab Fishery and Other Types of Fishing Gear

DRAFT

August 2025

Working Group Members: Michael Pierdinock (Chair), Ted Platz (Vice Chair), Terry Alexander, Spencer Bode, Erica Fuller, Jennifer Goebel (GARFO), Sonny Gwin (MAFMC), Toni Kerns (ASMFC), Henry Milliken (NEFSC), Drew Minkiewicz, Kenneth Murgo, Allison Murphy (GARFO), Scott Olszewski (NEFMC), Marc Palombo, Renee Zobel (NEFMC), Ross Pearsall, Sam Rosen, Wes Townsend (MAFMC), Erin Wilkinson (ME DMR)

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3.0 BACKGROUND

3.1 On-Demand Fishing Gear Conflict Working Group

At the January 2023 meeting of the New England Fishery Management Council (Council), the Council received presentations on the status of on-demand fishing, including work done under the Northeast Fisheries Science Center's (NEFSC) exempted fishing permit (EFP), as well as recent Atlantic Large Whale Take Reduction Team (ALWTRT) work. Following these presentations, the Council agreed that there was a need for a working group to consider potential interactions between on-demand and other types of fishing gear. In Spring 2023, the Council formed the On-Demand Fishing Gear Conflict Working Group (ODWG) to address concerns regarding gear conflict between on-demand fishing gear and Council-managed fisheries, including fixed and mobile gear fisheries.

The goal of the working group is to identify strategies for reducing gear interactions between on-demand gear and other fisheries, including mobile, fixed-gear, and recreational fleets. In addition, the working

group will identify strategies for reducing interactions between gears that may be caused by measures adopted for sink gillnet and other trap/pot (OTP) fisheries.

The ODWG consists of 19 members, including:

- Four NEFMC members
- Two MAFMC members
- One ASMFC Representative
- Two GARFO representatives (Sustainable Fisheries Division, Protected Resources Division)
- One NEFSC representative
- Members of the public (Representatives of the mobile gear, gillnet, trap/pot, and recreational/charter fisheries in the Greater Atlantic Region; conservation organizations)
- NEFMC staff

Table 1. Past and Present ODWG membership.

Name/Affiliation	Membership
Michael Pierdinock (Chair; NEFMC)	Spring 2023-Present
Ted Platz (Vice Chair; NEFMC)	Spring 2023-Present
Terry Alexander (Mobile Gear/Gillnet)	Spring 2023-Present
Spencer Bode (Mobile Gear)	Spring 2023-Present
Colleen Coogan (GARFO Protected Resources)	Spring 2023-Spring 2025
Dan Eilertsen (Scallop)	Spring 2023-Summer 2023
Elizabeth Etrie (NEFMC)	Spring 2023-Summer 2023
Erica Fuller (Conservation Law Foundation)	Spring 2023-Present
Jennifer Goebel (GARFO Protected Resources)	Spring 2025-Present
Sonny Gwin (MAFMC)	Spring 2023-Present
Patrick Keliher (Vice Chair; NEFMC)	Spring 2023-Spring 2025
Toni Kerns (ASMFC)	Spring 2023-Present
Henry Milliken (NEFSC)	Spring 2023-Present
Drew Minkiewicz (Scallop)	Summer 2023-Present
Kenneth Murgo (Trap/Pot)	Spring 2023-Present
Allison Murphy (GARFO Sustainable Fisheries)	Spring 2023-Present
Scott Olszewski (NEFMC)	Spring 2023-Present
Marc Palombo (Lobster)	Spring 2023-Present
Cheri Patterson (NEFMC)	Spring 2023-Spring 2025
Ross Pearsall (Recreational)	Spring 2023-Present
Sam Rosen (Lobster)	Spring 2023-Present
Wes Townsend (MAFMC)	Spring 2023-Summer 2025
Erin Wilkinson (NEFMC/ME DMR)	Spring 2025-Present
Renee Zobel (NEFMC)	Spring 2025-Present

The ODWG has convened eight times to address the terms of reference (Section 3.2). Meeting materials are available on the Council website.

3.2 ODWG Terms of Reference

The Council approved the working group's final terms of reference at its September 2023 meeting.

