

 GRANTED* Space Bureau	File # SAT-LOA-20250523-00123
	Call Sign: <u>S3231</u> (or other identifier)
	Grant Date: <u>08/12/2026</u>
	From: <u>See Conditions</u> To: <u>See Conditions</u>
Approved: <u>Carolyn A. Mahoney</u> Acting Division Chief Satellite Programs and Policy Division	
*with conditions	

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 Starfish Space, Inc.
 ICFS File No. SAT-LOA-20250523-00123

ICFS File No(s):	SAT-LOA-20250523-00123 ¹	GRANTED – With Conditions  Space Bureau Satellite Programs and Policy Division
Licensee/Grantee:	Starfish Space, Inc. (Starfish)	
Call Sign:	S3231	
Satellite Name:	Otter 24B	
Orbital Location: (required station- keeping tolerance)	See Scope of Grant.	
Administration:	United States of America	
Scope of Grant:	Authority to construct, deploy, and conduct telemetry, tracking, and command (TT&C) for the Otter 24B during orbit raising, in-orbit testing, transit to and between client spacecraft, ² and during rendezvous, proximity, and docking operations with client spacecraft in and near geosynchronous orbit (GEO).	
Service Area(s):	N/A	
Frequencies:	<u>TT&C and Payload Data</u> 8450-8500 MHz (space-to-Earth) (center frequency of 8490.0 MHz with bandwidths of 2.0 MHz, 200 kHz, 30 kHz, and 10 kHz) 2025-2110 MHz (Earth-to-space) (center frequencies of 2048.5 MHz, 2027.0 MHz, and 2103.0 MHz each with bandwidths of 200 kHz and 10 kHz) <u>Backup TT&C and Payload Data</u> 8025-8400 MHz (space-to-Earth) (center frequency of 8200.0 MHz with bandwidths of 2.0 MHz, 200 kHz, 30 kHz, and 10 kHz)	
Unless otherwise specified herein, operations under this grant must comport with the legal and technical specifications and commitments set forth by the applicant or petitioner and with the Federal Communications Commission's rules not waived herein. This grant is also subject to the following conditions: - Starfish's request for processing under the rules for streamlined licensing of small spacecraft is GRANTED.³ We find that the operations requested in this application meet the criteria listed in section 25.123 of the Commission's rules, 47 CFR § 25.123, for streamlined small spacecraft applicants.⁴ We conclude that Starfish's operations are compatible with existing operations in the requested frequencies and will not materially constrain future space station entrants from using the requested bands. - Starfish's request for waiver of section 25.123(b)(1) of the Commission's rules, 47 CFR § 25.123(b)(1), to allow for processing under the streamlined small spacecraft process, even though the Otter 24B will not be disposed of beyond Earth's orbit, is GRANTED. Otter 24B will be disposed of in the GEO		

¹ See Starfish Space, Inc., ICFS File No. SAT-LOA-20250523-00123 (filed May 23, 2025) (Application). This Application was placed on public notice on August 22, 2025. See *Satellite Licensing Division and Satellite Programs and Policy Division Information, Space Station Applications Accepted for Filing*, Report No. SAT-01942 (rel. Aug. 22, 2025). No comments were filed.

² Starfish refers to the client spacecraft as "Asset #1" and "Asset #2." See Application, Legal Narrative at 9-10. Asset #1 is in an elliptical orbit with a 36,500 apogee (+/- 100 km) and a 35,900 km perigee (+/- 100 km), with an inclination of 3 degrees. *Id.* at 9. Asset #1 will drift west at approximately 4.2 degrees per day during the estimated Otter 24B long-range rendezvous of 100 days. *Id.* Asset #2 is located in non-geostationary orbit (NGSO) with a 10 degree inclination and drifts approximately 1.2 degrees a day. *Id.* at 10.

³ Application, Legal Narrative at 18-19 (specifying compliance with the qualifying criteria in 47 CFR § 25.123(b)).

