



DEPARTMENT OF THE ARMY
ALASKA DISTRICT, U.S. ARMY CORPS OF ENGINEERS
REGULATORY DIVISION
1046 MARKS ROAD
FORT WAINWRIGHT, ALASKA
99703

May 14, 2026

Regulatory Division
POA-2025-00084

Chris Haddox
GCI Communication Corporation
2550 Denali Street, Suite 1000
Anchorage, Alaska 99503

Dear Mr. Haddox:

This letter is in response to your December 15, 2025, application for a Department of the Army (DA) permit, to discharge fill material in wetlands and waters in order to extend the existing Airraq Fiber Cable Network by installing fiber optics cable starting in Nunapitchuk and extending to Mertarvik, Tununak, Toksook Bay, Alakanuk, Emmonak, and Kotlik using a combination of overland and water routes, underwater jet sled, cable trenching and excavation trenching/backfill, and overhead methods. The route between Nunapitchuk and Mertarvik would be predominately overland (52 miles), combined with a shorter submerged portion approximately 24 miles through Baird Inlet. From Mertarvik, the Project will be routed overland and terminate at Tununak, with a junction on the pole line to Toksook Bay. The route from Tununak to Alakanuk would be entirely marine (215 miles). The termination of the submarine cable will be in Alakanuk via the Yukon River and coming ashore near Dump Dock Road. From Alakanuk to Emmonak, a cable will be installed on poles on an existing power line to Emmonak. There would be feeder lines that deliver connectivity to the premise locations in Tununak, Toksook Bay, and Emmonak. The project would also extend the fiber optics 45 miles from Emmonak to Kotlik, using a predominantly overland route through the Kwikpak Pass and heading north adjacent to the Kotlik River before reaching Kotlik. Airraq Kotlik would also include approximately 5.1 miles.

In total the project would result in 0.071 acre of permanent wetland impacts. Approximatey 2.65 acres of temporary impacts would be in wetlands and waters above high tide line. About 18.30 acres of temporary impacts would be below HTL in the marine waters. The project would cross section 10 waters in the marine environment and bottom lay the cable at the mouth of the Yukon River near communities of Emmonak and Alakanuk. It has been assigned file number POA-2025-00084, which should be referred to in all future correspondence with this office.

The project site starts in Nunapitchuk at Latitude 60.892691 ° N., Longitude 162.466307° W.; and ends in Kotlik at Latitude 63.023500° N., Longitude 163.561800° W.; in western, Alaska.

DA authorization is necessary because your project will involve work in and placement of structures and dredged or fill material into waters of the U.S. under our regulatory jurisdiction.

Based upon the information and plans you provided, we hereby verify that the work described above, which will be performed in accordance with the enclosed plan (sheets 1-27), dated May 07, 2026, is authorized by Nationwide Permit (NWP) No. 57, Electric Utility Line and Telecommunications Activities. Enclosed is a copy of the NWP No. 57, as well as the Regional and General Conditions. These documents are also available on our website at <https://www.poa.usace.army.mil/Missions/Regulatory/Types-of-Permits/Nationwide-Permits/>. The following Regional Conditions apply to your project: Regional Condition C-Activities Involving Trenching; Regional Condition D-Site Revegetation for Projects with Ground Disturbing Activities; Regional Condition F-Maintenance of Hydrology Patterns; and Regional Condition G-Clean Fill Material.

You must comply with all terms and conditions associated with NWP No. 57, as well as with the special conditions listed below:

Special Condition 1: The permittee shall comply with the Federal Endangered Species Act, you must implement all of the mitigation measures identified in the enclosed U.S. Fish and Wildlife Service concurrence letter signed January 14, 2026, including those ascribed to the Corps therein. If you are unable to implement any of these measures, you must immediately notify the Corps, and the U.S. Fish and Wildlife Office, so we may consult as appropriate, prior to initiating the work, in accordance with Federal law.

Special Condition 2: The permittee shall comply with the Federal Endangered Species Act, you must implement all of the mitigation measures identified in the enclosed National Marine Fisheries Service concurrence letter signed January 13, 2026, including those ascribed to the Corps therein. If you are unable to implement any of these measures, you must immediately notify the Corps, and the National Marine Fisheries Service, so we may consult as appropriate, prior to initiating the work, in accordance with Federal law.

Special Condition 3: The National Oceanic and Atmospheric Administration, Office of Coast Survey, Marine Chart Division, National Ocean Service (NOS) has been notified of this authorization. When placing or updating a structure that is in or crosses a navigable waterway, you must alert NOAA's NOS upon completion of the activities authorized by this permit. Your notification of completion must include a drawing which certifies the location and configuration of the completed activity in relation to the mean high water or ordinary high water of the navigable water (a certified permit drawing may

be used) and a copy of the USACE permit. If any structure is removed, a statement certifying the old structure was removed to or below the mudline must be included. The Permittee shall make these notifications to NOS, either in mailed correspondence to Nautical Data Branch, Office of Coast Survey, Attn: John Whiddon, N/CS261 Room 7220, N/CS26, 1315 East-West Highway, Silver Spring, MD 20910-3282 or by electronic mail correspondence, with the requisite documents attached, through ocs.ndb@noaa.gov.

Special Condition 4: Best management practices for preventing the introduction of invasive aquatic species shall be implemented, such as thoroughly washing equipment before deployment on and off site and using native seed mixes on disturbed soils to suppress and compete with invasive species in the seed bank.

Special Condition 5. Following completion of the project, the applicant shall provide to Corps of Engineers by December 31, for three years, a summary report, with narrative, color photos and GPS coordinates of locations, where the project may not meeting 2026 Nationwide Permit (NWP) Regional Conditions C-Activities Involving Trenching, Regional Condition D-Site Revegetation for Projects with Ground Disturbing Activities, and Regional Condition F-Maintenance of Hydrology. Please also describe in the reports any measures proposed or undertaken to correct noncompliance with the 2026 NWP Regional General Conditions, and the 2026 NWP General Conditions. The annual monitoring reports shall be submitted to john.c.sargent@usace.army.mil and regpagemaster@usace.army.mil.

Special Condition 6: Ground disturbing activities shall be performed in months when the ground is frozen sufficiently to minimize disturbance to soil and vegetation.

Further, please note General Condition 30 requires that you submit a signed certification to us once any work and required mitigation are completed. Enclosed is the form for you to complete and return to our office.

Unless this NWP is modified or revoked, it expires on March 15, 2031. If you commence or are under contract to commence this activity before the date that the NWPs are modified or revoked, you will have twelve (12) months from the date of the modification or revocation of the NWPs to complete the activity under the present terms and conditions of these nationwide permits. It is incumbent upon you to remain informed of the changes to the NWPs.

This permit should not be considered as an approval of the design features of any activity authorized or an implication that such construction is considered adequate for any purpose intended. It does not authorize any damages to private property, invasion of private rights, or any infringement of federal, state, or local laws or regulations, including, but not limited to, the Marine Mammal Protection Act.

Please contact me via email at John.C.Sargent@usace.army.mil, by mail at the address above, by phone at (907) 347-1801, or toll free from within Alaska at (800) 478-2712, if you have questions. For more information about the Regulatory Program, please visit our website at www.poa.usace.army.mil/Missions/Regulatory.

Sincerely,

A handwritten signature in cursive script that reads "John C. Sargent".

John Sargent
Project Manager

Enclosures

ENCLOSURE



**US Army Corps of Engineers
Alaska District**

Permit Number: POA-2025-00084

Name of Permittee: Chris Haddox, GCI Communication Corporation

Date of Issuance: May 14, 2026

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to Mr. John Sargent at regpagemaster@usace.army.mil.

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

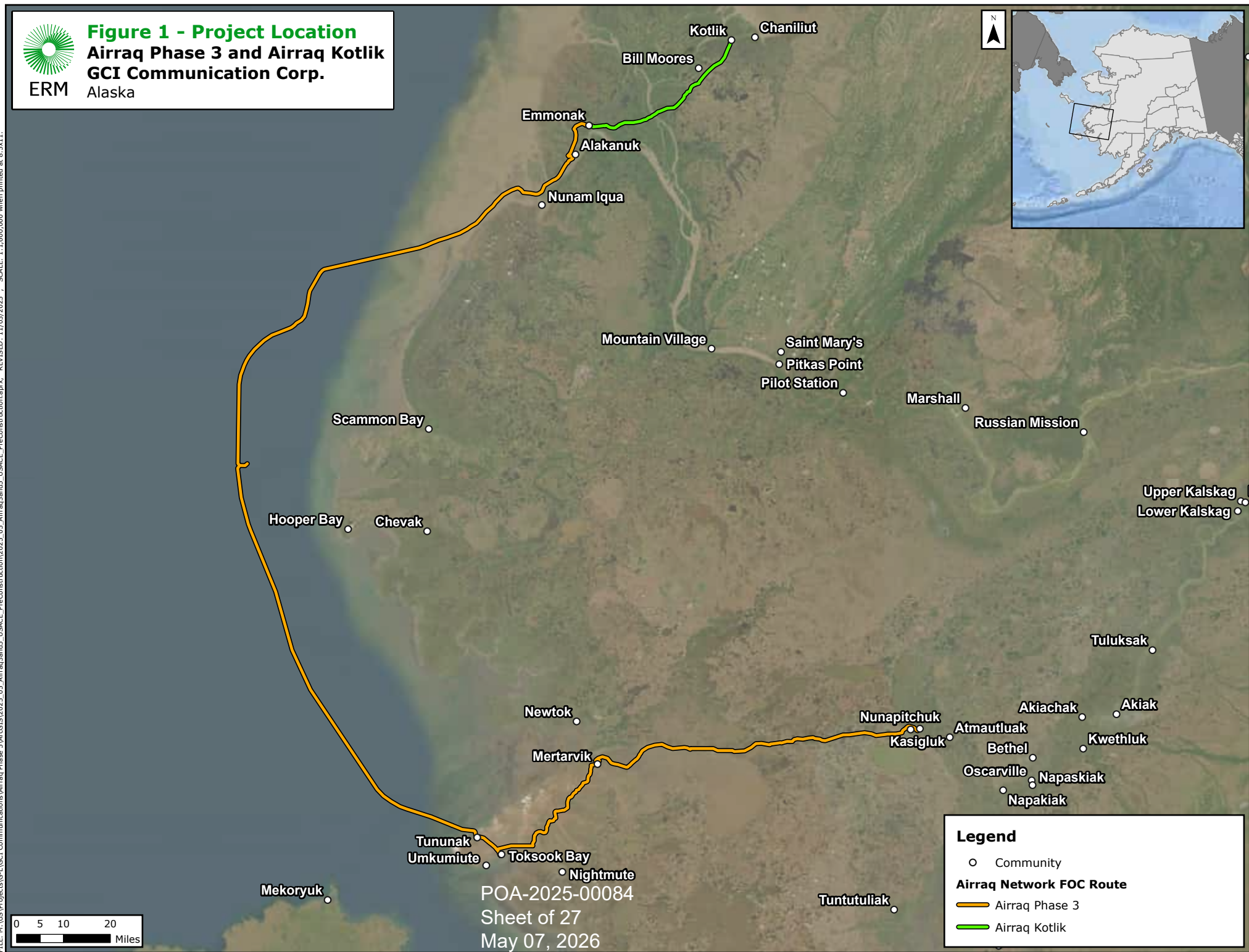
Date



ERM

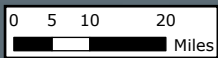
Figure 1 - Project Location
Airraq Phase 3 and Airraq Kotlik
GCI Communication Corp.
Alaska

FILE: M:\US\Projects\G-L\GCI Communications\Airraq Phase 3\ArcGIS\2025_05_Airraq3and5_USACE_PreConstruction\2025_05_Airraq3and5_USACE_PreConstruction.aprx REVISED: 11/03/2025 SCALE: 1:1,600,000 when printed at 8.5x11.

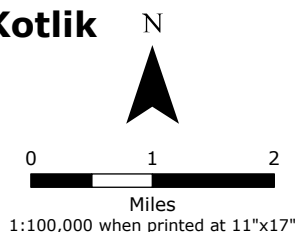


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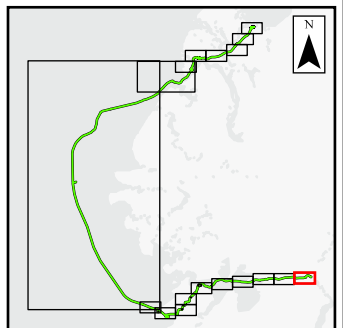
- Community
- Airraq Network FOC Route**
 - Airraq Phase 3
 - Airraq Kotlik



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- Legend**
- | Project Activities | Installation Method |
|--|---|
|  Splice |  Surface Lay |
|  Connection Vault |  Buried - Chain Trencher |

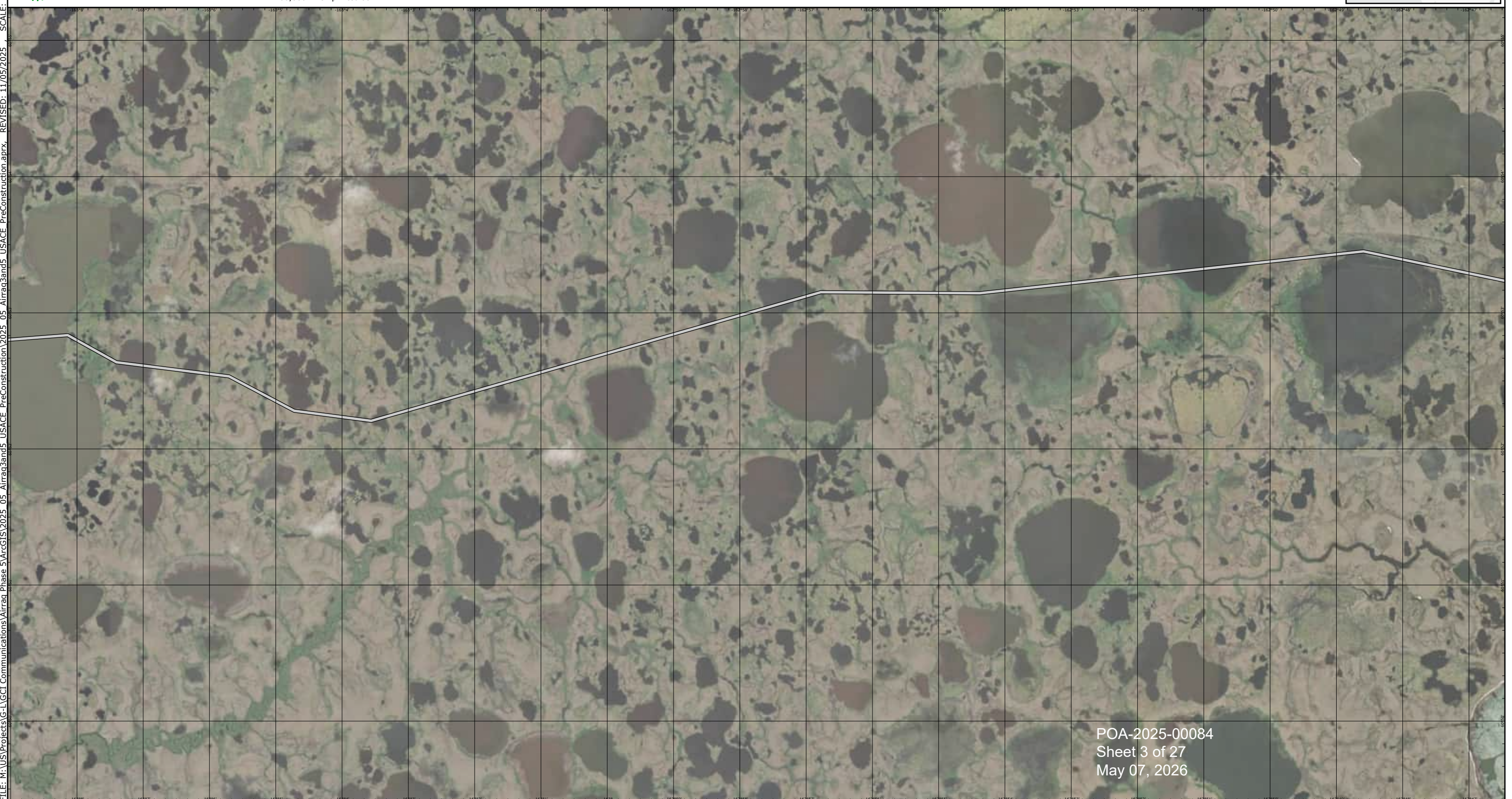
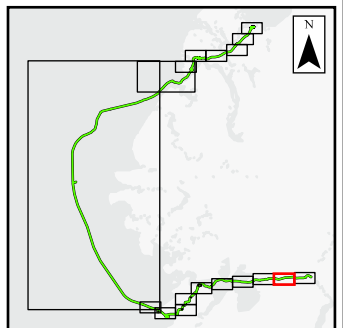
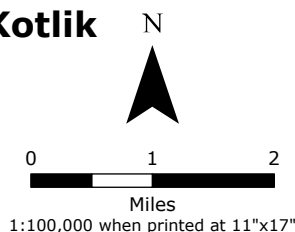


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May 07, 2026

Figure 2b
Overview Map Series
Airraq Phase 3 and Airraq Kotlik
GCI Communication Corp.
Alaska



Legend
Installation Method
— Surface Lay

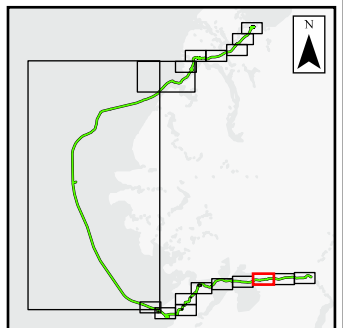
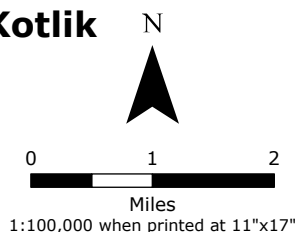


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Figure 2c
Overview Map Series
Airraq Phase 3 and Airraq Kotlik
GCI Communication Corp.
Alaska



Legend
Installation Method
— Surface Lay



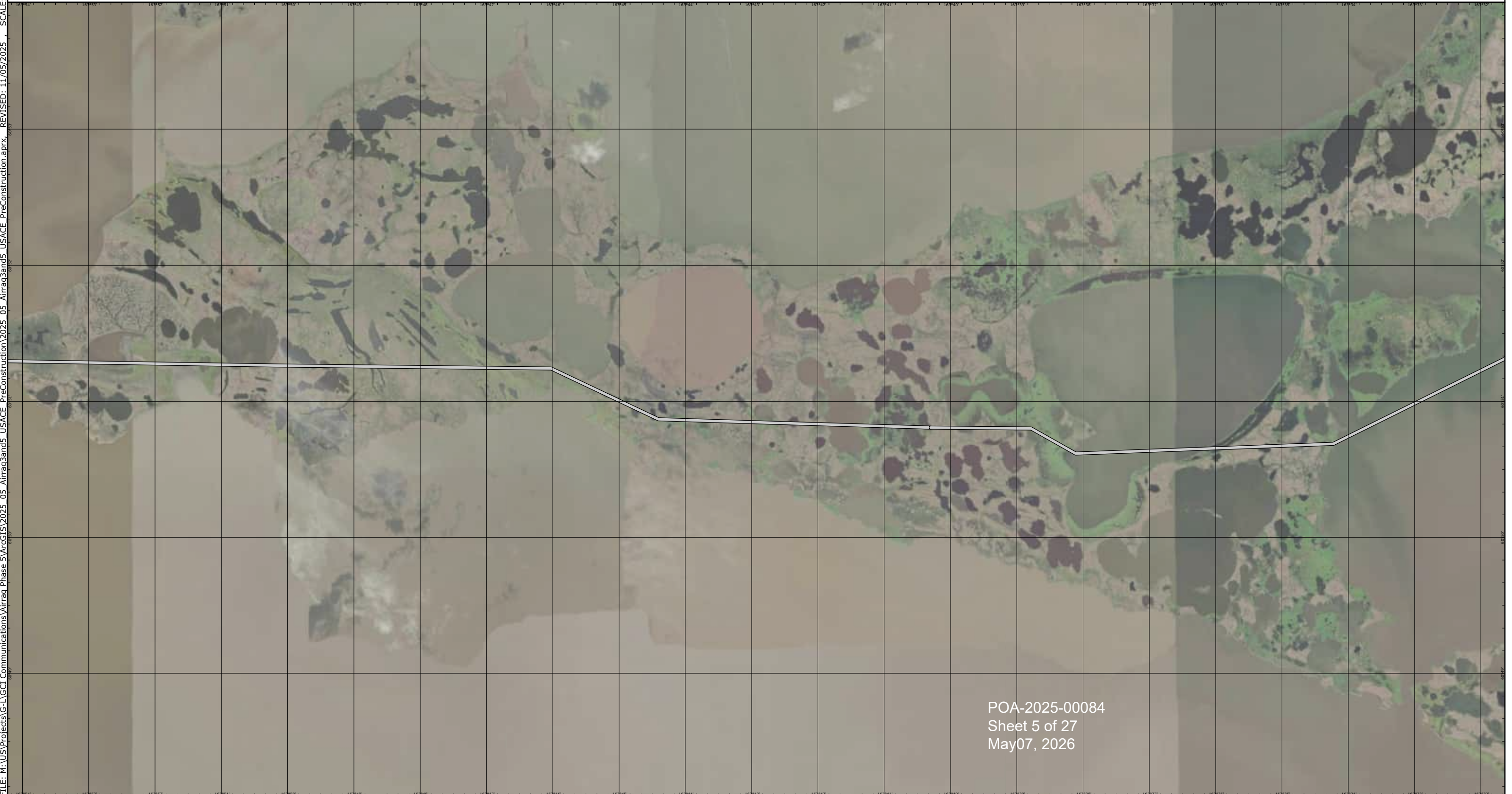
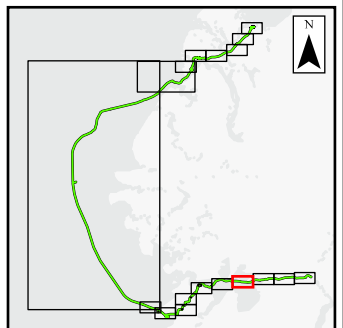
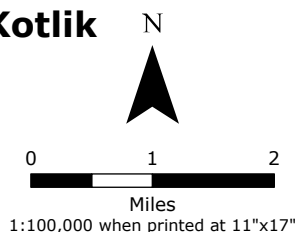
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Figure 2d
Overview Map Series
Airraq Phase 3 and Airraq Kotlik
GCI Communication Corp.
Alaska