The working group will:

1. Identify the implications of on-demand fishing gear use for Council-managed fisheries.
2. Engage with fishermen, industry members, members of the public, and other relevant stakeholders to identify potential interactions between on-demand and mobile, fixed, and recreational fishing gear use.
3. Develop strategies to reduce gear interactions between on-demand and other types of fishing gear.
    a. Provide advice on reducing gear interactions that may result from risk reduction measures under consideration for gillnets and other trap/pot (OTP) fisheries in the form of a final report by spring 2024.
    b. Develop recommendations on reducing gear interactions between on-demand gear used in the Northeast lobster and Jonah crab fisheries and other types of fishing gear (including the fixed gear, mobile gear, and recreational/charter fleets) in the form of a final report by fall 2025.
4. Explore gear impacts/loss issues related to gear interactions.
5. Coordinate with the Enforcement Committee to identify recommendations to improve the enforceability of on-demand fishing.
6. Suggest what modifications would be required to replace a buoy: technologies that would mark where gear is on the bottom, and to enable vessels to visualize that gear.

3.3 On-Demand Fishing Gear

On-demand fishing gear, also called ropeless fishing gear, can reduce entanglement risk for large whales as well as other protected species by minimizing the time that vertical lines are present in the water. Rather than using vertical lines to connect gear to a surface gear marking (i.e., buoy, radar reflector), on-demand gear utilizes acoustic or timed-release technologies such as pop-up buoys, float bags, and buoyant rope spools to retrieve gear set on the seafloor. This technology can be used with multiple types of gear, including traps/pots and gillnets. Gear positions may be marked digitally when gear is deployed, and gear can be located acoustically or using this location information, which can be viewed using a chart plotter or app. Other user groups could use these technologies to see gear locations to avoid gear conflict or for law enforcement purposes. However, factors including the lack of surface markers and possible technological limitations may lead to interactions between on-demand gear and mobile, fixed, and recreational fishing gear. Identifying and addressing these interactions will be an important step towards the widespread adoption of on-demand fishing gear.

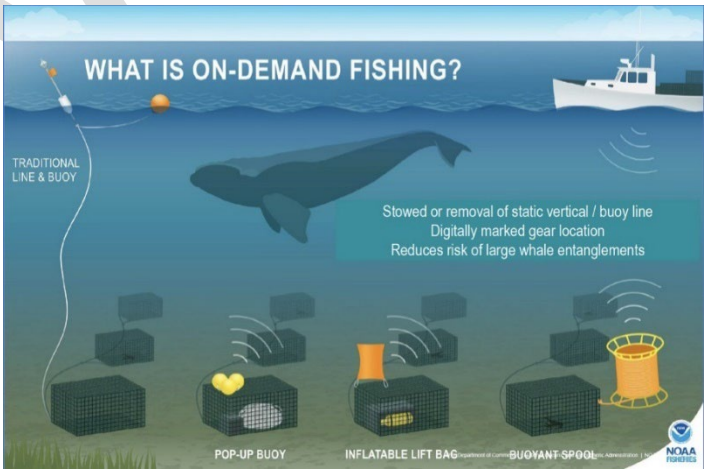

Figure 1. What is on-demand fishing? Image Source: NOAA Fisheries.

There are several active on-demand fishing gear trial projects occurring in the Northeast for the lobster/Jonah crab and gillnet fisheries, some of which the ODWG has received updates on at its meetings (Table 1). Because on-demand gear is fished without traditional surface markings as outlined in federal fisheries regulations, fishing activity with this gear in Federal waters occurs under exempted fishing permits (EFPs). Presentations on and discussions around these projects have helped the working group to

meet its terms of reference by providing the ODWG with a better understanding of how these technologies are working in a real-world setting.

Table 2. On-demand fishing gear testing programs in the Northeast discussed at recent ODWG meetings.