⁴ 47 CFR § 25.123

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graveyard orbit at an altitude of 36,050 km, which is consistent with the Commission's requirements for end-of-life disposal applicable to operators in and around GSO orbit.⁵ This disposal does not result in a disposal of the Otter 24B via atmospheric reentry, similar to the requirements for small spacecraft. Otter 24B also satisfies all other required elements for small spacecraft processing. Therefore, given these facts and the public interest objectives of the Otter 24B mission, we find the waiver to be in the public interest.⁶

3. Starfish's request for waiver of the U.S. Table of Frequency Allocations (U.S. Table), 47 CFR § 2.106(a), to conduct non-Federal space operations in the 2025-2110 MHz band (Earth-to-space) for command uplink is GRANTED. The U.S. Table includes a Federal allocation for space operations (Earth-to-space), but not a non-Federal allocation.⁷ Starfish has coordinated its planned operations with Federal users of the band and this grant reflects that coordinated outcome. Starfish is authorized for these operations on an unprotected, non-interference basis, and operations pursuant to this authorization must not cause interference to or claim protection from stations operating in the 2025-2110 MHz band in accordance with the U.S. Table, 47 CFR § 2.106(a).
4. Starfish's request for a waiver of the U.S. Table, 47 CFR § 2.106(a), for backup TT&C operations in the 8025-8400 MHz band is GRANTED. We note that the 8025-8400 MHz band is allocated to the Earth-exploration satellite service (EESS) (space-to-Earth), including for non-Federal operations,⁸ and is not allocated for Space Operations Service (SOS) or the Space Research Service (SRS) in either the U.S. Table or internationally. Given that Starfish plans to only use the 8025-8400 MHz band for emergency backup,⁹ and that Starfish plans to operate with low duty cycles and relatively narrow channels in this band, we conclude that grant of waiver to permit these operations is in the public interest. Starfish has demonstrated it can share with non-Federal operators in the band and will coordinate with Federal operators.¹⁰ Starfish is authorized for these operations only as an emergency backup and on an unprotected, non-interference basis, and operations pursuant to this authorization must not cause interference to, nor claim protection from, stations operating in the 8025-8400 MHz band in accordance with the U.S. Table. 47 CFR § 2.106.
5. Starfish's request for waiver of the U.S. Table, 47 CFR § 2.106(a), for operations in the 8450-8500 MHz band is GRANTED, to the extent necessary.¹¹ In the U.S. Table, the 8450-8500 MHz band is allocated, *inter alia*, to the SRS (space-to-Earth) for non-Federal use, in all ITU regions.¹² Starfish indicates that its use of the band will include TT&C functions and mission data communications. Starfish states that it

⁵ See 47 CFR § 25.283(a); Application, Legal Narrative at 11.

⁶ Starfish's requests for limited waiver of sections 25.164 and 25.165 of the Commission's rules, 47 CFR §§ 25.164 and 25.165, are DISMISSED as MOOT. Considering that we approve Starfish's request for streamlined processing under section 25.123, the requests for waiver are not necessary. See Application, Legal Narrative at 22. Starfish's request for waiver of section 25.157 of the Commission's rules, 47 CFR § 25.157, which provides for the processing of "NGSO-like satellite systems" under a modified processing round framework, is similarly DISMISSED as MOOT.

⁷ See 47 CFR § 2.106(a).

⁸ 47 CFR § 2.106(c)(258).

⁹ See Application, Legal Narrative at 26.

¹⁰ See *id.* at 25-26.

¹¹ In a recent Notice of Proposed Rulemaking (NPRM), the Commission tentatively concluded that communications supporting emergent space operations that do not have the primary aim of providing a traditional telecommunications service may justifiably fit within the SRS allocation. *Spectrum Abundance for Weird Space Stuff*, Notice of Proposed Rulemaking, FCC 26-13, SB Docket No. 26-54 at para. 38 (rel. Mar. 5, 2026) (*WSS NPRM*). Until final rules are adopted, we find that it is in the public interest to grant Starfish's waiver of the U.S. Table to the extent necessary.

¹² 47 CFR § 2.106(a).

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will coordinate its operations in the band with both in-band and adjacent band Federal spectrum users.¹³ Starfish is authorized for these operations on an unprotected and non-interference basis, and operations pursuant to this authorization must not cause harmful interference to stations operating in the 8450-8500 MHz band in accordance with the U.S. Table.