Legend
Installation Method
— Surface Lay



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Figure 2e
Overview Map Series
Airraq Phase 3 and Airraq Kotlik
GCI Communication Corp.
Alaska



Legend

Installation Method

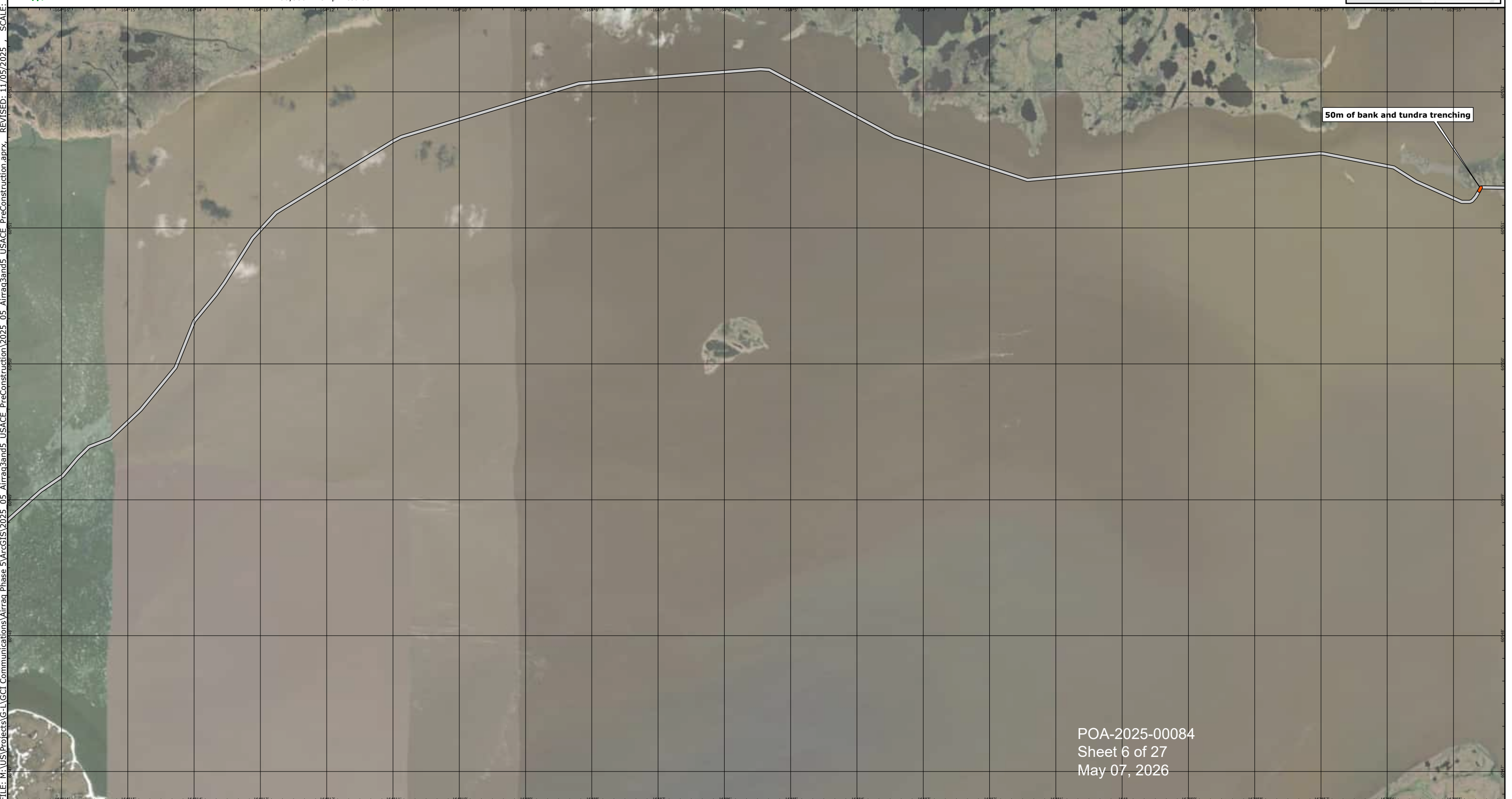
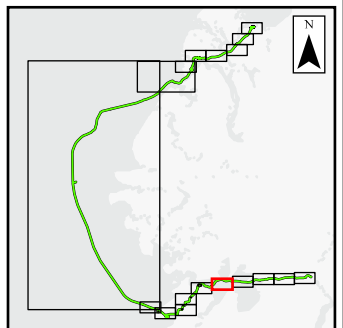
- Buried - Backhoe
- Surface Lay

N

0 1 2

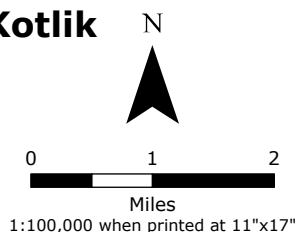
Miles

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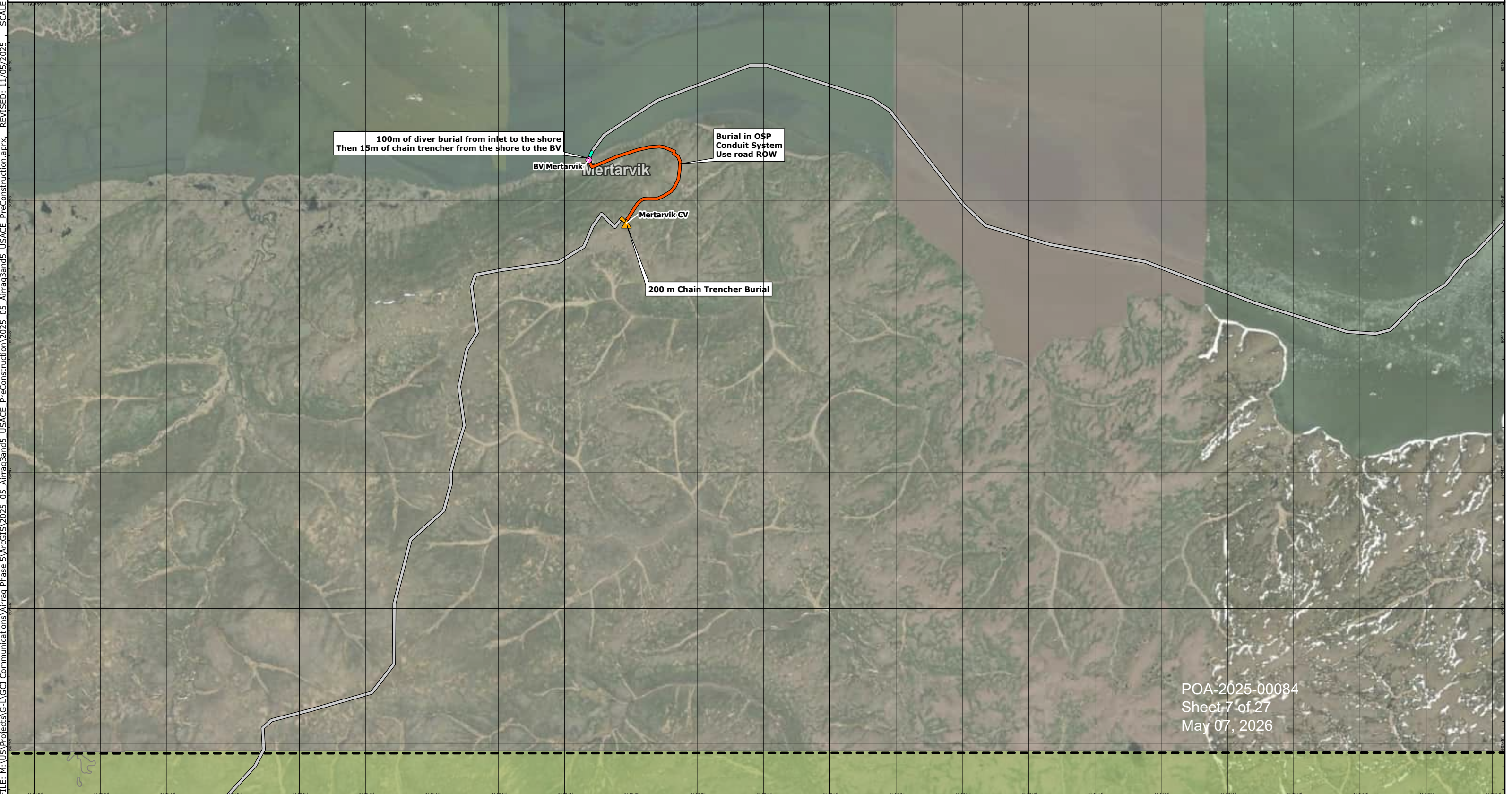
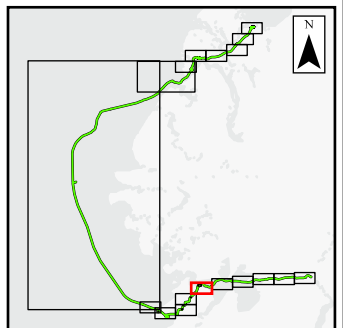


50m of bank and tundra trenching

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- Legend**
- Project Activities**
- BV
 - Connection Vault
- Installation Method**
- Surface Lay
 - Buried - Backhoe
- NWI Mapping (USFWS 2024)**
- Buried - Chain Trencher
 - Buried - Diver Burial
 - Extent of Wetlands Mapping
 - Freshwater Emergent Wetland



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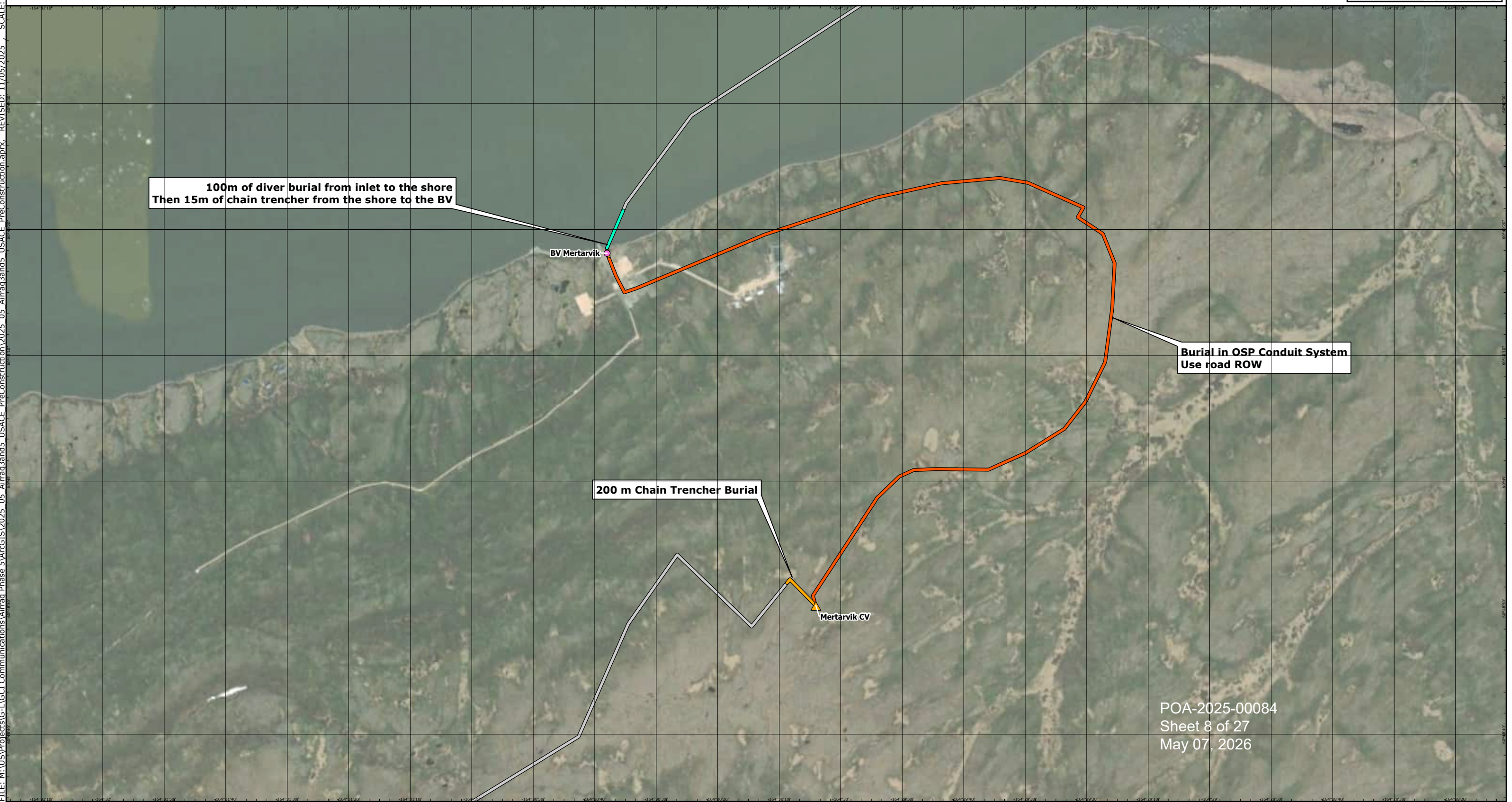
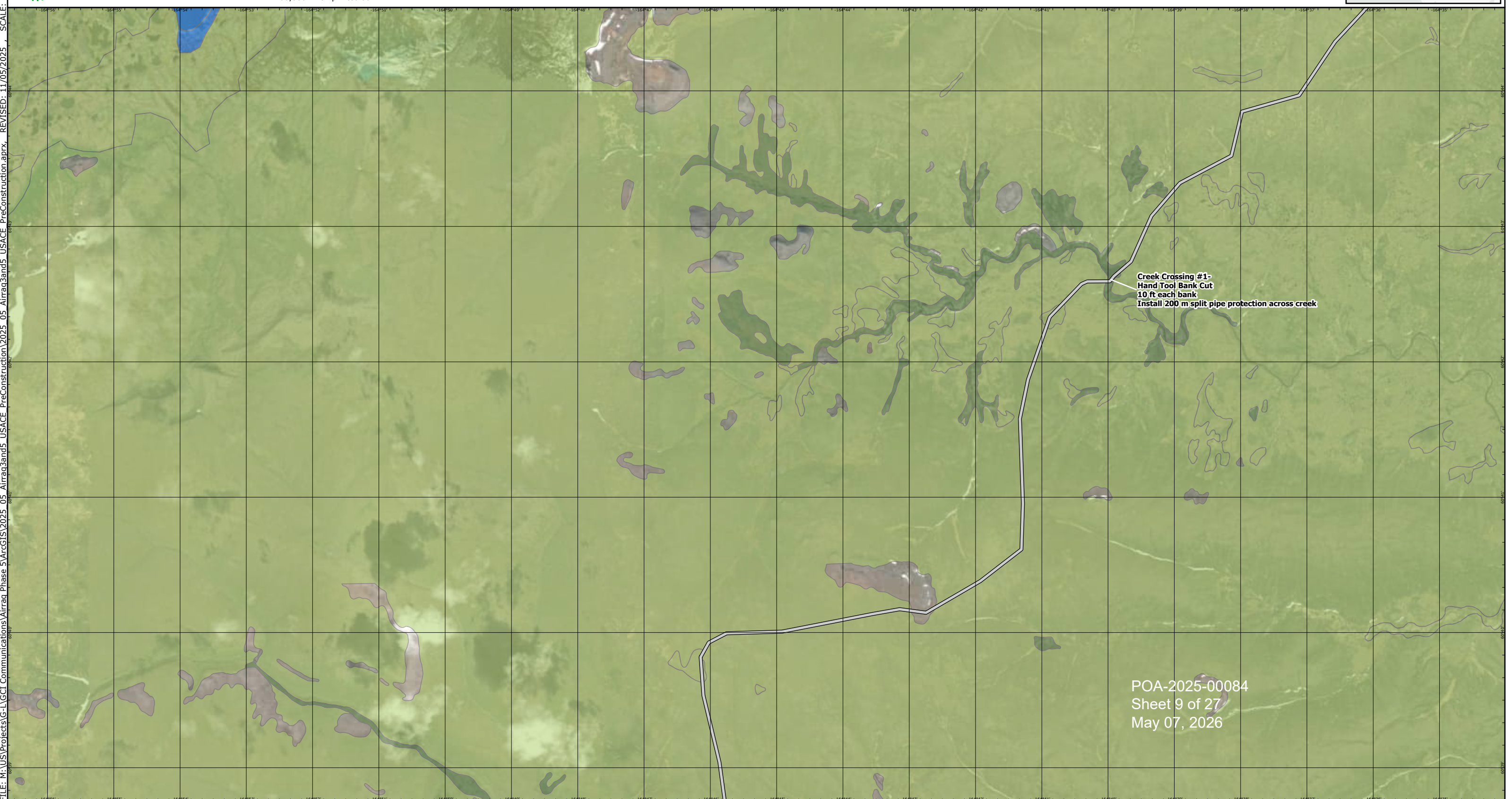
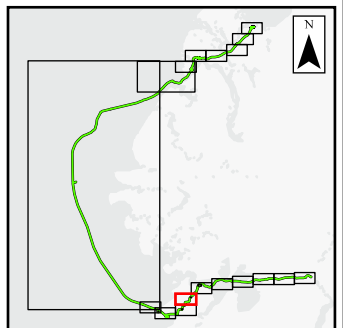
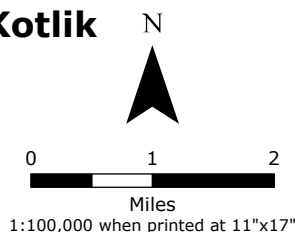


Figure 2h
Overview Map Series
Airraq Phase 3 and Airraq Kotlik
GCI Communication Corp.
Alaska



- Legend**
- Installation Method**
- Surface Lay
- NWI Mapping (USFWS 2024)**
- Freshwater Forested/Shrub Wetland
 - Lake
 - Riverine
 - Freshwater Emergent Wetland



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Legend

▲ Connection Vault

Installation Method

— Surface Lay

— Aerial

- - Extent of Wetlands Mapping

NWI Mapping (USFWS 2024)

