

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Part 80 of the Commission’s Rules and the)	WT Docket No. 21-230
Use of the Automatic Identification System)	
for Devices that Can Be Used to Mark)	
Fishing Equipment)	

REPLY COMMENTS OF THE LAND MOBILE COMMUNICATIONS COUNCIL

I. Introduction.

The Land Mobile Communications Council (“LMCC”)¹ submits these reply comments to oppose the allocation of the 160.8875-160.9125 MHz frequencies (“160.900 MHz band”) for certain maritime devices that mark fishing equipment.² Critical railroad deployments enjoy quasi-public safety status in the 160.900 MHz band, and there are extensive current and planned railroad uses of the band on a primary basis. The record establishes that the introduction of transmitting maritime devices in the 160.900 MHz band would cause harmful interference to receiving railroad devices in the band. Unlike the 160.900 MHz band, the record reflects that the

¹ The LMCC is a non-profit association of organizations serving public safety, business, industrial, transportation, and private commercial radio users, as well as a diverse group of land mobile service providers and equipment manufacturers. Members include: American Association of State Highway and Transportation Officials; American Automobile Association; American Petroleum Institute; Association of American Railroads (“AAR”); Association of Public-Safety Communications Officials-International, Inc.; Aviation Spectrum Resources, Inc.; Enterprise Wireless Alliance; Forest Industries Telecommunications; Forestry-Conservation Communications Association; Government Wireless Technology & Communications Association; International Association of Fire Chiefs; International Municipal Signal Association; MRFAC, Inc.; Telecommunications Industry Association; The Monitoring Association; Utilities Technology Council; and Wireless Infrastructure Association.

² See generally *Part 80 of the Commission’s Rules and the Use of the Automatic Identification System for Devices that Can Be Used to Mark Fishing Equipment*, Notice of Proposed Rulemaking, WT Docket No. 21-230, FCC 21-69 (rel. June 16, 2021) (“*NPRM*”).

161.975 MHz (“AIS 1”), 162.025 MHz (“AIS 2”), and/or 1900-2000 kHz bands could suffice for devices marking fishing equipment.

II. The 160.900 MHz Band is Inappropriate for Hosting New Devices Marking Fishing Equipment Because of the Harmful Interference Potential to Existing and Future Railroad and Public Safety Deployments.

The *NPRM* asks what frequency bands could support devices that mark fishing equipment, including “those attached to vessels during fishing activities, such as long-lines, trawl nets or drift nets, and those deployed for later retrieval, such as fixed fishing nets, pots, traps or other fishing equipment.”³ The 160.900 MHz band is not a viable option for these devices. The railroads and some public safety entities⁴ have ongoing and safety-related use of this spectrum, and AAR has demonstrated the harmful interference potential that railroad devices would experience if co-frequency maritime devices enter the band.⁵

Critical railroad deployments have primary status in the band.⁶ At least “[f]ive hundred seventy-six (576) of the[] 630 licenses [in the 160.900 MHz band] are held by railroad entities,”⁷ which use the spectrum “for critical voice and data operations, including centralized traffic control operations, crossing services, and other safety-related communications.”⁸ And this tally will only continue increasing. Railroad entities “are actively seeking new authorizations in the band for future applications requiring higher data-transmit rates,” among other things.⁹

³ *NPRM* ¶ 10. *See also NPRM* ¶¶ 8-9.

⁴ At least three public safety licensees operate near the 160.900 MHz band. *See NPRM* ¶¶ 18-19.

⁵ *See generally* Comments of Association of American Railroads, WT Docket No. 21-230 (filed Aug. 6, 2021) (“AAR Comments”).

⁶ *See id.* at 1 and n.2.

⁷ *Id.* at 3.

⁸ *Id.* at 1.

⁹ *Id.* at 3.

AAR has established that inviting fishing equipment markers in the 160.900 MHz band would cause harmful interference to critical co-frequency railroad and public safety communications operations in the United States and Canada.¹⁰ *First*, the technical analysis is telling.¹¹ In one scenario, at only 26 kilometers separation between a railroad receiver and maritime transmitter, railroad radios receiving on 160.905 MHz experience significant desensitization and railroad radios receiving on 160.890 MHz encounter damaging desensitization.¹²

Second, exacerbating this harmful interference potential is surface ducting. This natural phenomenon, a common occurrence in calm seas, “can cause interference over water and in flat coastal land areas[] and can give rise to high signal levels over long distances (more than 500 km over the sea).”¹³ Because freight railroad tracks often run alongside oceans, rivers, lakes, and other waterways,¹⁴ surface ducting may magnify and carry service-degrading signals from nearby transmitting maritime devices over bodies of water into receiving railroad receivers.