6. Starfish's operations must be strictly limited to durations when the space stations referenced within this license are visible to the corresponding earth station locations listed in the Appendix to this grant, noting any additional restrictions within this grant.
7. Starfish must comply with the following conditions for its operations in the 2025-2110 MHz band:
 - a. To the extent possible, Starfish uplink (Earth-to-space) transmissions should use a center frequency of 2048.5 MHz; and
 - b. In the 2025-2110 MHz band, Starfish must not transmit in the Earth-to-space direction with a center frequency of 2027.0 MHz from Paumalu, Hawaii; Accra, Ghana; Cordoba, Argentina; and Portland, Oregon.
8. In the 8025-8400 MHz band, power flux-density levels must not exceed the limits in No. 22.5 and Table 21-4 of the ITU Radio Regulations, must meet the limits/protection criteria in Recommendation ITU-R SA.1157-1, and must follow the guidelines in Recommendation ITU-R SA.1810.
9. Power flux-density levels from operation in the 8450-8500 MHz band must not exceed the limits in Table 21-4 of the ITU Radio Regulations and must meet the limits/protection criteria in Recommendation ITU-R SA.1157-1.
10. All operations under this authorization must not exceed the operational power levels and parameters requested and coordinated with federal agencies, including specified duty cycles.
11. Starfish's request for waiver of Section 25.114(a)(1) of the Commission's rules, 47 CFR § 25.114(a)(1) is GRANTED. As required by the Commission's rules, Starfish submitted a completed Schedule S, which contains certain technical information in a prescribed form. However, Starfish found that it could accurately describe its system in certain respects due to limitations in Schedule S itself and therefore requested waiver.¹⁴ Given that Starfish provided the relevant required information with its application, we find that a waiver of the requirement to complete certain aspects or fields of Schedule S is warranted.
12. Unless extended by the Commission for good cause shown, this authorization will become null and void in the event the Otter 24B is not constructed and launched in accordance with the schedule set forth in section 25.164 of the Commission's rules, as follows:
 - a. In the event that the Otter 24B has not been launched, placed into the assigned orbit, and begun operations in accordance with this grant by **August 12, 2027**,¹⁵ Starfish must post a surety bond in satisfaction of 47 CFR §§ 25.165(a)(1) & (b) no later than **September 12, 2027**, and thereafter maintain on file a surety bond requiring payment in the event of a default in an amount, at minimum, determined according to the formula set forth in 47 CFR § 25.165(a)(1); and
 - b. Starfish must launch, place into the assigned orbit, and operate the Otter 24B in accordance with this grant no later than **August 12, 2032**. 47 CFR § 25.164(b).
13. Upon commencement of operations, Starfish must file a notification within five (5) days certifying to the Commission that the spacecraft has been placed in orbit and indicating whether the operations fully

¹³ See Application, Legal Narrative at 25.

¹⁴ See Application, Legal Narrative at 16-17.

¹⁵ We note that since this Application was processed under the rules for streamlined licensing of small spacecraft, the requirement for Starfish to post a surety bond is deferred by one year following the date of grant in accordance with the grace period adopted in FCC 19-81. See 47 CFR §§ 25.165(a)(1), (b).

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conform to the terms and conditions of this grant. The term of this authorization is 6 years, commencing at 3 a.m. Eastern Time on the date when Starfish notifies the Commission that operation of the Otter 24B is compliant with the license terms and conditions and that the space station has been placed in its authorized orbit and begun operating.

Licensee/grantee is afforded thirty (30) days from the date of release of this action to decline the grant as conditioned. Failure to respond within this period will constitute formal acceptance of the grant as conditioned.

This action is taken pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 CFR § 0.261, and is effective upon release.

Station licenses are subject to the conditions specified in Section 309(h) of the Communications Act of 1934, as amended, 47 U.S.C. § 309(h).

Action Date:	August 12, 2026
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Term Dates	From: See Conditions	To: See Conditions
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Approved:

Carolyn A. Mahoney
Acting Division Chief, Satellite Programs and Policy Division

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Appendix: List of Coordinated Non-Federal Earth Stations

Earth Stations (S-Band uplink and X-Band downlink)

1. Paumalu, Hawaii, USA
2. Cordoba, Argentina
3. Accra, Ghana
4. Mwirire, Rwanda
5. Mingenew, Australia
6. Portland, Oregon, USA
7. Dubbo, Australia