Lead Agency/Organization	Description of Project
Northeast Fisheries Science Center	• Maintains a gear lending library with several types/manufacturers of on-demand fishing gear for vessels to use under EFPs • EFP: active through 12/31/25 (89 FR 43380) in Areas open to trap/pot and gillnet fishing in Gulf of Maine, Georges Bank, Southern New England, Mid-Atlantic ○ Continuation and expansion of on-demand gear trials for trap/pot and gillnet fisheries ○ Up to 180 lobster vessels (up to 5 using grappling), up to 20 gillnet/OTP (red crab, black sea bass) vessels could replace up to 10 existing trawls each with on-demand gear or other alternatives to static buoy lines. Alternative lobster gear would be allowed in ALWTRP restricted areas, alternative gillnet gear would not. No grappling allowed in ALWTRP restricted areas.
Maine Department of Marine Resources	• Maintains the Maine Innovative Gear Library to facilitate testing of alternative fishing gear technologies • EFP active 1 year from date of issuance (89 FR 18395) in Trap/pot: LMA 1; all Maine Lobster Conservation Zones (A-G) • Gillnet: Statistical Areas 513, 514, 515 • Up to 50 vessels (up to 45 trap/pot, up to 5 gillnet) • 2 main components: testing alternative gear on one end of trawl, testing acoustic positioning systems
Massachusetts Division of Marine Fisheries	• On-demand gear research occurs as part of the Massachusetts Right Whale and Lobster Fishery Research Program • On-demand gear research program: MA DMF provides letters of authorization to fishers to exempt from trap marking requirements ○ 2023-2024: total of 11 vessels testing gear ○ Open season testing with hybrid trawls; closed season testing with fully on-demand trawls since 2023 (portion of SIRI, MRA areas) ○ NEFSC collecting operational & timing data, locations, depths, environmental data, catch/discards, whale sightings; MA DMF collecting additional data on timing ○ Conducting gear density study to determine what proximities on-demand gear can be set at without conflict, assess functionality of on-demand gear and current GPS marking system, and document how conflict rates vary by setting technique/proximity determination
Blue Planet Strategies	• Continuation of current EFP (89 FR 60879; active through 12/31/25 in various areas)

	• 16 trap/pot vessels, 4 gillnet vessels; up to 12 trap/pot vessels trialing fully on-demand gear in ALWTRP restricted areas (modify up to 4 trawls each, max 48 trawls in restricted areas) • Trap/pot (LMA 1,3): vessels would modify up to 2 existing trawls to use on-demand devices with either 1 or no buoy lines; targeting areas with less mobile fishing effort to reduce gear conflict • Gillnet (Stat area 521 & 538, Georges Bank Regulated Mesh Area): modify up to 2 existing gillnet strings to use on-demand systems with 1 or no buoy lines

4.0 Progress Updates: Terms of Reference

4.1 TOR 1

"Identify the implications of on-demand fishing gear use for Council-managed fisheries."

On-demand fishing gear use could impact Council-managed fisheries in two primary ways. Some Council-managed fisheries, namely fixed gear fisheries such as groundfish, monkfish, spiny dogfish, and red crab, may have the option to utilize on-demand fishing gear in various spatial and temporal extents to reduce risk to large whales (see below for more information on the Joint Alternative Gear-Marking Framework). In addition, other user groups fishing for Council-managed species using mobile gear or participating in a recreational/charter fishery may be operating alongside on-demand gear as they currently do with traditionally marked fixed gear.

Fixed Gear Fisheries

For on-demand gear (or other alternative gear-marking technologies) to be used outside of fishing under an EFP, gear marking requirements detailed in federal regulations for multiple Council fishery management plans (FMPs) would need to be changed. In December 2024, the NEFMC prioritized the development of a joint action with the Mid-Atlantic Fishery Management Council and the Greater Atlantic Regional Fisheries Office to consider allowing alternative surface gear-marking provisions for fixed gear fisheries in the Greater Atlantic Region. If approved, this action would allow for the use of fixed gear without a persistent buoy line and reconcile fishery management plan regulations with recent and potential future changes to Marine Mammal Protection Act regulations. The NEFMC and MAFMC initiated the framework at their April 2025 meetings, and received updates from GARFO staff at their respective June meetings. The NEFMC is anticipated to take final action on the framework at its September meeting, and the MAFMC is anticipated to take final action in October. If the action is accepted and approved, it will apply to all Council-managed fisheries utilizing fixed gear, including: northeast multispecies, deep sea red crab, monkfish, northeast skate complex, and spiny dogfish.

Mobile and Recreational/Charter Fisheries

The ODWG has continued to identify potential impacts of on-demand fishing gear use on mobile and recreational/charter fishing vessels. Mobile and recreational fishing vessels will need to understand where and how on-demand fishing gear is used in order to avoid encountering this gear. To visualize on-demand gear locations, mobile and recreational/charter vessels may need to utilize some sort of onboard technology to display these locations either through an application on a cell phone/tablet or via chart

plotter. Some of the on-demand fishing gear trials outlined in Table 1 include mobile gear vessels testing on-demand gear visualization technology.