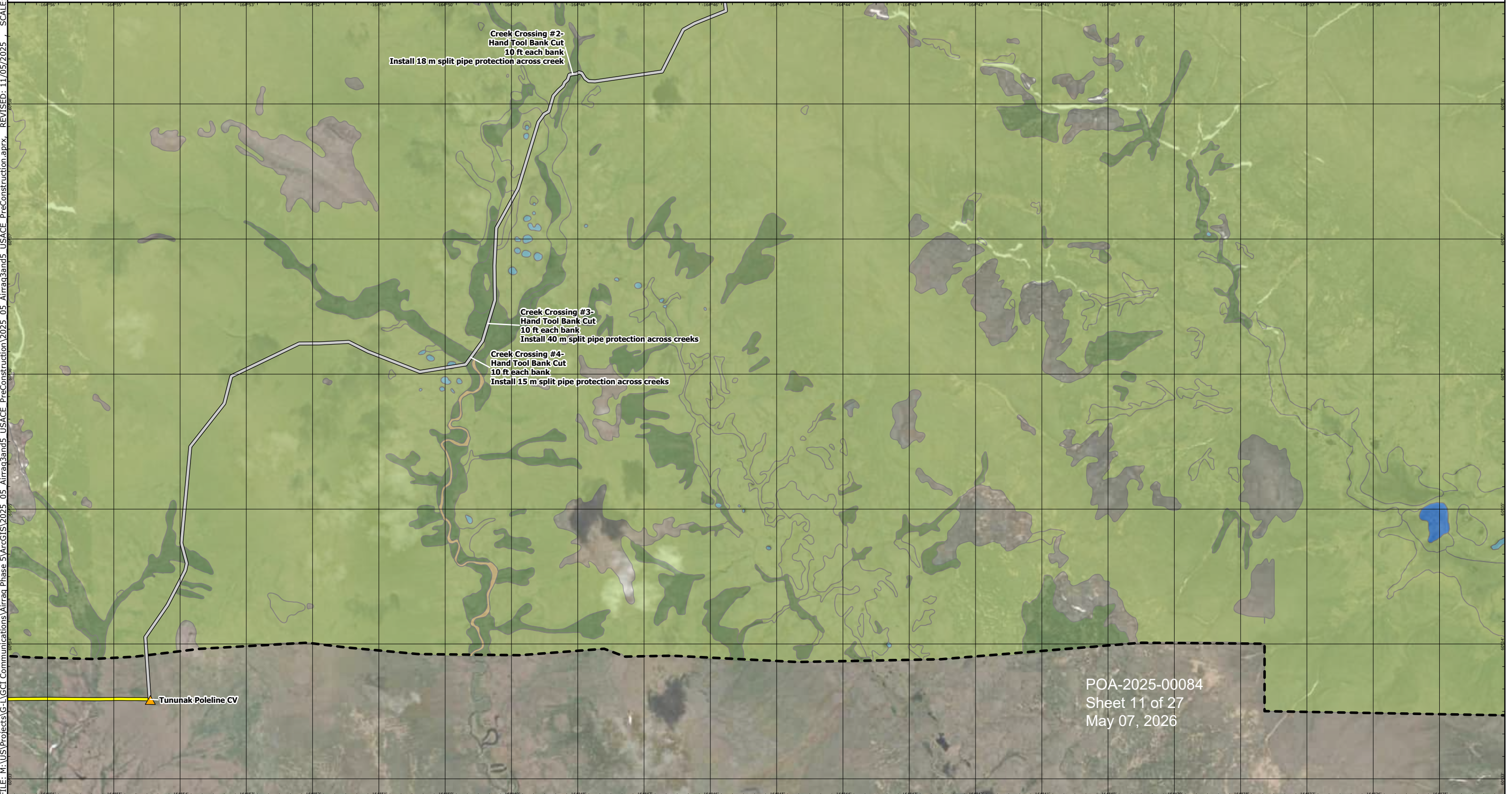
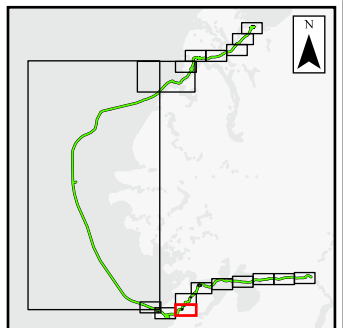
■ Freshwater Emergent Wetland

■ Freshwater Forested/Shrub Wetland

■ Freshwater Pond

■ Lake

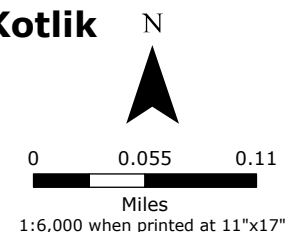
■ Riverine



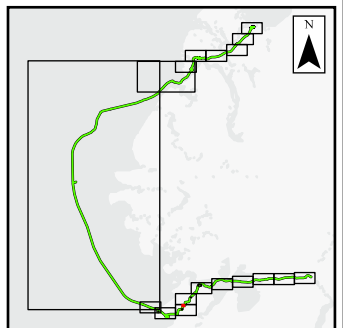
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Figure 2k
Overview Map Series
Airraq Phase 3 and Airraq Kotlik
GCI Communication Corp.
Alaska

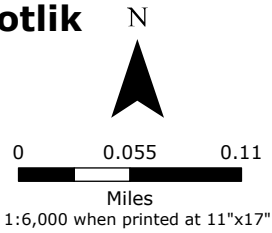


- Legend**
- Installation Method**
- Surface Lay
- NWI Mapping (USFWS 2024)**
- Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland

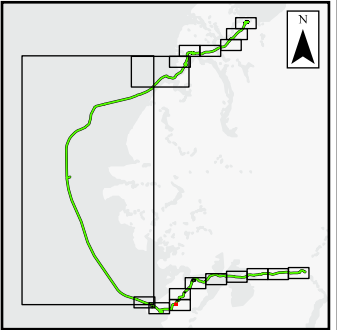


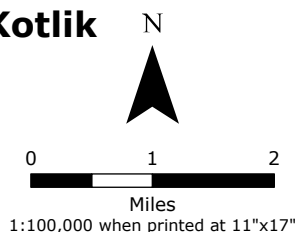
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Figure 21
Overview Map Series
Airraq Phase 3 and Airraq Kotlik
GCI Communication Corp.
Alaska



- Legend**
- Installation Method**
- Surface Lay
- NWI Mapping (USFWS 2024)**
- Freshwater Forested/Shrub Wetland
 - Freshwater Pond
 - Riverine
 - Freshwater Emergent Wetland





- Legend**

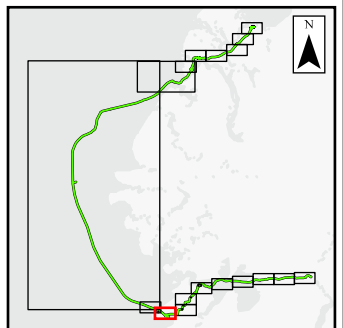
Project Activities

 - Cable Landing Station
 - Splice
 - BV
 - CO
- Installation Method**

 - Surface Lay
 - Aerial
 - Buried - Backhoe
 - Buried - Chain Trencher
 - Buried - Diver Burial
- Extent of Wetlands Mapping**

NWI Mapping (USFWS 2024)

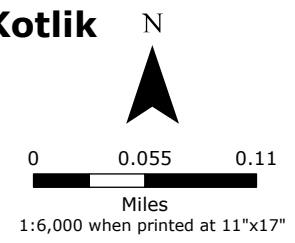
 - Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Riverine



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Figure 2n
Overview Map Series
Airraq Phase 3 and Airraq Kotlik
GCI Communication Corp.
Alaska



Legend

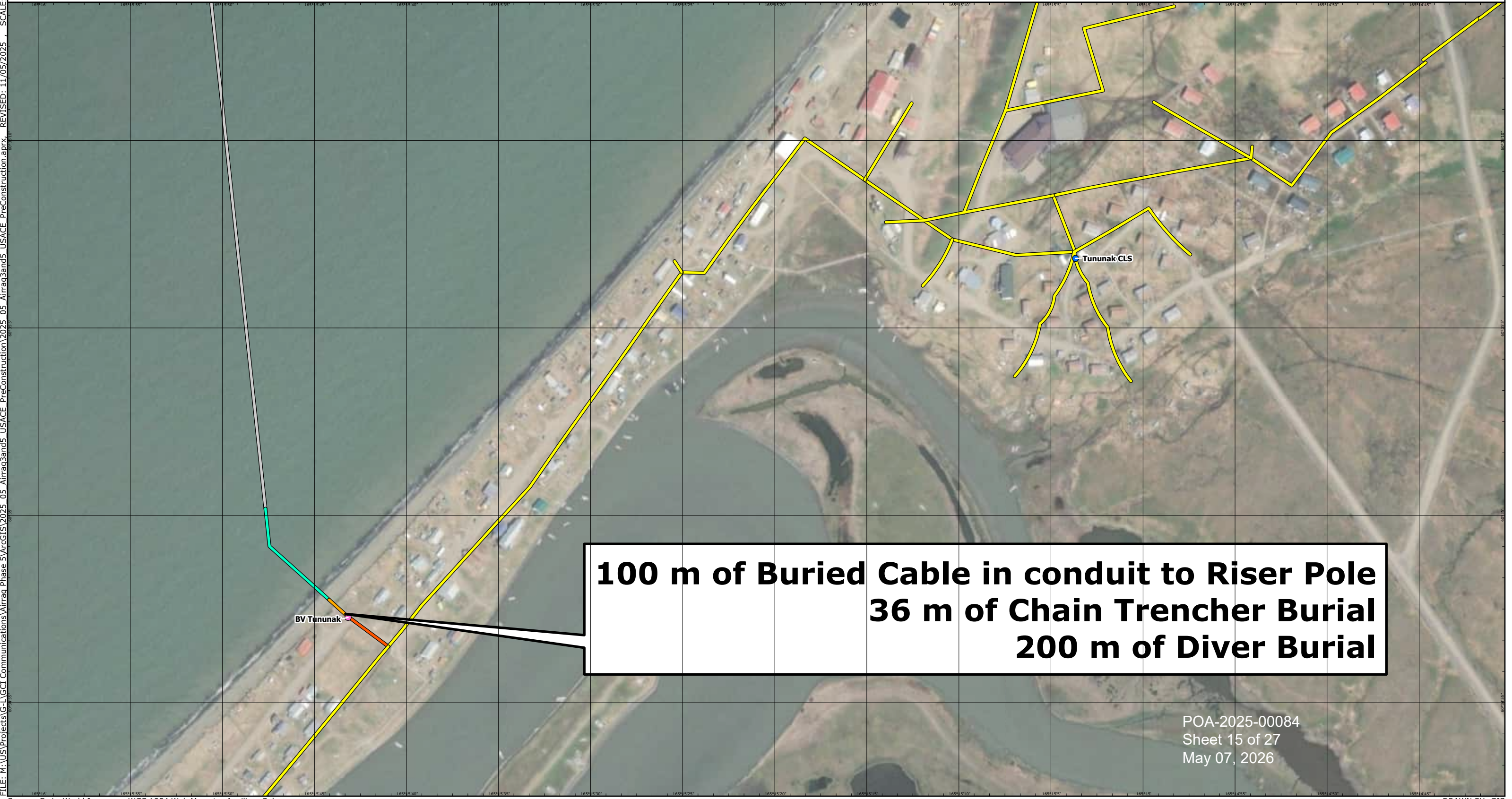
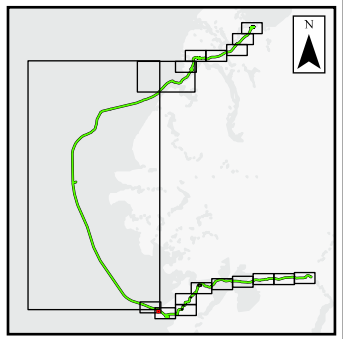
Project Activities

- Cable Landing Station
- BV

Installation Method

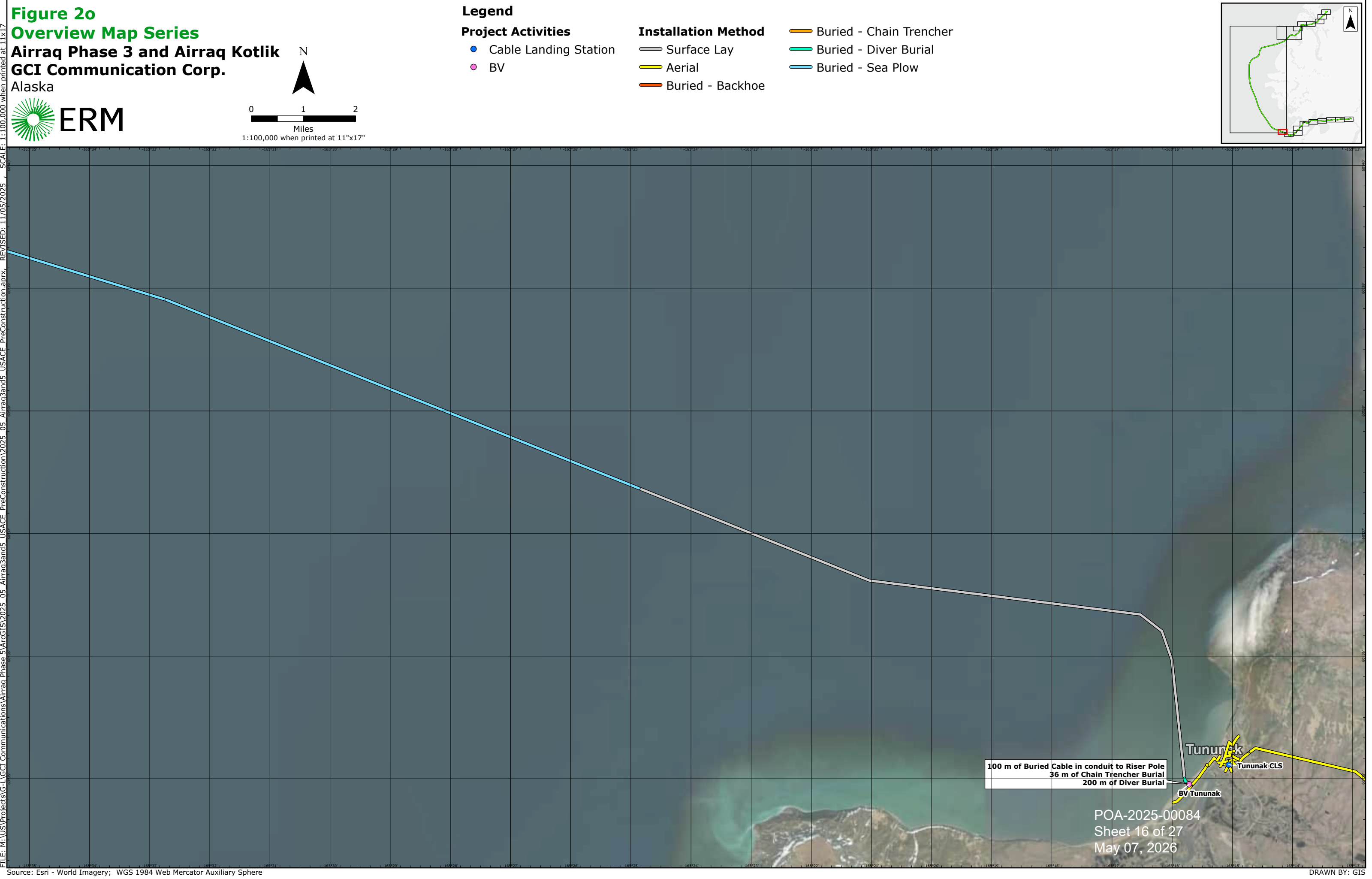
- Surface Lay
- Aerial

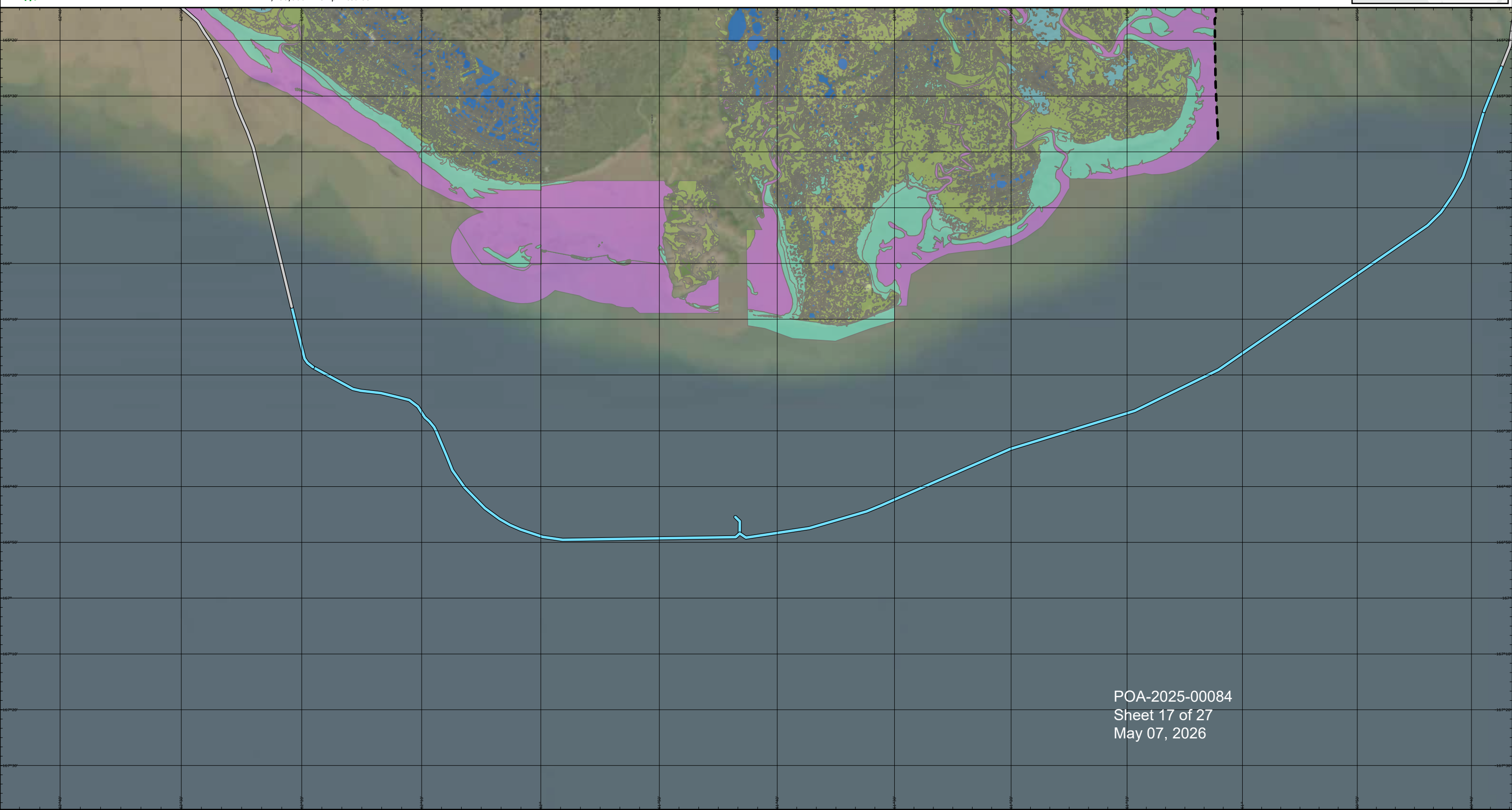
- Buried - Backhoe
- Buried - Chain Trencher
- Buried - Diver Burial

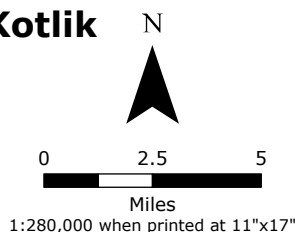


100 m of Buried Cable in conduit to Riser Pole
36 m of Chain Trencher Burial
200 m of Diver Burial

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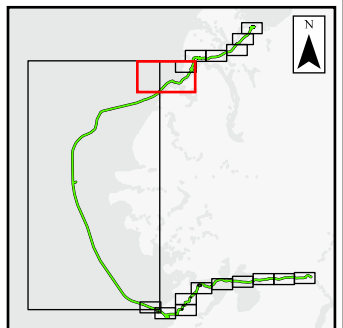




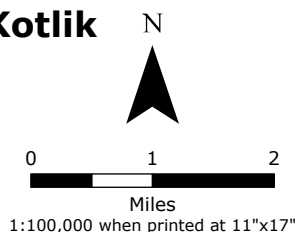


- Legend**
- Project Activities**
- ✕ Splice
 - CO
 - BV
- Installation Method**
- Surface Lay
- NWI Mapping (USFWS 2024)**
- Aerial
 - Buried - Backhoe
 - - Extent of Wetlands Mapping
 - Estuarine and Marine Deepwater
 - Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