Relocating and reprogramming railroad devices is not practicable. Many railroads still employ older radios lacking advanced filtering capabilities.¹⁵ Mandating any radio or frequency swap would not only be “prohibitively expensive” but also would be disruptive to “a

¹⁰ *See id.* at 2-10.

¹¹ *See id.* at 7-9.

¹² *See id.* at 8.

¹³ *Id.* at n.13 (citing Recommendation ITU-R P.452-16, Prediction procedure for the evaluation of interference between stations on the surface of the Earth at frequencies above about 0.1 GHz, at 3 (July 2015)).

¹⁴ *See id.* at 4.

¹⁵ *See id.* at 9.

longstanding regulatory framework that delivers certainty and the necessary protection to primary users of [a] band.”¹⁶

III. The AIS 1, AIS 2, and 1900-2000 kHz Bands Could Be Suitable Options for New Devices Marking Fishing Equipment.

Fishing industry representatives expressed virtually no interest in the 160.900 MHz band. Instead, they overwhelmingly advocated for expanding the AIS 1 and AIS 2 band allocations to include devices marking fishing equipment.¹⁷ Doing so, they explain, would not only increase maritime safety¹⁸ but also help vessels of all sizes circumvent potentially hazardous fishing equipment and large marine animals entangled in vertical lines.¹⁹ In addition, the fishing industry commenters note that the allocation expansion would not disturb or congest existing AIS 1 and AIS 2 channels because fishing equipment deployments occur in low densities.²⁰

¹⁶ *Id.* at 9-10.

¹⁷ *See, e.g.*, Comments of Sablefish and Halibut Pot Association, WT Docket No. 21-230, at 1 (filed July 15, 2021) (“SHPA Comments”); Comments of Fishing Vessel Owners’ Association, WT Docket No. 21-230, at 1-2 (filed June 29, 2021); Comments of Pacific Fishery Management Council, WT Docket No. 21-230, at 1-2 (filed July 14, 2021); Comments of Michael Offerman, WT Docket No. 21-230, at 1 (filed July 7, 2021); Comments of Alaska Longline Fishermen’s Association, WT Docket No. 21-230, at 1-2 (filed July 4, 2021) (“ALFA Comments”); Comments of Southeast Alaska Fishermen’s Alliance, WT Docket No. 21-230, at 1 (filed July 10, 2021); Comments of the Atlantic Red Crab Company, LLC, WT Docket No. 21-230, at 1 (filed Aug. 6, 2021) (“ARCC Comments”).

¹⁸ Most maritime vessels already monitor the AIS 1 and AIS 2 safety bands, not the 160.900 MHz band, for navigation safety and domain awareness. *See* ARCC Comments at 4-5; *see also* SHPA Comments at 1 (“The FCC notice of proposed rulemaking suggested that the fishing fleet might use an alternate spectrum signal that only fishing vessels setting gear can see. This option would negate the most important aspect of using AIS markers, which is to allow vessels to know where fishing gear is set so it can be avoided.”).

¹⁹ *See* ARCC Comments at 4-5.

²⁰ *See* ALFA Comments at 1.

Another feasible frequency option exists. Radio buoys for commercial fishing operations already use the 1900-2000 kHz band on a primary basis on the open sea and the Great Lakes.²¹ As AAR explained, the 1900-2000 kHz band offers greater technical flexibility than the 160.900 MHz band.²² For example, the 1900-2000 kHz band supports higher permissible power levels, higher antenna height above sea level, and better spectrum-use priority than the 160.900 MHz band.²³ Because of the existing, similar maritime uses of the 1900-2000 kHz band and the need to protect existing services in the 160.900 MHz band, the 1900-2000 MHz band is a more appropriate option for new fishing equipment markers.

²¹ See *NPRM* ¶ 11.

²² See generally AAR Comments at 11-12.

²³ See AAR Comments at 11-12 (“In the 1900-2000 kHz band, ‘the output power is limited to 8 watts and the station antenna height is limited to 4.6 meters above sea level for a buoy station, or 6 meters above the mast of the ship for ship installations,’ and operations may occur on a primary basis. In the 160.900 MHz band, however, . . . [t]he ITU-established output power is limited to 100 milliwatts; antenna height may not exceed 1 meter above sea level; and operations may occur only on a secondary basis, which is necessary to protect existing services for public safety and critical railroad operations.”).

IV. Conclusion.

Maintaining the status of railroad deployments in the 160.900 MHz band and protecting current and future licensees from interference remains paramount. Because devices marking fishing equipment can access alternate frequencies, such as AIS 1, AIS 2, and/or 1900-2000 kHz without raising interference concerns, the Commission should prioritize authorizing these bands.

Respectfully submitted,

**LAND MOBILE
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