4.2 TOR 2

"Engage with fishermen, industry members, members of the public, and other relevant stakeholders to identify potential interactions between on-demand and mobile, fixed, and recreational fishing gear use."

The working group has worked to address Term of Reference 2 at each of its meetings, which included presentations and discussions to learn more about the current status of on-demand gear development, recent on-demand gear trials, various workshops and meetings related to on-demand gear, and other related topics. All working group meetings are open to the public, and members of the public can ask questions and/or provide comments during meetings. Additional information on previous tasking related to TOR 2 is available in the September 2024 ODWG report.

The working group has discussed several potential interactions between on-demand fishing gear and other types of gear fished by the fixed, mobile, and recreational fleets that could lead to gear conflict. Gear conflict is defined in the Code of Federal Regulations (50 CFR 600.10) as "Any incident at sea involving one or more fishing vessels (a) in which one fishing vessel or its gear comes into contact with another vessel or the gear of another vessel, and (b) which results in the loss of, or damage to, a fishing vessel, fishing gear, or catch."

Potential Interactions with Mobile Fleets

The working group has discussed potential interactions between on-demand rigged fishing gear and mobile gear at length. Mobile and fixed gear vessels have historically fished concurrently in various areas, and have been able to work around each other's gears because fixed gear is set with surface markings that are physically visible either to the eye or via radar. Some fishermen also reduce gear conflict through the use of gentlemen's agreements in particular fishing areas. However, on-demand fishing gear does not have a surface marking and would instead be marked digitally, raising some questions about how other user groups would visualize the gear locations.

The risk of interactions between the mobile and fixed gear fleets could vary by fishing area. At its April 29 meeting, the ODWG received a presentation from MITRE with an overview of their research and upcoming report developed for NOAA Fisheries to evaluate proposed acoustic interoperability approaches that would allow for on-demand fishing gear to be deployed at scale. As part of this project, MITRE developed gear conflict risk maps for the northeast region, using fixed gear density and mobile gear fishing activity data to identify areas where the risk of gear conflicts occurring may be higher or lower. Overall, according to this analysis, the Gulf of Maine has the greatest cumulative risk of gear conflict, though it was noted that gear conflict risk is location-dependent, and can still occur in areas of low gear density and/or mobile gear activity. MITRE also endorsed the need for a cloud-based gear marking solution based on their findings.

[add vertical line estimates from GARFO? Presented at 7/23 ODWG meeting]

Potential Interactions with Council-Managed Fixed Gear Fleets

Depending on where and when alternative gear marking is approved for use, there could be fixed gear operating in some areas with on-demand gear and some with traditional gear markings (i.e., buoys, high flyers, radar reflectors).

Potential Interactions with Recreational/Charter Fleets
The working group has identified some potential for gear interactions between recreational fishing gear and on-demand gear. First, fishing gear itself could hook onto on-demand rigged trawls and be damaged and/or lost. The working group has also noted that anchoring could pose a risk if an anchor is dropped on or near an on-demand trawl, though this may be more of a concern in inshore waters.

4.3 TOR 3a

"Provide advice on reducing gear interactions that may result from risk reduction measures under consideration for gillnets and other trap/pot (OTP) fisheries in the form of a final report by spring 2024."

The ODWG addressed Term of Reference 3a in a report to the Council at its September 2024 meeting. The full report is available here. The working group developed three consensus statements to present to the Council, detailed below.

Consensus Statement 1: The ODWG requests the Enforcement Committee provide input for the working group as they continue developing recommendations for reducing gear conflict.

Progress on Recommendations: The Council received this recommendation at its September 2024 meeting, and passed the following motion: "to recommend that the Council task the Enforcement Committee to provide input for the On-Demand Fishing Gear Conflict Working Group as it continues developing recommendations for reducing gear conflict." The Enforcement Committee convened on November 18, 2024 to provide feedback to the ODWG on recommendations to reduce gear conflict. Additional information on this meeting is included in Section 4.6. The Council received a presentation on the Enforcement Committee's discussion at its December 2024 meeting, and the working group received an update in January 2025.