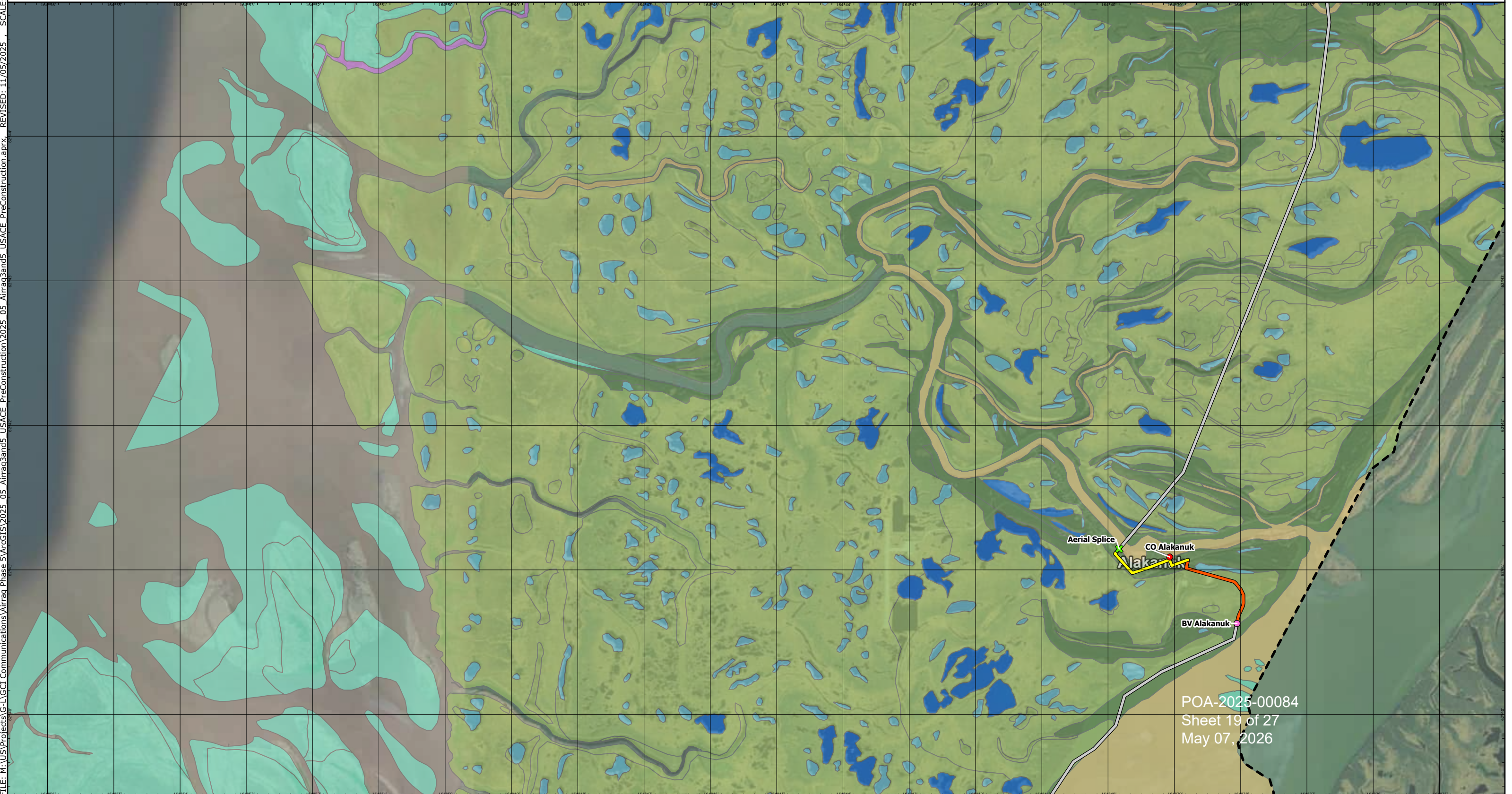
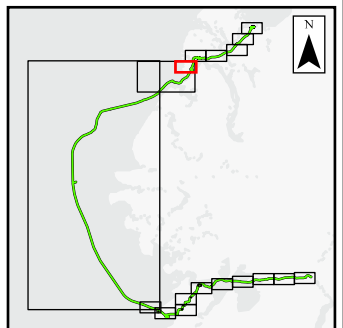


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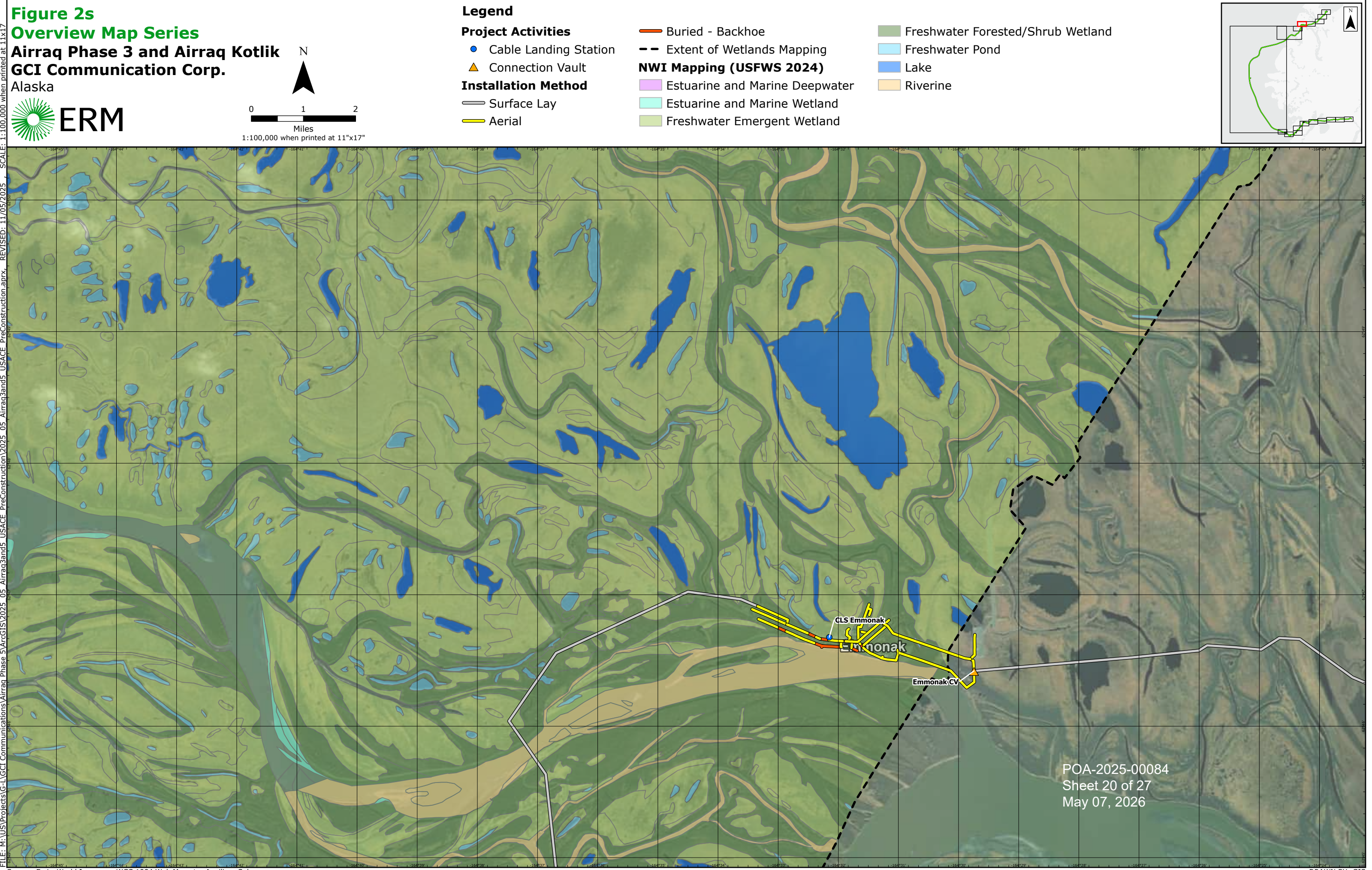


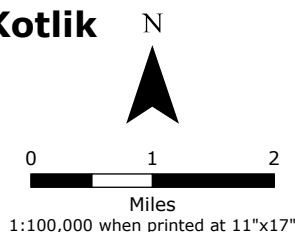
- Legend**
- Project Activities**
- ✕ Splice
 - CO
 - BV
- Installation Method**
- Surface Lay
- NWI Mapping (USFWS 2024)**
- Aerial
 - Buried - Backhoe
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- Freshwater Emergent Wetland
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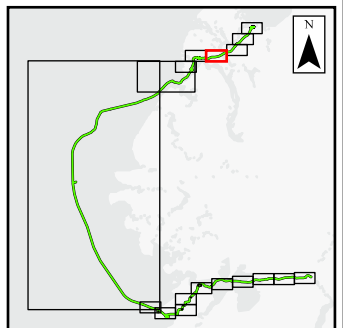


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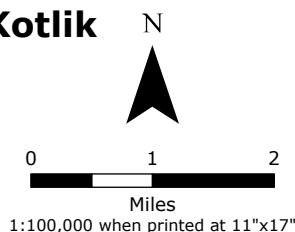


- Legend**
- Installation Method**
- Surface Lay
 - - Extent of Wetlands Mapping
- NWI Mapping (USFWS 2024)**
- Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Freshwater Pond
 - Lake
 - Riverine



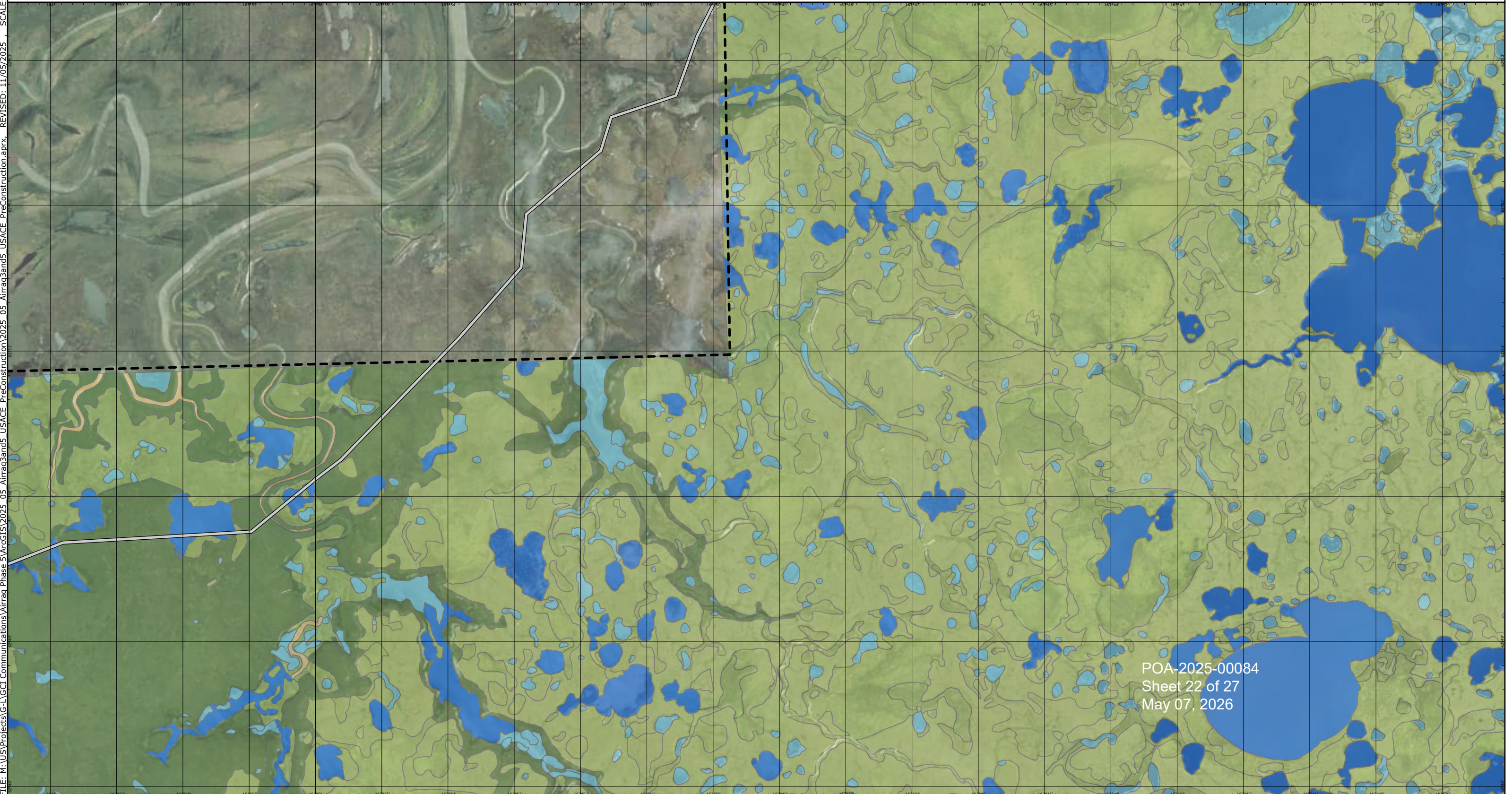
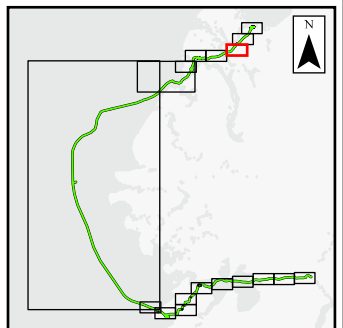
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Figure 2u
Overview Map Series
Airraq Phase 3 and Airraq Kotlik
GCI Communication Corp.
Alaska

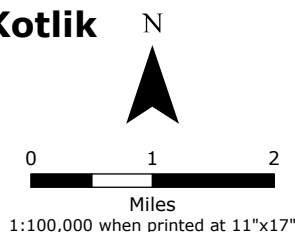


- Legend**
- Installation Method**
- Surface Lay
 - - Extent of Wetlands Mapping
- NWI Mapping (USFWS 2024)**
- Freshwater Emergent Wetland

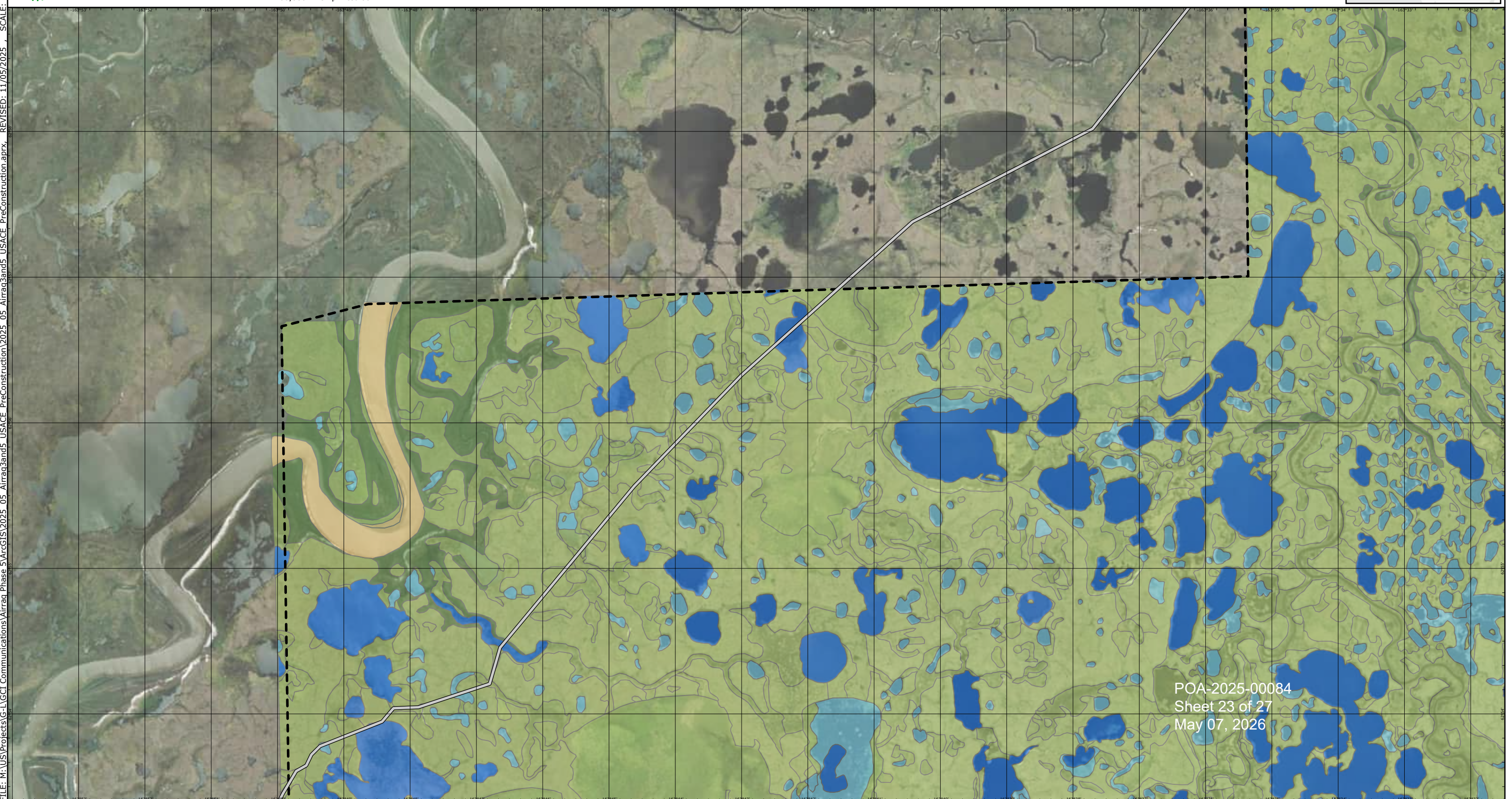
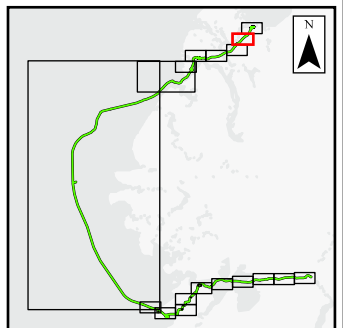
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine



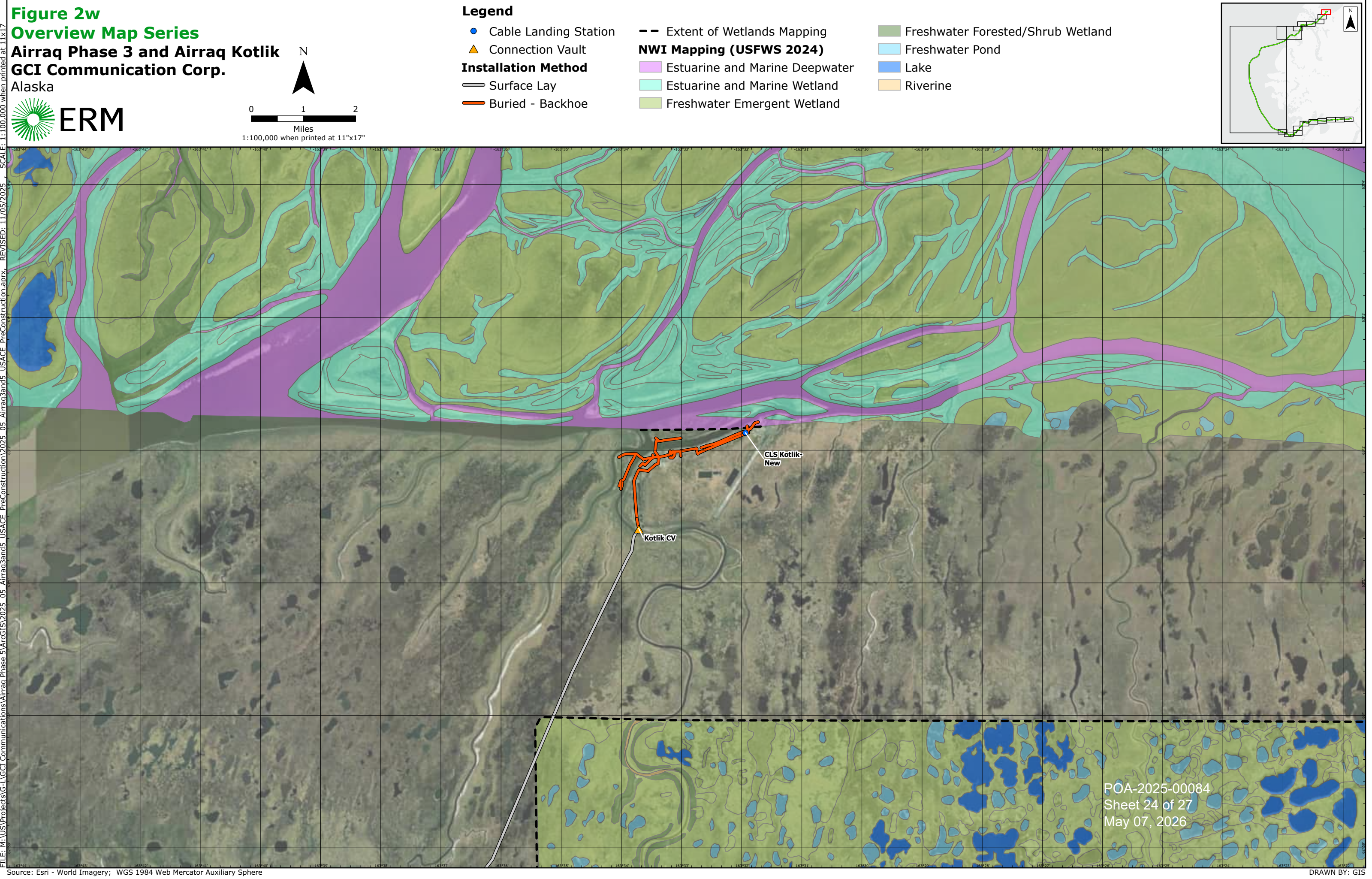
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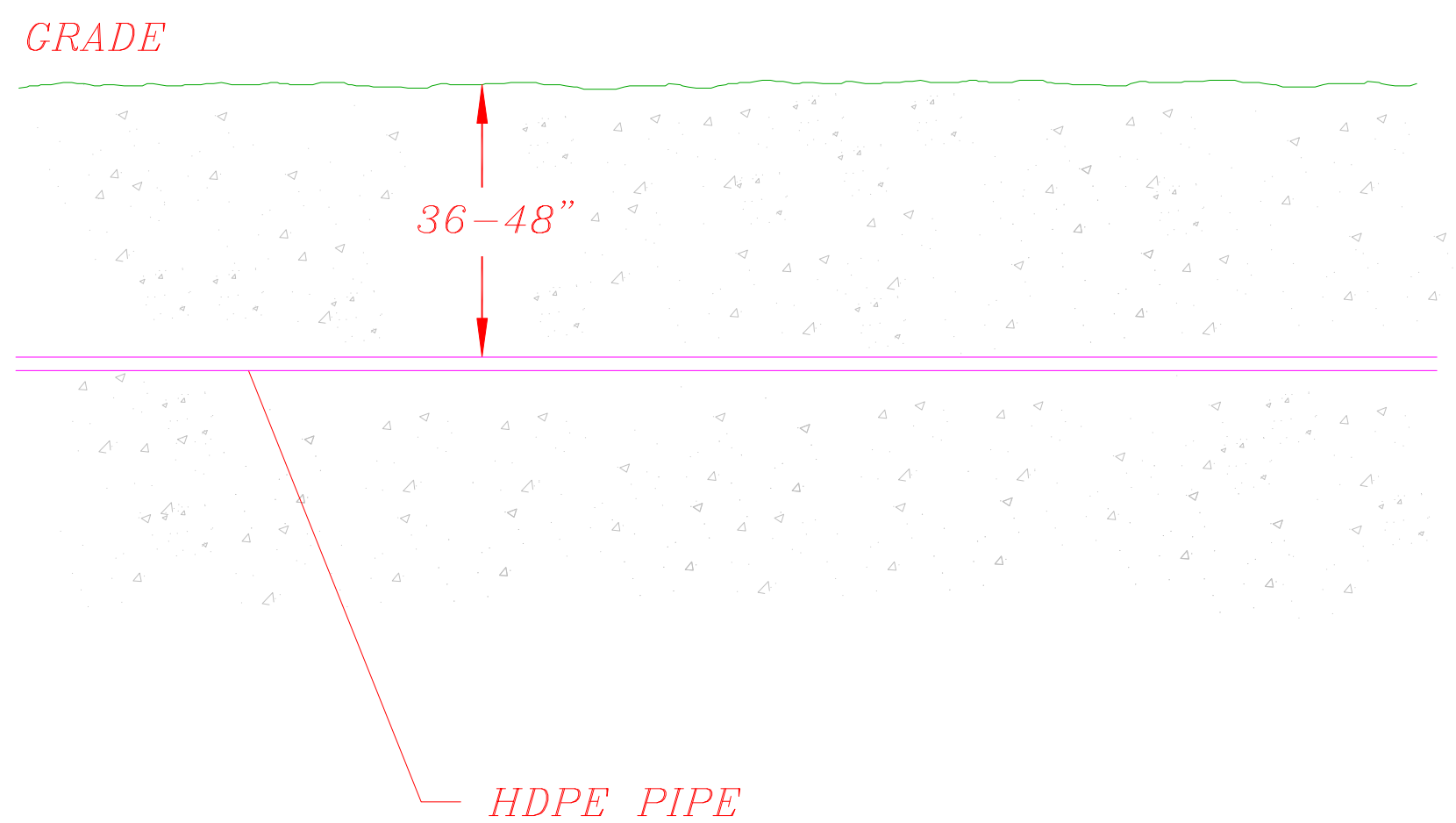
- Legend**
- Installation Method**
- Surface Lay
 - - Extent of Wetlands Mapping
- NWI Mapping (USFWS 2024)**
- Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
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 - Riverine



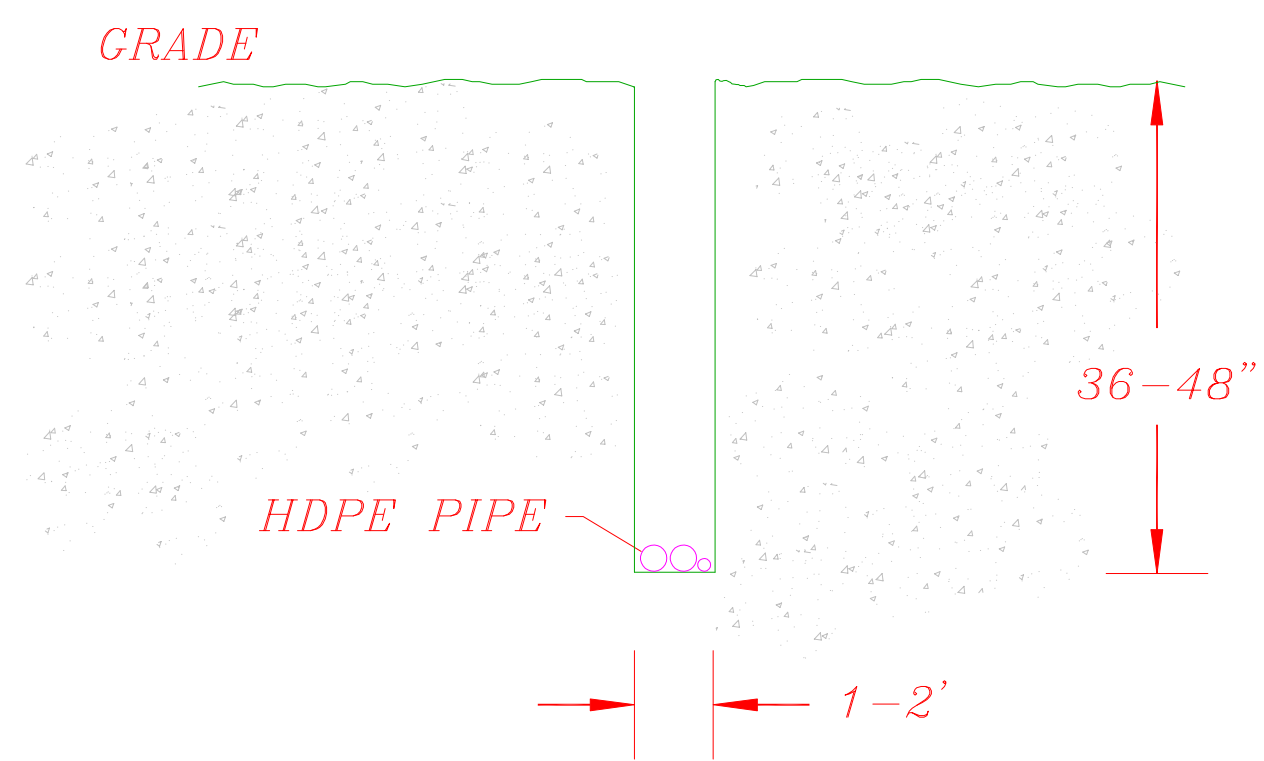
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PROFILE

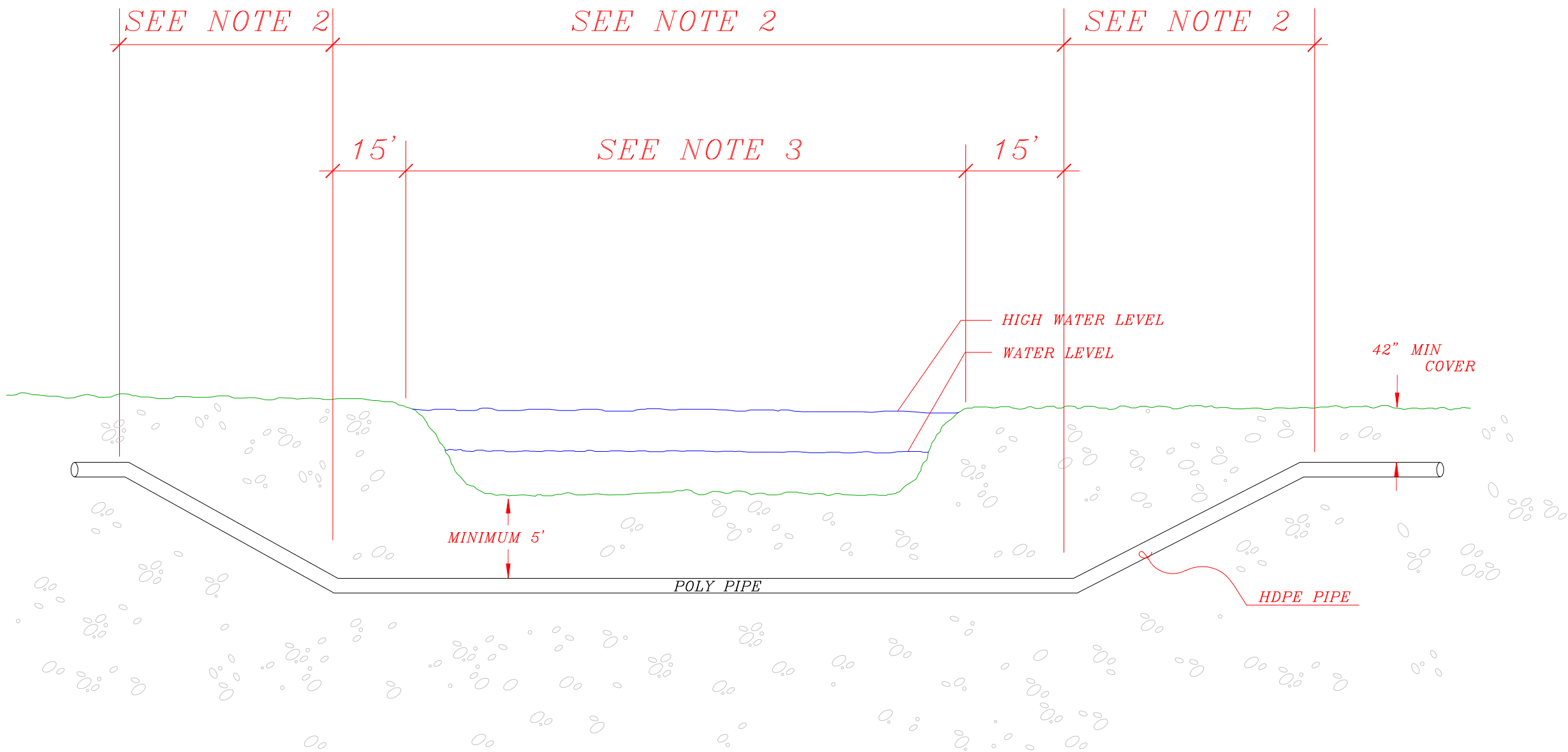


CROSS SECTION

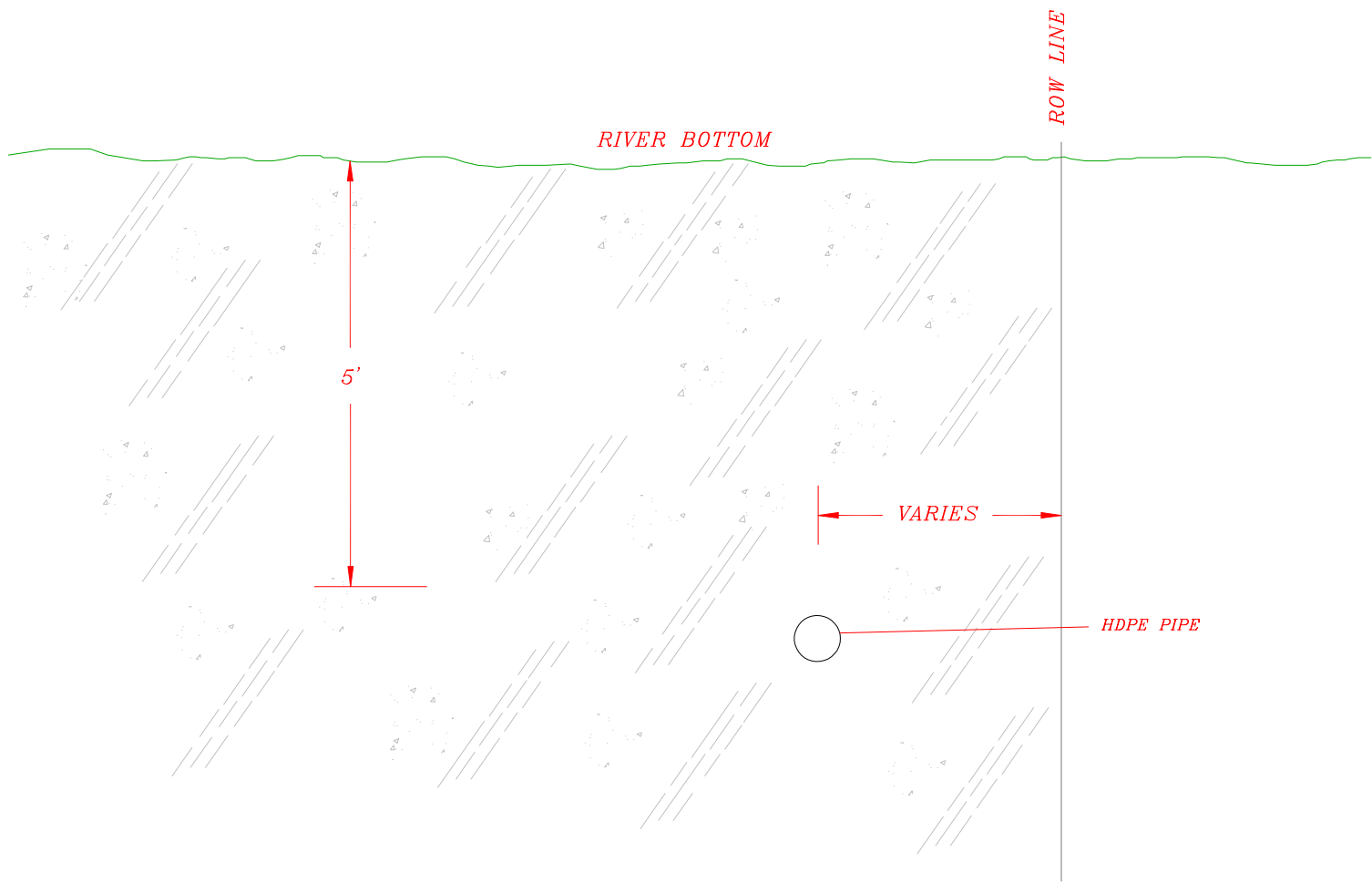


- NOTES:
- 1. CONDUITS WILL BE STUBBED UP AT EACH PEDISTAL LOCATION, WITH PULL ROPE INSTALLED AND THE ENDS CAPPED OR TAPE SEALED.

TYPICAL RIVER
CROSSING



PROFILE

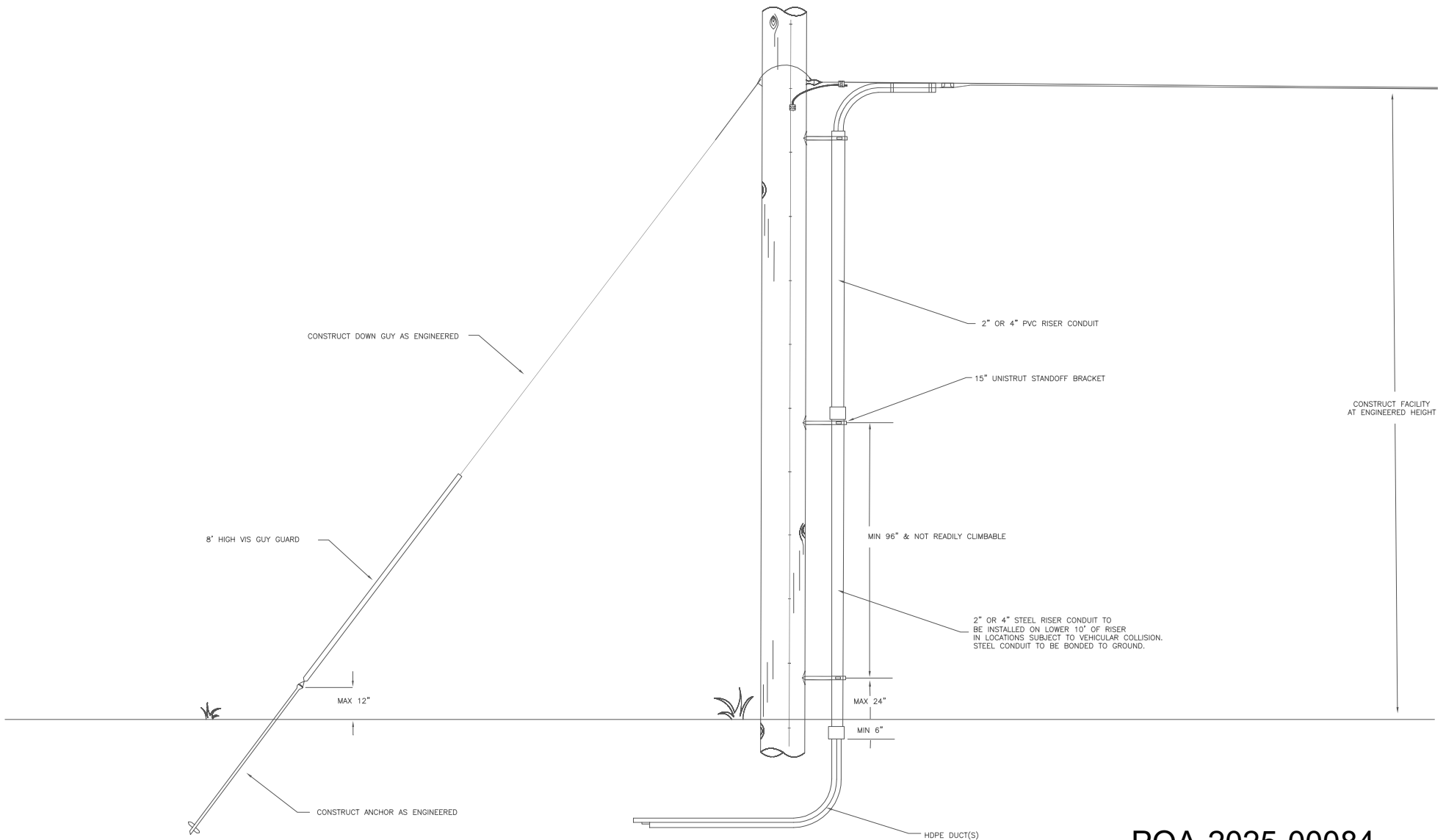


CROSS SECTION

1. Installation would be in accordance with applicable permits and specifications.
2. This distance would vary depending upon terrain.
3. Pipe would be level to stream channel to the minimum depth shown above.
4. Pipe would be installed by directional drilling.

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*TYPICAL STREAM OR
RIVER CROSSING
REQUIREMENTS*



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Nationwide Permit 57. Electric Utility Line and Telecommunications Activities

Activities required for the construction, maintenance, repair, and removal of electric utility lines, telecommunication lines, and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project.