Consensus Statement 2: The ODWG recommends that the Council prioritize the development of an action starting in 2025 to revise gear marking regulations in the Northeast Multispecies, Monkfish and red crab fisheries to allow for trained vessel operators to fish without surface gear markings.

Progress on Recommendations: In December 2024, the Council passed its 2025 work priorities, including a "joint action with MAFMC and GARFO to revise gear marking regulations across FMPs". GARFO has taken the lead on developing this joint action, forming a Plan Development Team/Fishery Management Action Team (PDT/FMAT) to work on the action. The NEFMC and MAFMC initiated the framework in April 2025 at their respective meetings, and received updates at their June meetings. Final action is anticipated for the September (NEFMC) and October (MAFMC) Council meetings.

Consensus Statement 3: The working group recommends that the Council work with the Mid-Atlantic Fishery Management Council and Atlantic States Marine Fisheries Commission as appropriate.

Progress on Recommendations: The working group continues to coordinate with the Mid-Atlantic Council and ASMFC through their participation in the working group as well as through the alternative gear-marking framework action.

4.4 TOR 3b

"Develop recommendations on reducing gear interactions between on-demand gear used in the Northeast lobster and Jonah crab fisheries and other types of fishing gear (including the fixed gear, mobile gear, and recreational/charter fleets) in the form of a final report by fall 2025."

The ODWG developed recommendations to address this term of reference over the course of three working group meetings (April 29, July 23, and August 26, 2025). Recommendations can be found in Section 5.0 of this document.

Addressing Potential Gear Conflict
The Council has pathways available for addressing conflicts between on-demand gear and Council-managed fisheries. In 1996, the Council adopted an amendment to the scallop and groundfish FMPs that allowed measures to resolve gear conflicts to proceed via framework adjustments. This amendment has also been adopted into the Atlantic herring and monkfish FMPs. These measures include:

1) Monitoring of a radio channel by fishing vessels;
2) Fixed-gear location reporting and plotting requirements;
3) Standards of operation when gear conflict occurs;
4) Fixed-gear marking and setting practices;
5) Gear restrictions for specific areas (including time and area closures);
6) VMS;
7) Restrictions on the maximum number of fishing vessels or amount of gear; and
8) Special permitting conditions.

The full text of the amendment and environmental assessment is available on the Council website, and additional information is available in Appendix III.

4.5 TOR 4

"Explore gear impacts/loss issues related to gear interactions."

The ODWG has discussed gear impacts and loss issues related to interactions between on-demand and other types of fishing gear. ODWG members have expressed concerns about the impacts of potential gear conflicts, including damage to fishing gear as well as potential costs incurred due to these damages. Current gear conflict regulations and enforcement still apply – there is an expectation for fixed gear vessel operators to adequately mark their gear (i.e., with a digital gear mark that can be seen by others), and an obligation for mobile vessel operators to take steps to determine gear locations and avoid interactions.

[Add other ODWG questions and discussion on this topic?]

The working group has also discussed examples of gear conflict that have occurred with on-demand gear. Most recently, the ODWG received a presentation regarding a gear conflict incident with on-demand gear being tested in the Massachusetts Restricted Area (MRA). Northeast Fisheries Science Center described the gear conflict, which occurred in February 2025 when a mobile gear vessel (likely a scallop vessel) dragged over several trawls rigged with on-demand gear. Some of the gear was able to retrieved, but some units were unable to be hauled. The NEFSC also worked with the NOAA Office of Law Enforcement (OLE) to place a geofence around a high concentration of gear in the MRA and conducted outreach with scallop fleet representatives and on-demand fishing gear collaborators to notify them of research activities as well as scallop fishing activity. Discussing these gear conflict incidents and resulting remediation has helped the working group to understand current protocols in place and consider strategies to address gear interactions.

4.6 TOR 5

"Coordinate with the Enforcement Committee to identify recommendations to improve the enforceability of on-demand fishing."

At its September 2024 meeting, the ODWG agreed to a consensus statement to seek input and guidance from the Enforcement Committee on potential revisions to gear marking requirements and the addition of gear conflict avoidance responsibilities to the Federal regulations. The ODWG prepared a list of questions generated from discussions around draft strawman gear marking language that the ODWG reviewed at prior meetings (see Appendix I). A summary of Enforcement Committee discussion at this meeting is available in Appendix II. The Enforcement Committee will continue to be engaged in the ODWG process.