Electric utility lines and telecommunication lines: This NWP authorizes discharges of dredged or fill material into waters of the United States and structures or work in navigable waters for crossings of those waters associated with the construction, maintenance, or repair of electric utility lines and telecommunication lines. There must be no change in pre-construction contours of waters of the United States. An “electric utility line and telecommunication line” is defined as any cable, line, fiber optic line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and internet, radio, and television communication.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a French drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the electric utility line or telecommunication line crossing of each waterbody.

Electric utility line and telecommunications substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with an electric utility line or telecommunication line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for overhead electric utility line or telecommunication line towers, poles, and anchors: This NWP authorizes the construction or maintenance of foundations for overhead electric utility line or telecommunication line towers, poles, and anchors in all waters of the United States, provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of electric utility lines or telecommunication lines, including overhead lines and substations, in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and

complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize electric utility lines or telecommunication lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (see 33 CFR part 322). Electric utility lines or telecommunication lines constructed over section 10 waters and electric utility lines or telecommunication lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP authorizes, to the extent that Department of the Army authorization is required, temporary structures, fills, and work necessary for the remediation of inadvertent returns of drilling fluids to waters of the United States through sub-soil fissures or fractures that might occur during horizontal directional drilling activities conducted for the purpose of installing or replacing electric utility lines or telecommunication lines. These remediation activities must be done as soon as practicable, to restore the affected waterbody. District engineers may add special conditions to this NWP to require a remediation plan for addressing inadvertent returns of drilling fluids to waters of the United States during horizontal directional drilling activities conducted for the purpose of installing or replacing electric utility lines or telecommunication lines.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the electric utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After construction, temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) a section 10 permit is required; or (2) the discharge will result in the loss of greater than 1/10-acre of waters of the United States. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: Where structures or work are authorized in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, the permittee should provide a copy of the 'as-built drawings' and the geographic coordinate system used in the 'as-built drawings' to the National

Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), to inform updates to nautical charts and Coast Pilot corrections. The information should be transmitted via email to ocs.ndb@noaa.gov.

Note 2: For electric utility line or telecommunications activities crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Electric utility line and telecommunications activities must comply with 33 CFR 330.6(d).

Note 3: Electric utility lines or telecommunication lines consisting of aerial electric power transmission lines crossing navigable waters of the United States (which are defined at 33 CFR part 329) must comply with the applicable minimum clearances specified in 33 CFR 322.5(i).

Note 4: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the electric utility line or telecommunication line must be removed upon completion of the work, in accordance with the requirements for temporary fills.

Note 5: This NWP authorizes electric utility line and telecommunication line maintenance and repair activities that do not qualify for the Clean Water Act section 404(f) exemption for maintenance of currently serviceable fills or fill structures.

Note 6: For overhead electric utility lines and telecommunication lines authorized by this NWP, a copy of the PCN and NWP verification will be provided by the Corps to the Department of Defense Siting Clearinghouse, which will evaluate potential effects on military activities.

Note 7: For activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b)(4) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

Note 8: Where structures or work are proposed in navigable waters of the United States, project proponents should ensure they provide the location and dimensions of the proposed structures to the U.S. Coast Guard (USCG) prior to submittal of a Pre-Construction Notification, or prior to beginning construction. The USCG may assess potential navigation-related concerns associated with the location of proposed structures or work, and may inform project proponents of marking and lighting requirements necessary to comply with General Condition 1 (Navigation). For assistance identifying the appropriate USCG District or Sector Waterways Management Staff responsible for the area of the proposed work, contact USCG at CGWWM@uscg.mil.

ALASKA DISTRICT REGIONAL CONDITIONS for the 2026 NATIONWIDE PERMITS (NWP)

The Alaska District Regulatory Office has issued the following Regional Conditions to ensure that activities authorized by NWPs in the Alaska District cause no more than minimal adverse environmental effects, individually and cumulatively. Before the Alaska District will verify an activity under one or more NWPs, the proposed activity must comply with the NWP terms and all applicable General and Regional Conditions.

APPLICABILITY: The following would apply throughout the state of Alaska.

RESTRICTIONS:

REGIONAL CONDITION A – Revoked Permits

The following NWPs are revoked within Alaska:

- 24. Indian Tribe or State Administered Section 404 Programs
- 34. Cranberry Production Activities

REGIONAL CONDITION B – Additional Pre-Construction Notification (PCN) Requirements

1. NWP 13, Bank Stabilization: In addition to the PCN requirements specified by NWP 13, a PCN is required for proposed bank stabilization projects in fresh water when the proposed methods and techniques are not in accordance with the Streambank Revegetation and Protection: A Guide for Alaska Revised 2025 (September 2025) (Guide) or its future revisions. The Guide is available at <http://www.adfg.alaska.gov/index.cfm?adfg=streambankprotection.main>.
2. A PCN is required for any project located within the Municipality of Anchorage that qualifies for NWPs 12, 13, 14, 18, 57, and/or 58.
3. NWP 48: A PCN is required for impacts to greater than 1/2 acre of special aquatic sites (wetlands, mudflats, vegetated shallows, coral reefs, etc.).
4. NWP 12, 57, and 58: A PCN is required for projects located within permafrost soils identified using the appropriate soil survey (<https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>) or other appropriate data (e.g., other geospatial information and/or field gathered data).

REGIONAL CONDITION C – Activities Involving Trenching

Trenches may not be constructed or backfilled in such a manner as to drain waters of the U.S. (e.g., backfilling with extensive gravel layers, creating a French drain effect). Ditch plugs or other methods shall be used to prevent this situation.

Except for material placed as minor trench over-fill or surcharge necessary to offset subsidence or compaction, all excess materials shall be removed to a non-waters of the U.S. location. The backfilled trench shall achieve the pre-construction elevation, within a year of disturbance unless climatic conditions warrant additional time. The additional time must be approved by USACE.

Excavated material temporarily sidecast into wetlands shall be underlain with geotextile, ice pads, or similar material, to allow for removal of the temporary material to the maximum extent practicable.

REGIONAL CONDITION D – Site Revegetation for Projects with Ground Disturbing Activities

Re-vegetation of all disturbed areas within the project site shall begin as soon as site conditions allow and in the same growing season as the disturbance, unless climatic conditions warrant additional time (e.g., too wet or too cold). Topsoil (the outermost layer of soil, usually the top 2 – 8 inches) removed from the construction area shall be separated and used for site rehabilitation. When backfilling, topsoil shall be placed as the top layer to provide a seed bed for regrowth. If topsoil is not available from the project site, local native soil material obtained from an approved site may be used. Species used for seeding and planting shall be certified seed sources free of invasive species and follow this order of preference: 1) species native to the site; 2) species native to the region; 3) species native to the state.

REGIONAL CONDITION E – Delineation of Project Footprint

Prior to commencement of construction activities within waters of the U.S., the permittee shall clearly identify the permitted limits of disturbance at the project site with highly visible markers (e.g. construction fencing, flagging, silt barriers, coir logs, etc.). The permittee shall properly maintain such identification until construction is complete and the soils have been stabilized. The permittee is prohibited from conducting any unauthorized USACE-regulated activity outside of the permitted limits of disturbance (as shown on the permit drawings).

REGIONAL CONDITION F – Maintenance of Hydrology Patterns

Natural drainage patterns shall be maintained using appropriate methods. Excessive ponding or drying adjacent to fill areas shall indicate non-compliance with this condition.

REGIONAL CONDITION G – Clean Fill Material: No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts. Only clean rip rap material, free of exposed rebar, asphalt, plastic, soil, etc., may be used.

REGIONAL CONDITIONS H, I, J, K, and L APPLY TO SPECIFIC NWPs

REGIONAL CONDITION H – NWP 40 Agricultural Activities

The following activities are not authorized by NWP 40: a. Installation, placement, or construction of drain tiles, ditches, or levees; and b. Mechanized land clearing or land leveling in wetlands within 300 feet of an anadromous water (anadromous water is defined by the state of AK see <https://www.adfg.alaska.gov/sf/SARR/AWC/index.cfm?ADFG=main.interactive>).

REGIONAL CONDITION I – NWP 44 Mining Activities

Placer mining activities are excluded from coverage by NWP 44 (Mining Activities). Placer mining may be authorized by Regional General Permit POA-2014-00055-M2 (RGP 8). In Alaska, NWP 44 may only authorize the following activities:

1. Hard rock mining within waters jurisdictional under only Section 404 of the Clean Water Act, not including trenching, drilling, or access road construction.
2. Temporary stockpiling of sand and gravel in waters of the U.S., limited to seasonally dewatered unvegetated sand/gravel bars. Stockpiles shall be completely removed and the area restored to pre-project contours within one year, in advance of seasonal ordinary high water events, or prior to equipment being removed from site, whichever occurs first.

REGIONAL CONDITION J – NWP 48 and 55:

When an Aquatic Farm Lease is required from the Alaska Department of Natural Resources (ADNR) for a new or modified aquatic farm, the applicant must obtain and submit a copy of the ADNR preliminary decision with a Preconstruction Notification to the USACE.

REGIONAL CONDITION K – NWPs 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52:

The proposed NWP activity must not cause the loss of anadromous streambed.

REGIONAL CONDITION L – NWP 6: Trenching or similar temporary exploration activities are limited to 0.02-acre impact per each exploration point. WOTUS impacts exceeding this threshold may indicate the activity is no longer exploratory in nature and could be considered mining and this would require a PCN to the Alaska District for review of a Regional General Permit (RGP) 8 or Standard permit.

Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows, including tidal flows. The activity must not restrict or impede the passage of normal or high flows, including tidal flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance. If mats are used to minimize soil disturbance, the affected areas must be returned to pre-construction elevations, and revegetated as appropriate. In circumstances where the use of mats has caused significant soil compaction, efforts using techniques (e.g., soil reaeration techniques) to break up the compaction should be employed to return the soil to a pre-construction state prior to returning to pre-construction elevations.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Structures and Fills. Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: <http://www.rivers.gov/>.

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which “may affect” a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of “effects of the action” for the purposes of ESA section 7 consultation.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect federally-listed endangered or threatened species (or species proposed for listing) or designated critical

habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have “no effect” on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference has been completed. If the non-federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWP.

(e) Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take” means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal permittee should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.nmfs.noaa.gov/pr/species/esa/> respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties. (a) No activity is authorized under any NWP which may have the potential to cause effects on properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects on any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects on historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activities authorized by NWPs, must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the federal, tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these

NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, because streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the

project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWP, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of

greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. (a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed activity which may result in any discharge from a point source into waters of the United States must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by the certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed activity which may result in any discharge from a point source into waters of the United States in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed activity which may result in any discharge from a point source into waters of the United States is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge into waters of the United States, the permittee must submit a copy of the certification to the district engineer. The discharge into waters of the United States is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied (i.e., by the issuance of a water quality certification or a waiver and completion of the Section 401(a)(2) process).

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the division engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) The total acreage loss of waters of the United States for a single and complete project cannot exceed the acreage limit of the NWP with the highest specified acreage limit when multiple NWPs are used to authorize an activity.

(b) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States for that single and complete project cannot exceed that specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14 (which has an acreage limit of 1/3 acre in tidal waters), with associated bank stabilization authorized by NWP 13 (which does not have a specified acreage limit), the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

(c) If two or more of the NWPs used to authorize the single and complete project have specified acreage limits, the acreage loss of waters of the United States authorized by each of those NWPs cannot exceed the specified acreage limits of each of those NWPs. For example, if a commercial development is constructed under NWP 39 (which has a 1/2-acre limit), and the single and complete project includes the filling of a ditch authorized by NWP 46 (which has a 1-acre limit), the maximum acreage loss of waters of the United States for the construction of the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States caused by the combination of the NWP 39 and NWP 46 activities cannot exceed 1 acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this

nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

(Transferee)

(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The successful completion of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a “USACE project”), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification. (a) *Timing*. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30

day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification:* The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no

more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of waters, wetlands, and other special aquatic sites on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate. For NWP 27 activities that require PCNs because of other general conditions or regional conditions imposed by division engineers, see Note 2 of that NWP;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the compensatory mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, federal permittees must provide

documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the “study river” (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

(c) *Form of Pre-Construction Notification:* The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) *Agency Coordination:* (1) The district engineer will consider any comments from federal and state agencies concerning the proposed activity’s compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity’s adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity’s compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies’ concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a

significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases where the prospective permittee is not a federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

D. District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add activity-specific conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed NWP activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee

should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. However, compensatory mitigation shall not be required for activities authorized by NWP 27 because those activities must result in net increases in aquatic resource functions and services (see the text of NWP 27). The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal when determining whether the net adverse environmental effects of the proposed NWP activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the proposed activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed NWP activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN review period (unless additional time is required to comply with general conditions 16, 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

E. Further Information

1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).



United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Southern Alaska Fish and Wildlife Field Office
4700 BLM Road
Anchorage, Alaska 99507



In Reply Refer to:
FWS/R7/FES/SAFWFO

Genevieve Rozhon
Principal Consultant
Environmental Resources Management, Inc.
A980 9th Street, Suite 750
Sacramento, California 95814

Subject: Airraq Network Extension Phase 3 and Kotlik Telecommunications Cable and Fiber-Optic Interconnect, Alaska (Consultation Number 2023-0060288-02)

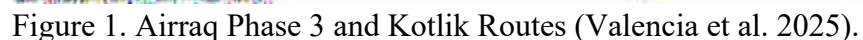
Dear Genevieve Rozhon:

Thank you for your November 7, 2025, letter requesting informal consultation with the U.S. Fish and Wildlife Service (Service), pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq., as amended; ESA). Unicom, Inc. (Unicom), in cooperation with the National Telecommunications and Information Administration (NTIA), and the U.S. Department of Agriculture (USDA) Rural Development Rural Utilities Service proposes to extend existing broadband service within the Airraq Network from Nunapitchuk to the Villages of Mertarvik, Toksook Bay, Tununak, Emmonak, and Kotlik, with routes selected to avoid passing through the Kuskokwim Delta National Wildlife Refuge (NWR). The NTIA has designated Unicom and Environmental Resources Management, Inc. (ERM) as their non-Federal representatives. You have determined the proposed project may affect but is not likely to adversely affect the federally threatened polar bear (*Ursus maritimus*) and its critical habitat, short-tailed albatross (*Phoebastria albatrus*), spectacled eider (*Somateria fischeri*), and Steller's eider (*Polysticta stelleri*).

Consultation History

Expansion of the broadband network in Alaska has been conducted in phases due to timing of individual funding opportunities and sources. The NTIA and Unicom have worked with the Service and different consulting agencies for ESA pre-planning and consultation. The following is a summary of the ESA consultation history for the Airraq Network:

- June 1, 2023: Unicom and HDR Engineering, Inc. consulted with the Service on the Airraq Phase 1 and Phase 2 (Consultation Number 2023-0060288-01).
- February 18, 2025: A pre-planning meeting was held between the Service, Unicom, and ERM to discuss ESA-listed species and potential routes for the next phases.
- November 7, 2025: The ERM requested consultation on the Airraq Phase 3 and Airraq Kotlik routes (Figure 1).



The Airraq Phase 3 and Kotlik routes would extend broadband to coastal communities. Routes include marine and terrestrial installation of approximately 400 miles (643.7 kilometers [km]) of fiber-optic cable (FOC).

- Cable installation is scheduled over consecutive years, 2026 through 2028. Sites may be accessed by marine vessel, small boat, and helicopter. Construction vehicles include rubber wheel backhoes, tracked excavators, utility trucks and trailers, and light tracked vehicles. Routes

include terrestrial landscapes, including landfall, overland, community shore, and fiber to community lines. Overland segments cross wetlands, lakes, ponds, and streams. Overland routes would be installed during winter; if the ground is not frozen, trenching would not take place in tundra. Marine cable would be installed during summer when ice is not present. Marine vessels would operate at speeds up to 2 knots (3.7 km per hour) during installation and up to 10 knots (18.5 km per hour) during transit.

Mitigation Measures

As detailed in the ERM 2025 Biological Assessment (Valencia et al. 2025), Unicom will implement Service-recommended best management practices (BMPs) for broadband projects to minimize impacts (USFWS 2024a) and recommendations to avoid potential effects on ESA-listed species (USFWS 2024b), with key measures in the following bullets:

- The overland cable routes will be laid or trenched in winter when ESA-listed eiders are not present onshore and to avoid or minimize impacts to vegetation and wildlife.
- The project footprint will be minimized by using already disturbed areas or lower-quality habitats whenever possible. Infrastructure will be collocated in existing disturbed areas such as rights-of-way (e.g., use of road corridors for utilities, placing new antennas on existing towers, and locating new structures near existing ones).
- Project materials such as fill, aggregate, and erosion control materials will be carefully managed to prevent the introduction of invasive plants and seeds. Certified weed-free hay and gravel will be used to further reduce the risk of infestation.
- Artificial lighting will be reduced or shielded so it is not projected skyward to reduce attracting birds.
- The cable-laying vessels will not discharge materials into the ocean that may attract seabirds, including short-tailed albatross.
- Vessels will not allow unused or loose tow lines to remain in the water, thereby reducing the potential for entanglement.
- Deck lighting of vessels will be minimized, and lights will be shielded to direct illumination inboard and downward to the extent possible.
- Project activities will adhere to BMPs for minimizing impacts to polar bears and minimizing human-bear conflicts (USFWS 2024b).
- Precautions will be taken to minimize encounters with polar bears, particularly within 25 miles (40 km) of the coastline and farther inland during the denning period (November to April).
- If a sow and cubs of the year are observed, operations will cease within a 1-mile (1.6-km) exclusion zone, and the Service will be notified.
- Bear deterrence plans will be prepared for implementation in the event that a polar bear approaches. All personnel working in polar bear habitat will receive appropriate bear safety training.
- Personnel will be especially vigilant for swimming polar bears while operating vessels. Vessels will avoid traveling in the same direction as a polar bear, will maintain the

maximum distance possible from polar bears, will reduce speed, and will avoid sudden changes in travel direction when visibility is low.

Unicom will also implement the following measures intended to reduce the potential for spills of hazardous materials and implement spill response plans:

- All fuel and hazardous substances used will be handled and stored on site in compliance with State and Federal regulatory guidance. All fuels and chemicals will be stored in appropriate primary containment areas. Secondary containment areas will be designed in compliance with all applicable permits and regulations.
- Fuels and other products will be transported to the action area using a licensed, commercial transporter following U.S. Department of Transportation regulations for safe transport of materials to minimize spill risk.

ESA-listed Species

Polar Bear

Polar bears use sea ice, marine waters, and terrestrial areas throughout the Arctic. Sea ice is used as a platform for hunting and feeding, seeking mates and breeding, denning, resting, and long-distance movements. Areas near ice edges, leads, or polynyas (open sea areas surrounded by ice) where ocean depth is minimal are productive hunting grounds (Durner et al. 2004). Some polar bears occur seasonally in ice-free environments and use land habitats for varying portions of the year; however, they are more likely to be encountered within 25 miles (40 km) of the coastline, especially along barrier islands July through October. Polar bears, especially females and females with cubs, may be encountered farther inland during the winter denning period (November to April).

Polar Bear Critical Habitat

Polar bear critical habitat was federally designated on December 7, 2010 (75 FR 76086). Three units were identified: Unit 1 - Sea-ice Habitat, used for feeding, breeding, denning, and movements with sea ice; Unit 2 - Terrestrial Denning Habitat, which includes sea ice in proximity of terrestrial denning habitat prior to the onset of denning during the fall; and Unit 3 - Barrier Island Habitat, used for denning, refuge from human disturbance, and movements along the coast to access maternal dens and optimal feeding habitat.

The majority of the action area is located outside the designated polar bear critical habitat. Marine cable laying activities are proposed to occur over spring and summer in water shoreward of pack ice, and therefore, outside the timing and geographical scope of critical habitat Unit 1 and Unit 2. Terrestrial activities are proposed to occur over winter and may occur during shoulder seasons of ice formation and break up. The action area is within the southern portion of Unit 3, which is used for denning, refuge from human disturbance, and includes all barrier islands along the Alaska coast and their associated spits, and the water, ice, and land within 1 mile (1.6 km) of these islands.

Polar bears are particularly sensitive to human disturbance during denning. Den selection and use is related to seasonal timing of pack ice and conditions. Females search for potential den sites, which may be relatively close to the sea-ice edge, in fall when sea ice is at its minimum (75 FR 76086). Polar bears could be exposed to human presence and vessels transiting in waters nearby, possibly reducing the value of the habitat for den selection.

Unicom will incorporate the Service's BMPs for polar bears to ensure precautions are taken to minimize encounters and maintain distance buffers to avoid polar bears. Given the lack of overlap in proximity and timing of activities, and mitigation to avoid polar bears, we expect encounters with polar bears in critical habitat would be unlikely.