4.7 TOR 6

"Suggest what modifications would be required to replace a buoy: technologies that would mark where gear is on the bottom, and to enable vessels to visualize that gear."

The working group worked towards addressing TOR 6 at the July 17, 2024 and September 3, 2024 meetings by discussing potential regulatory changes including regulations with specific gear standards that could be implemented to allow for the use of alternative gear marking technologies (i.e., on-demand fishing gear). GARFO staff provided a draft strawman document including example gear marking language to help prompt discussion at these ODWG meetings. The question of functional equivalence of a buoy has also risen in the alternative gear-marking framework development process. The ODWG has received updates on this action as it is developed.

5.0 ODWG Recommendations for Reducing Gear Interactions between On-Demand Gear Used in the Northeast Lobster/Jonah Crab Fishery and Other Types of Fishing Gear

The ODWG has developed recommendations for the Council on reducing gear interactions between on-demand gear used in the Northeast lobster and Jonah crab fisheries and other types of fishing gear, including the fixed gear, mobile gear, and recreational/charter fleets.

The following consensus statements were developed at the July 23, 2025 ODWG meeting. These consensus statements are considered **draft** and will be discussed again at the August 26th meeting.

Consensus Statement 1: The ODWG is not supportive of implementing a new pre-trip notification for the purposes of reducing gear conflict at this time.

Discussion: A pre-trip notification specific to notifying vessels of on-demand gear presence may not be practical for the scallop fishery. Scallop vessels already must complete pre-trip notifications to access various areas, and adding another notification could restrict/overly complicate fishing activity. It also may not add much of a benefit if there is a real-time system providing gear locations. Similarly, groundfish vessels must complete a pre-trip notification for certain areas, and can travel distances within the Gulf of Maine and Georges Bank on a given trip. Adding another pre-trip notification for on-demand gear might limit the areas vessels could fish in on a given trip. Recreational fishing vessels do not have pre-trip notification or Vessel Monitoring System (VMS) requirements, so using a pre-trip notification or geofence to alert vessels to on-demand gear presence would not be practical for this sector.

Consensus Statement 2: At this time, the ODWG is not supportive of developing regulations that would replace (codify?) existing gentlemen's agreements. This would allow fisheries to continue to operate as they have been with gentlemen's agreements.

Discussion: Some vessels coming from other areas to fish (i.e., from southern points to northern fishing grounds) may not be aware of existing gentlemen's agreements, which have historically prevented gear conflict between mobile and fixed gear fleets. Generally, vessels fishing in new areas will reach out to fishermen in those areas to understand existing agreements. Existing gentlemen's agreements have worked well, evolving organically over time as needed, and some working group members were hesitant to change this process. At this point, industry is capable of handling the development and use of

gentlemen's agreements without adding a regulatory component. Formalizing these agreements in regulations may limit their ability to be flexible and evolve over time as needed. Gentlemen's agreements may work as a tool for reducing gear conflict in discrete areas, but may be less practical if on-demand gear use was more widespread. On-demand gear also does not change how gear is fished, but rather how the gear is marked, so current agreements should still be effective. Finally, the NEFMC gear conflict amendment set up a system where if gentlemen's agreements are no longer working, the Council could follow the defined process to address gear conflicts through other strategies.

Consensus Statement 3: The ODWG recommends the use of a universal (digital?) gear marking and detection system (that would display on-demand gear location from all manufacturers?) to address on-demand fishing gear conflict.

Discussion: "Universal gear marking" in this case would be defined as a system where vessels can see gear from multiple manufacturers on a single system. The working group and members of the public discussed some wordsmithing at the July 23rd meeting to clarify the definitions and intention of the terms used (universal gear marking and detection).

The working group has had some discussion regarding the distance of visibility available on these platforms. While the 5-mile window currently being tested by the Northeast Fisheries Science Center Gear Research Team seems to be effective, there are some pros and cons to making this window larger or smaller. The working group has also emphasized the importance of having real-time or close to real-time data to reduce the potential for gear conflicts.

[Discussion on costs associated with satellite connectivity? Comments/discussion on data sharing options?]