In summary, we expect effects on polar bears would be minor (i.e., would not result in injury or death of an individual), temporary (i.e., would not significantly disrupt normal behaviors feeding, breeding, moving, and sheltering), and therefore insignificant and effects on polar bear critical habitat to be discountable.

Short-tailed Albatross

Short-tailed albatrosses spend the majority of their lives over water in the North Pacific. They are surface feeders, soaring along wind currents above the waves, searching along continental shelf breaks and areas of upwelling for prey that churns up on the sea surface. They do not breed in the U.S. but forage extensively and spend considerable time in Alaskan waters along continental shelf breaks and slope regions of the Bering Sea. The largest threat to albatrosses is mortality and injury related to commercial fisheries, especially hook-and-line fisheries when bait is slow to sink, and albatrosses can get hooked and drown. They are also injured by trawl fishery activities, particularly when they are focused on competition for potential food at the water's surface and collide with vessel gear and wires. Other threats include ingestion of plastics, habitat degradation, and contamination by oil and other pollutants.

The short-tailed albatross is unlikely to be encountered. The action area does not overlap concentration areas of the short-tailed albatross, and proposed activities are not expected to attract individual birds. We anticipate effects to the short-tailed albatross to be discountable.

Spectacled and Steller's Eiders

Spectacled eiders are medium-sized sea ducks that remain at open sea or in polynyas (areas of open water in sea ice covered regions), or open leads (more temporary breaks in the sea ice) of the northern Bering Sea from November through March and April. As open water becomes available in spring, breeding pairs move to nesting areas on wet, coastal tundra. Nesting typically occurs between March and August each year. During the breeding season, hens and broods feed in freshwater ponds and wetlands where they eat aquatic insects, crustaceans, and vegetation (Petersen et al. 1991). Migration routes are primarily located offshore. Molting occurs in nearshore waters with flocks gathering to feed in shallow areas along coasts. Although most spectacled eiders are primarily flightless during molting, some flight activity occurs between nests and feeding areas.

The Steller's eider is a small sea duck that spends most of its life in the marine environment, occupying terrestrial habitats only during the nesting season (USFWS 2019). Steller's eiders nest on the Alaska Coastal Plain, near Utqiagvik. A western subpopulation has historically nested in western Alaska; however, this population is now limited to a small area on the Yukon-Kuskokwim Delta with less than 50 adult individuals (USFWS 2019). After breeding, Steller's eiders migrate from nesting grounds to marine waters where they undergo a complete molt. Migration routes are primarily located offshore. Molting occurs in nearshore waters with flocks gathering to feed in shallow areas along the coast, and individuals remain flightless for about three weeks, from late July until late October (Petersen 1981). Most individuals then disperse further south to wintering grounds throughout the Aleutian Islands, Alaska Peninsula, and western Gulf of Alaska beginning as early as August. Spring migration and staging near nesting grounds generally occurs April to May.

The action area is within the range of spectacled eiders and Steller's eiders. In this area these species have similar use patterns, and project-related activities could disturb staging and nesting eiders if eiders are present during activities. Scheduling terrestrial activities over winter when eiders are not expected to be nesting would help minimize effects to nesting eiders. Marine-based activities are scheduled to occur during spring, summer, and fall; therefore, they could disturb eiders during staging and molting. The risk of eiders colliding with marine vessels increases during fall while eiders are migrating. Scheduling marine activities over summer when eiders are nesting, and down-shielding onshore and vessel lights would minimize this risk. Spills or releases of hazardous materials could injure or kill eiders or degrade foraging habitat. Implementing spill prevention and response measures would minimize the potential for this effect.

Minimization measures, BMPs, and timing are planned so that activities would occur outside of the core spatial and temporal areas of highest use to reduce the likelihood of encounters with listed eiders. We expect effects on spectacled eiders and Steller's eiders would be minor (i.e., not result in injury or death of an individual) and temporary (i.e., not significantly disrupt normal feeding, breeding, moving, and sheltering behaviors), and therefore insignificant.

Conclusion

After reviewing the proposed project and avoidance and mitigation measures, and evaluating the anticipated effects, the Service concurs with your determination that the proposed project is not likely to adversely affect the polar bear and its critical habitat, short-tailed albatross, spectacled eider, and Steller's eider. Based on your request and our response, requirements of section 7 of the ESA have been satisfied. However, if new information reveals that project impacts may affect listed species or critical habitat in a manner or to an extent not previously considered, or if this action is subsequently modified in a manner which was not considered in this assessment, or if a new species is listed or critical habitat designated that may be affected by the proposed action, section 7 consultation should be reinitiated.

This letter relates only to federally listed or proposed species and/or designated or proposed critical habitat under jurisdiction of the Service. It does not address species under the jurisdiction of the National Marine Fisheries Service, or other legislation or responsibilities under the Fish and Wildlife Coordination Act, Migratory Bird Treaty Act, Marine Mammal Protection Act, Clean Water Act, National Environmental Policy Act, or Bald and Golden Eagle Protection Act.

Conservation Recommendations

Section 7(a)(1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are suggestions regarding discretionary measures to minimize or avoid adverse effects of a proposed action on listed species or critical habitat regarding development of information.

- Where overhead wires and guy lines are needed, use bird flight diverters that are durable and visible to reduce collision risk. The type and spacing of diverters will affect the degree to which collision risk is reduced. Diverters with demonstrated utility in extremely cold and windy environments, similar to FireFly™, are encouraged.
- Avoid listed eiders and/or their nests by 656 feet (200 meters) between June 1 and July 31 while in eider habitat on the Yukon-Kuskokwim Delta.
- During marine operations avoid listed species on water. Be vigilant for swimming polar bears, low-flying birds, and birds on the water when vessels of any size are underway.
- Where eiders are present, operate vessels at slow speeds (10 knots [18.5 km per hour] or less) and maintain a distance of 0.3 mile (500 meters) or greater, as practicable.
- Never deliberately operate a vessel at any rate of speed heading directly toward a protected species.
 - a. Deploy and/or assign wildlife observers on large vessels involved in response when operating in and near polar bear critical habitat and listed eider marine critical habitat. Observers would be expected to notify vessel operators about presence of polar bears and eiders (or groups of unidentified sea ducks on the water), record sightings, and ensure best practices are implemented to minimize impacts.
 - b. While operating skiffs in nearshore areas, vigilantly scan the water surface ahead of the skiff. Place someone in the bow to help the skiff operator search.
- In the nearshore environment, minimize activities that would impact areas of eelgrass, including through turbidity and sedimentation during debris removal or construction, or mechanical disturbance related to vessel traffic.
- If operating aircraft (including helicopters, unmanned systems and/or drones):
 - a. Avoid landing helicopters or airplanes within 1,969 feet (600 meters) of listed eiders and/or their nests from June 1 to July 31.
 - b. Pilots of all aircraft types should fly at the maximum distance possible from polar bears. Under no circumstances, other than an emergency, should aircraft operate at an altitude of lower than 1,500 feet (457 m) within 0.5 mile (805 meters) of polar bears observed on ice or land.

- Document any effects to listed species, their prey, and habitat. Include: location, time of year, response activity and method, species affected, habitat type, and a description of effects including anticipated duration.
- Report any take (e.g., injury, killing of eiders or loss of eggs, nests) to the local U.S. Fish and Wildlife Office of Law Enforcement (<https://www.fws.gov/law-enforcement/special-agent-charge-anchorage-alaska>) and to ak_fisheries@fws.gov.
- Report all polar bear sightings, encounters, and incidents to the Service, Marine Mammals Management at 907-786-3800 or FW7_MMM_Reports@fws.gov (cc: amy_kirkham@fws.gov). Reports are mandatory if polar bears are harassed or harmed in an incident, and all sighting reports are helpful. Any injury or death of a bear related to human activities must be reported as soon as possible and no later than 48 hours after occurrence
- If desired, Marine Mammals Management is available to assist with developing a polar bear interaction plan and should also be contacted if activities may need authorization for incidental take of polar bears under the Marine Mammal Protection Act, including due to intentional, non-lethal take of polar bears (i.e., through non-lethal deterrence): R7mmmregulatory@fws.gov.

If you have questions or need more information, please contact Fish and Wildlife Biologist, Jennifer Spegon, at jennifer_j_spegon@fws.gov and refer to Consultation Number 2023-0060288-02.

Sincerely,

Douglass M. Cooper
Ecological Services Branch Chief

Literature Cited

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, AK 99802-1668

January 13, 2026

Anthony High
U.S. Department of Agriculture
Rural Development, Rural Utility Service
1400 Independence Ave, SW
Room 4121, Stop 1590
Washington D.C. 20250

Re: Airraq Telecommunications Cable Project, Letter of Concurrence, AKRO-2025-03313

Dear Mr. High:

The National Marine Fisheries Service (NMFS) has completed informal consultation under section 7(a)(2) of the Endangered Species Act (ESA) regarding the proposed installation of fiber optic cable along marine routes to extend the Airraq telecommunications network to provide service to Yukon Kuskokwim Coastal communities in western Alaska (Figure 1). Environmental Resources Management (ERM) and Unicom, Inc. requested on behalf of the USDA Rural Utilities Service written concurrence that the proposed action may affect, but is not likely to adversely affect, Mexico DPS humpback whales (*Megaptera novaeangliae*), Western North Pacific humpback whales (*Megaptera novaeangliae*), Western North Pacific gray whales (*Eschrichtius robustus*), Western DPS Steller sea lions (*Eumetopias jubatus*) Arctic ringed seals ((*Pusa hispida hispida*), Arctic ringed seal critical habitat¹, Beringia DPS bearded seals (*Erignathus barbatus*), Beringia DPS bearded seal critical habitat², fin whales, (*Balaenoptera physalus*), or North Pacific right whales (*Eubalaena japonica*). Based on our analysis of the information you provided to us, and additional literature cited below, we concur with your determination.

Updates to the regulations governing interagency consultation (50 CFR part 402) were effective on May 6, 2024 (89 FR 24268). We are applying the updated regulations to this consultation.

^{1, 2} On September 26, 2024, the U.S. District Court for the District of Alaska vacated the critical habitat designations for ringed seals and bearded seals under the ESA and remanded the rules to NMFS for further consideration (*State of Alaska v. Nat'l Marine Fisheries Serv.*, Case No. 3:23-cv-00032-SLG, 2024 WL 4298114 (D. Alaska Sept. 26, 2024)). NMFS and the Center for Biological Diversity separately appealed that decision. Since that time, NMFS moved to dismiss both appeals, and the Ninth Circuit has dismissed NMFS's. In the interim, while the Center for Biological Diversity's appeal remains active, our consultations under section 7(a)(2) of the ESA will continue to address effects to ringed seal and bearded seal critical habitat when requested so that action agencies have the benefit of NMFS's analysis of the consequences of proposed actions on the critical habitat in the event that the appeal is successful.



The 2024 regulatory changes, like those from 2019, were intended to improve and clarify the consultation process, and, with one exception from 2024 (offsetting reasonable and prudent measures), were not intended to result in changes to NMFS' existing practice in implementing section 7(a)(2) of the ESA (84 FR at 45015; 89 FR at 24268). We have considered the prior rules and affirm that the substantive analysis and conclusions articulated in this letter of concurrence would not have been any different under the 2019 regulations or pre-2019 regulations.

This letter underwent pre-dissemination review in compliance with applicable Data Quality Act guidelines. A complete administrative record of this consultation is on file in this office.

Consultation History

We received your request for consultation on November 7, 2025 and your correspondence identifying Unicom and their consultant, ERM, as your non-Federal representative for this project. NMFS sought clarification on the species requested for consultation via email on December 2, 2025; ERM responded on December 3, 2025. On December 8, 2025, NMFS requested clarification on details specific to the marine component of the project; ERM responded on December 11, 2025. NMFS sent draft mitigation measures to ERM on December 15, 2025; these were modified slightly and agreed upon on December 22, 2025. We initiated consultation on December 22, 2025.

Description of the Proposed Action

“Action” means all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies in the United States or upon the high seas. 50 CFR 402.02.

This project proposes to extend the existing Airraq Network to provide high-speed broadband services to rural communities in the Yukon-Kuskowim Delta region. This action includes the installation of approximately 400 miles of fiberoptic cable starting in Nunapitchuk and extending to the communities of Mertarvik, Tununak, Toksook Bay, Alakanuk, and Emmonak, as well as installation of approximately 45 miles of fiber optic cable from Emmonak to Kotlik. Cable installation activities will occur across wetlands, through Baird Inlet, through the Bering Sea, and onto nearshore landfall sites (Figure 1). Cable installation activities will occur in two phases: Airraq Phase 3 and Airraq Kotlik. The Airraq Kotlik route will occur predominately overland, with some crossings over inland streams and rivers. As such, the effects of Airraq Kotlik will not be considered further. The entire marine route component of this action will occur in Airraq Phase 3, and thus proposed activities related to Airraq Phase 3 will be the focus of this assessment.

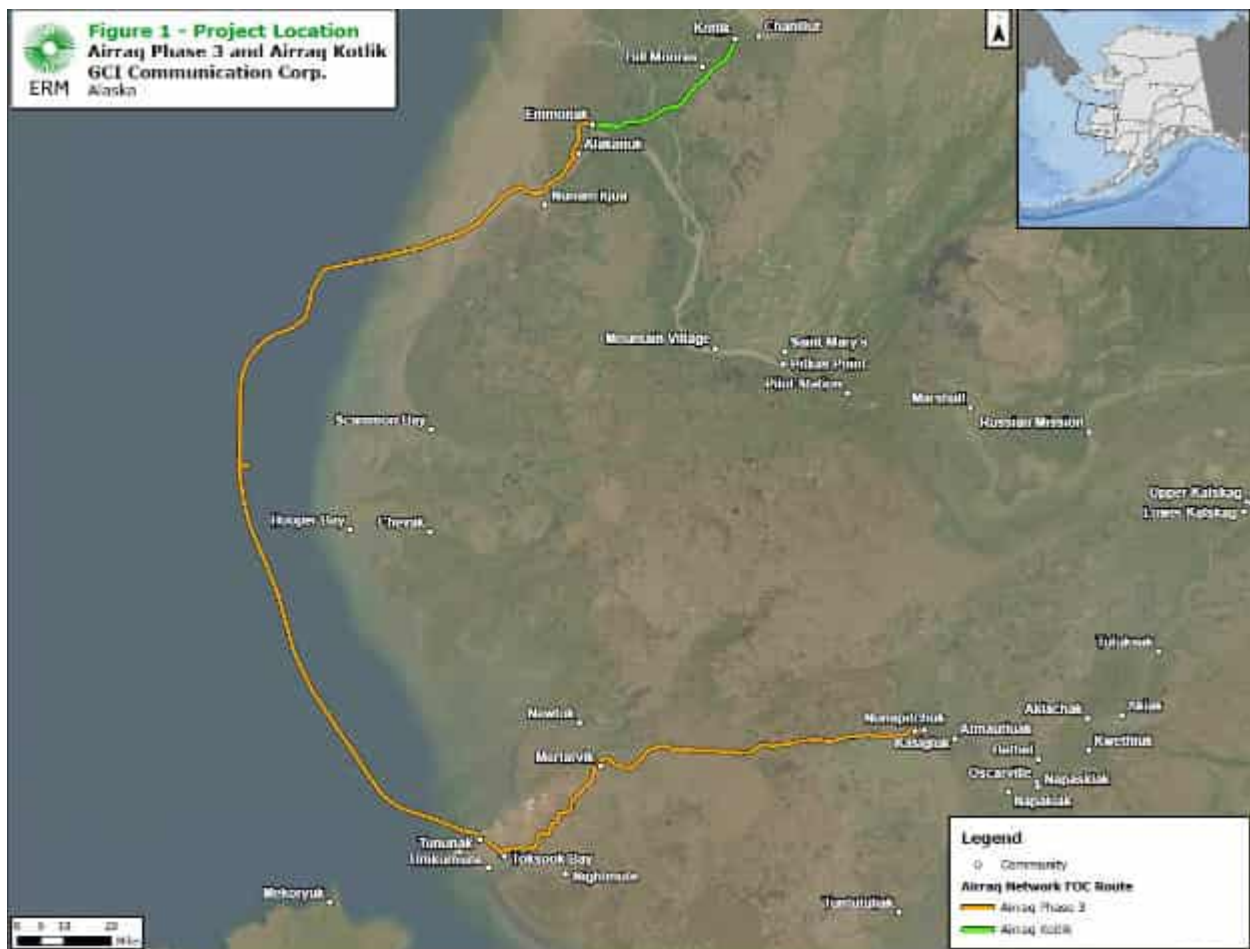


Figure 1. Cable installation route.

Airraq Phase 3 includes two marine components: the route between Nunapitchuk and Mertarvik, in which a portion of the route will be installed through Baird Inlet; and the route between Tununak and Alakanuk, which will consist of two branching units that will be installed in the Bering Sea. Landfall locations will occur at Mertarvik, Tununak, and Alakanuk. The marine route was identified through desktop studies and previously conducted benthic and geophysical surveys. The marine cable will measure approximately 1 inch in diameter, will be constructed from benign materials, and will not carry an electrical current. The marine route is expected to total 238.2 miles of cable, and will modify a total of 28.04 acres of subtidal or intertidal substrate. Once away from shore, the route parallels the coastline approximately 20 to 25 miles offshore. The cable will be installed in depths ranging from approximately 23 to 85 ft in the marine offshore environment.

Airraq phase 3 is expected to be completed within a 12-month timeframe, from summer/fall of 2026 through summer/fall of 2027. The marine cable will be installed during the summer months when the water is not frozen, and no ice accumulation is present. Landfall construction activities are expected to take place in July and August.

Pre-lay Grapnel Run

Prior to cable burial, a pre-lay grapnel run (PLGR) will be carried out to identify and remove debris within the proposed cable route. PLGR is conducted by pulling a grapnel along the route over the seabed. Any debris collected will be discharged onshore in accordance with local regulations. If debris cannot be recovered, then the proposed route will be adjusted to avoid the debris. The grapnel for the proposed action is expected to be a flatfish grapnel (~39.8 inches by 25.6 inches).

Vessels

Marine cable installation will rely on up to four vessels for different phases of construction and navigation. The cable laying method will be dependent on water depth and location. Offshore (>30 ft) installation will utilize a full-size cable ship (e.g., IT Intrepid or IT Infinity) that will rely on dynamic positioning (DP). The nearshore segments of the marine route (<340 ft), such as within Baird Inlet and approaching Alakanuk and Tununak, will be installed using either a tug and barge, a landing craft (e.g., M/V Polar Bear or M/V Unalaq) (~150 ft) or a small vessel of opportunity (~40 ft) with a shallow draft that can be grounded on mud flats, such that shallow waters are accessible.

Cable Installation

Cable Plow

In the offshore marine route, cable will be installed by either laying directly on the seafloor or burying it by insertion into the sediment using a cable sea plow. Laying the cable on the seafloor will be carried out within areas that have low risk of cable disturbance or where the geological conditions of the seafloor do not allow for plow burial (e.g., steep grades or bedrock). When laying the cable on the seafloor, a cable ship will be used with engineered slack to ensure the cable conforms to contours of the seafloor. In areas where the risk of outside aggression to the cable is present (i.e., popular fishing or anchoring locations) or area of ice scaring, a cable plow will be used to install the cable below the seafloor. The cable plow will be pulled along the seafloor by a tow wire connected to the cable ship. The cable will be fed through the plow's share blade, penetrating the seafloor sediments under the plow up to 5 ft deep through a plow share approximately 1 ft wide. The cable will exit the lower aft end of the share blade, and the sediments will immediately collapse on top of the cable behind the plow. It is estimated that up to 115 miles of cable will be buried using this method, and the remainder will be surface laid.

Water-jetting

In waters with depths less than 30 ft, the marine cable will either be surface laid where there is a low risk of disturbance or be buried through areas where additional protection from environmental conditions such as surf action and ice scour are needed. Where burial is required, a water jet sled operated from a landing craft or barge system may be used to install the cable below the seafloor. Pressurized water will be used to liquefy substrate on the seafloor and turn the fine sediments into a slurry, and the cable will then sink into the trench. The jet sled will be a

self-propelled system, and the pressurized water will be supplied from the surface through pressurized hoses, allowing for the jetting pressure and flow rates to be controlled based on benthic conditions. Divers will accompany the jet sled to monitor the trenching performance and assist in operations. For marine cable laying, use of a plow or jet sled to trench and re-cover the cable up to 1.5 ft deep in soft sediments means that no sidecast will be generated.

In waters along the marine cable routes that are very shallow (10 ft or less) or constrained, a smaller shallow draft vessel will be deployed to install the cable. In these shallow areas, the cable will either be surface-laid in areas with low risk of disturbance or buried using divers and hand jetting tools near villages or areas of known vessel anchoring activities. Divers will be used to facilitate cable shore landing at landfall sites.

Landfall

The landfall cable segments are between the mean low water (MLW) mark and an onshore beach vault. There will be one beach vault per landfall location, and each will be pre-cast measuring 3 ft by 4 ft by 4 ft (48 ft³) and will be fully buried at the high tide line (HTL). Excavation dimensions will not exceed 5 ft by 5 ft by 5 ft (125 ft³). Divers may be used to assist in transferring the cable from the installation vessel to the landing site. Once the cable is brought ashore, divers will then install armor protection and jet bury the cable within the surf zone out to a depth of approximately 10 ft of water. Landfall trenching will be conducted with either a chain or a backhoe. Other additional equipment may include a tracked excavator, utility trucks, hand tools (e.g., shovels, rakes), survey equipment, winch or turning sheave, and/or splicing equipment. A maximum of three 4-inch conduits per cable landing site will be placed in the excavated area, no deeper than 36 inches, to extend from the beach vault seaward to the beach above the MLW, allowing cables to be pulled into the beach vault without further disturbing the shoreline. For the cable trench in intertidal and subtidal areas, the expected maximum excavation dimensions are 3 ft wide by 3 ft deep, with a sidecast width of 5 ft. Horizontal directional drilling (HDD) may be utilized for installation of cables onshore. Up to 984 ft of split pipe articulated armor may also be used in the landing sites to provide additional protection for the project cable. Excavated material will be used to bury the conduits or cable. Depending on substrate characteristics, geotextile, ice pads, or construction mats will be used to manage excavated material and mitigate erosion, accumulation of water, and increased runoff associated with the project. Any excess material will be disposed of at an upland location.

Action Area

The action area is defined in the ESA regulations (50 CFR 402.02) all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. The action area is distinct from and larger than the project footprint because some elements of the project may affect listed species some distance from the project footprint. The action area, therefore, extends out to a point where no measurable effects from the project are expected to occur. NMFS defines the action area for this project as the area within which project-related noise levels are ≥ 120 dBrms re 1 μ Pa or approaching ambient noise levels (i.e., the point

where project-related sound attenuates to levels below non-anthropogenic sound).³ For this project, the action area is defined by vessel noise. Received sound levels associated with the cable-laying vessel (CLV) are expected to decline to 120 dB_{rms} re 1μPa within 10 km of the source, shown as yellow buffer extending out from the cable route in Figure 2. To define the action area, we considered the vessel size, type, and empirical measurements from similar projects (Kipple and Gabriele 2007; Tetra Tech 2013; Green et al. 2018; BOEM 2023).

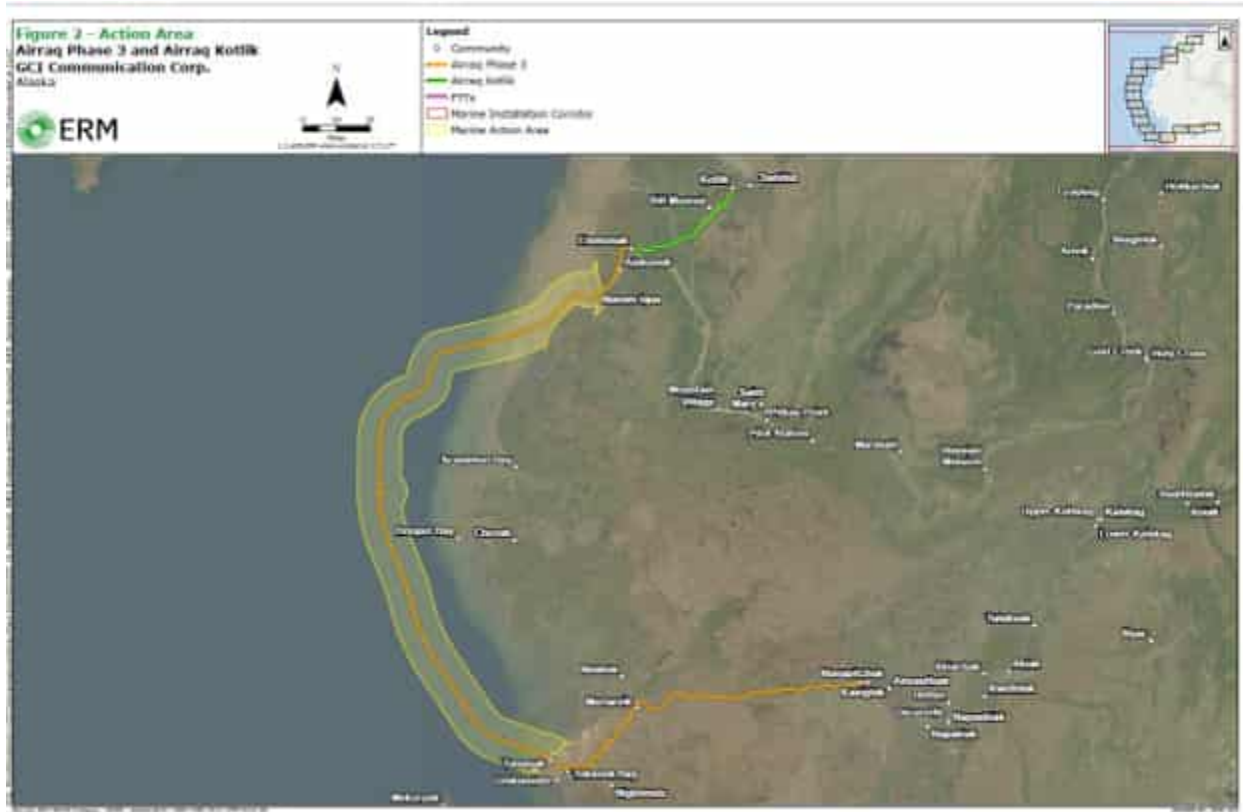


Figure 2. Action area.

³ We express noise as the sound force per unit micropascals (μPa), where 1 pascal (Pa) is the pressure resulting from a force of one newton exerted over an area of one square meter. Sound pressure level is expressed as the ratio of a measured sound pressure and a reference level. The commonly used reference pressure level in acoustics is 1 μPa, and the units for underwater sound pressure levels are decibels (dB) expressed in root mean square (rms), which is the square root of the arithmetic average of the squared instantaneous pressure values.

Mitigation Measures

The ERM informed NMFS via email on December 22, 2025 that the proposed action will incorporate the following mitigation measures:

For all reporting that results from implementation of these mitigation measures, NMFS will be contacted using the contact information specified in (Table 2). In all cases, notification will reference the NMFS consultation tracking number AKRO-2025-03313.

General Mitigation Measures

1. The project proponent will inform NMFS of impending in-water activities a minimum of one week prior to the onset of those activities (email information to akr.prd.records@noaa.gov).
2. If construction activities will occur outside of the time window specified in this letter, the applicant will notify NMFS of the situation at least 60 days prior to the end of the specified time window to allow for reinitiation of consultation.
3. In-water work will be conducted at the lowest points of the tidal cycle when feasible.
4. Consistent with AS 46.06.080, trash will be disposed of in accordance with state law. The project proponent will ensure that all closed loops (e.g., packing straps, rings, bands, etc.) will be cut prior to disposal. In addition, the project proponent will secure all ropes, nets, and other marine mammal entanglement hazards so they cannot enter marine waters.

PSO Requirements

5. At least one PSO will have either prior experience as a PSO in Alaska, or will have taken a NMFS-approved PSO or marine mammal observer training course.
6. PSO training will include:
 - a. field identification of marine mammals and marine mammal behavior;
 - b. ecological information on marine mammals and specifics on the ecology and management concerns of those marine mammals;
 - c. ESA and Marine Mammal Protection Act (MMPA) regulations;
 - d. proper equipment use;
 - e. methodologies in marine mammal observation and data recording and property reporting protocols; and
 - f. an overview of PSO roles and responsibilities.
7. PSOs will be individuals independent from the project proponent and must have no other

assigned tasks during monitoring periods.

8. The action agency or its designated non-federal representative will provide resumes or qualifications of PSO candidates to the consultation biologist and akr.prd.records@noaa.gov for approval at least one week prior to in-water work. NMFS will provide a brief explanation of lack of approval in instances where an individual is not approved.
9. PSOs will:
 - a. collectively be able to effectively observe the entirety of the monitoring zone;
 - b. be able to identify marine mammals and accurately record the date, time, and species of all observed marine mammals in accordance with project protocols;
 - c. be able to identify listed marine mammals that may occur in the action area, at a distance equal to the outer edge of the applicable monitoring zone, and determine the marine mammal's location and distance from sound source;
 - d. have the ability to effectively communicate orally, by radio or in person, with project personnel to provide real-time information on listed marine mammals;
 - e. possess a copy of mitigation measures; and
 - f. possess data forms.
10. PSOs will not scan for marine mammals for more than four hours without at least a one-hour break from monitoring duties between shifts. PSOs will not perform PSO duties for more than 12 hours in a 24-hour period.

PSO Procedures

11. PSOs will have the ability, authority, and obligation to order the appropriate mitigation response to avoid takes of listed marine mammals.
12. One or more PSOs will perform PSO duties onsite throughout the authorized activity.
13. Where a team of three or more PSOs are required, a lead observer or monitoring coordinator will be designated.
14. For each in-water activity, PSOs will monitor all marine waters within the indicated monitoring zone radius for that activity (Table 1).

Table 1. Monitoring Zones for Each Activity.

Activity	Zone Radius (m)
Cable laying	2,000

15. PSOs will be positioned such that they will collectively be able to monitor the entirety of each activity's monitoring zone.
16. Prior to commencing any activity listed in Table 1, PSOs will scan waters within the appropriate monitoring zone and confirm no listed marine mammals are within the monitoring zone for at least 30 minutes immediately prior to initiation of the in-water activity. If one or more listed marine mammals are observed within the monitoring zone, the in-water activity will not begin until the listed marine mammals exit the monitoring zone of their own accord, or the monitoring zone has remained clear of listed marine mammals for 30 minutes immediately prior to the commencement of the activities listed in Table 1.
17. The on-duty PSO(s) will continuously monitor the monitoring zone and adjacent waters during any of the activities listed in Table 1 for the presence of listed marine mammals.
18. PSOs will monitor during daylight hours.
19. Work will cease when conditions exceed Beaufort Sea State 6.
20. If a listed marine mammal is observed within a monitoring zone or is otherwise harassed, harmed, injured, or disturbed, the PSO will immediately report that occurrence to NMFS using the contact information specified in Table 2.
21. Prior to commencing any activity listed in Table 1, or at changes in watch, PSOs will establish a point of contact with the cable laying crew. The PSO will brief the point of contact as to the monitoring procedures if the PSO observes that listed marine mammals are likely to enter or enter the monitoring zone. If the point of contact goes "off shift" and delegates their duties, the point of contact must inform the PSO and brief the new point of contact.

Project-Dedicated Vessels (vessel and crew safety should never be compromised)

22. Vessel operators will:
 - a. maintain a watch for marine mammals at all times while underway;
 - b. stay at least 91 meters (100 yards) away from listed marine mammals, except that they will remain at least 460 meters (500 yards) away from endangered North Pacific right whales;
 - c. travel at less than five knots when within 274 meters (300 yards) of a whale;

- d. avoid changes in direction and speed within 274 meters (300 yards) of a whale, unless doing so is necessary for maritime safety;
 - e. not position vessel(s) in the path of a whale, and will not cut in front of a whale in a way or at a distance that causes the whale to change direction of travel or behavior (including breathing/surfacing pattern);
 - f. reduce vessel speed to less than 10 knots when weather conditions reduce visibility to 1.6 kilometers (one mile) or less; and
 - g. adhere to the Alaska Humpback Whale Approach Regulations when vessels are transiting to and from the project site (see 50 CFR 216.18, 223.214, and 224.103(b); these regulations apply to all humpback whales). Specifically, pilot and crew will not:
 - i. approach, by any means, including by interception (i.e., placing a vessel in the path of an oncoming humpback whale), within 100 yards of any humpback whale;
 - ii. cause a vessel or other object to approach within 100 yards of any humpback whale; or
 - iii. disrupt the normal behavior or prior activity of a humpback whale by any other act or omission.
23. If a whale's course and speed are such that it will likely cross in front of a vessel that is underway, or approach within 91 meters (100 yards) of the vessel, and if maritime conditions safely allow, the engine will be put in neutral and the whale will be allowed to pass beyond the vessel, except vessels will remain 460 meters (500 yards) from North Pacific right whales.
24. Vessels will not allow lines to remain in the water unless both ends are under tension and affixed to vessels or gear.
25. To the extent it is practicable and safe, vessel operators will operate their vessel thrusters (both main drive and DP) at the minimum power necessary to accomplish the work.
26. Vessels will travel at 2 knots during all cable installation activities, and at no more than 10 knots during transit.

Data Collection

PSOs have the following responsibilities for data collection:

- 27. PSOs will record observations on data forms or into electronic data sheets.
- 28. The project proponent will ensure that PSO data will be submitted electronically in a

format that can be queried such as a spreadsheet or database. Digital images of data sheets are not sufficient.

29. PSOs will record the following:

- a. project name, date, shift start time, shift stop time, and PSO identifier;
- b. date and time of each reportable event (e.g., a listed marine mammal observation, operation monitoring, reason for operation monitoring, change in weather conditions);
- c. weather parameters (e.g., percent cloud cover, percent glare, visibility) and sea state where the Beaufort Wind Force Scale will be used to determine sea state (<https://www.weather.gov/mfl/beaufort>);
- d. species, numbers, and, if possible, sex and age class of the observed listed marine mammal;
- e. the predominant anthropogenic sound-producing activities occurring during each listed marine mammal observation;
- f. observations of listed marine mammal behaviors and reactions to anthropogenic sounds and presence;
- g. geographic coordinates of initial, closest, and last location of listed species, including distance from observer to the listed species, and minimum distance from the predominant sound-producing activity to listed species; and
- h. whether the presence of a listed species necessitated the implementation of mitigation measures to avoid acoustic impact (i.e., monitoring), and the duration of time that normal operations were affected by the presence of listed species.

Reporting

Unauthorized Take

30. If a listed marine mammal is determined by the PSO to have been disturbed, harassed, harmed, injured, or killed (e.g., a listed marine mammal is observed entering a monitoring zone, or is injured or killed as a direct or indirect result of the action), the PSO will report the incident to NMFS within one business day, with information submitted to akr.prd.records@noaa.gov. These PSO records will include:

- a. digital, queryable documents containing PSO observations and records, and digital, queryable reports;
- b. the date, time, and location of each event (provide geographic coordinates);

- c. description of the event;
- d. number of individuals of each listed marine mammal species affected;
- e. the time the animal(s) was first observed or entered the monitoring zone, and, if known, the time the animal was last seen or exited the zone, and the fate of the animal;
- f. mitigation measures implemented prior to and after the animal was taken;
- g. if a vessel struck a listed marine mammal, the contact information for the PSO on duty on the vessel or the contact information for the individual piloting the vessel; and
- h. photographs or video footage of the animal(s), if available.

Stranded, Injured, or Dead Listed Species (not associated with the project)

- 31. If the PSO observes an injured, sick, or dead marine mammal (i.e., stranded), they will notify the Alaska Marine Mammal Stranding Hotline at 1-877-925-7773. The PSO will submit photos and available data to aid NMFS in determining how to respond to the stranded animal. If possible, data submitted will include date/time, location of stranded marine mammal, species and number of stranded individuals, description of the stranded marine mammal's condition, event type (e.g., entanglement, dead, floating), and behavior of live-stranded marine mammals.

Illegal Activities

- 32. If the PSO observes listed marine mammals or other marine mammals being disturbed, harassed, harmed, injured, or killed (e.g., feeding or unauthorized harassment), these activities will be reported to NMFS Alaska Region Office of Law Enforcement (Table 2; 1-800-853-1964).
- 33. Data submitted to NMFS will include date, time, location, description of the event, and any photos or videos taken.

North Pacific Right Whales

- 34. All observations of North Pacific right whales will be reported to NMFS within 24 hours. Photographs and/or video should be taken, if possible, to aid in photo identification of individual animals. Reports will include all applicable information that will be included in a final report.

Extralimital Sightings

- 35. All observations of ESA-listed marine mammal species not considered in this consultation will be reported to NMFS within 24 hours. Photographs and/or video should

be taken, if possible, to aid in photo identification of individual animals. Reports will include all applicable information that would be included in a final report.

Final Report

36. A final report will be submitted to NMFS within 90 calendar days of the completion of the project summarizing the data recorded by emailing it to akr.prd.records@noaa.gov. The report will summarize all in-water activities associated with the proposed action and results of PSO monitoring conducted during the in-water activities.

37. The final report for projects will include:

- a. summaries of monitoring efforts, including dates and times of construction, dates and times of monitoring, and dates, times, and duration of monitorings due to listed marine mammal presence;
- b. dates and times of listed marine mammal observations, geographic coordinates of listed marine mammals at their closest approach to the project site, water depth, species, age/size/sex (if determinable), and group sizes;
- c. number of listed marine mammals observed (by species) during periods with and without project activities (and other variables that could affect detectability);
- d. observed listed marine mammal behaviors and movement types versus project activity at the time of observation;
- e. numbers of marine mammal observations/individuals seen versus project activity at time of observation;
- f. any photos or videos taken of marine mammals; and
- g. digital, queryable documents containing PSO observations and records, and digital, queryable reports.

Table 2. Summary of Agency Contact Information

Reason for Contact	Contact Information
Consultation Questions & Unauthorized Take	akr.prd.section7@noaa.gov
Reports & Data Submittal	akr.prd.records@noaa.gov
Stranded, Injured, or Dead Marine Mammals	Stranding Hotline (24/7 coverage) 1-877-925-7773
Oil Spill & Hazardous Materials Response	U.S. Coast Guard National Response Center: 1-800-424-8802 and AKRNMFS_SpillResponse@noaa.gov
Illegal Activities (<i>not related to project activities; e.g., feeding, unauthorized harassment, or disturbance to marine mammals</i>)	NMFS Office of Law Enforcement (AK Hotline): 1-800-853-1964
In the event that this contact information becomes obsolete	NMFS Anchorage Main Office: 907-271-5006 or NMFS Juneau Main Office: 901-206-4342

Listed Species and Critical Habitat

Bearded Seal

The Beringia DPS of the *Erignathus barbatus nauticus* subspecies of bearded seal was listed as threatened under the ESA on December 28, 2012, primarily due to threats associated with long-term reductions in sea ice expected to occur within the foreseeable future “stemming from climate change” (77 FR 76739).

A reliable population estimate is not available (Muto et al. 2022). However, as discussed by Muto et al. (2022), using a limited sub-sample of spring aerial survey data collected from the U.S. portion of the Bering Sea in 2012, Conn et al. (2014) calculated a preliminary abundance estimate of 301,836 bearded seals (95 percent confidence interval: 238,195 to 371,147) in these waters.

Bearded seals are associated with moving pack ice that produces leads and other openings in the ice, and only rarely use areas of thick, continuous shorefast ice. They use sea ice as a platform for whelping and nursing of pups, pup maturation, and molting (shedding and regrowing hair and outer skin layers), as well as for resting (Cameron et al. 2010).

In late winter and early spring, bearded seals are widely but not uniformly distributed in broken, drifting pack ice the Bering Sea (Burns 1981; Braham et al. 1984). Some bearded seals also inhabit suitable pack ice the Chukchi and Beaufort seas over winter and spring (MacIntyre et al.

2015; Frouin-Mouy et al. 2016; Olnes et al. 2020; Quakenbush 2020). As the ice recedes in spring, many of the bearded seals that overwintered in the Bering Sea migrate north through the Bering Strait (mid-April to June) and spend the summer along the ice edge in the Chukchi and Beaufort seas, though some remain in open-water areas from the Bering Sea north (Burns 1981; Olnes et al. 2020; Quakenbush 2020).

During the open-water season, some bearded seals (largely juveniles) occur in small bays, lagoons, near river mouths, and up some rivers, particularly in late summer and fall (Oceana and Kawerak 2014; Gryba et al. 2021)⁴. While adult bearded seals have rarely been seen hauled out on land in Alaska (Burns 1981; Nelson 1981), (solitary) juvenile bearded seals have been observed or documented via satellite telemetry during the open-water season hauled out on land in some areas (Oceana and Kawerak 2014; Gadamus et al. 2015; Olnes et al. 2020).

Bearded seals feed primarily on benthic organisms including invertebrates (crabs, shrimp, clams, worms, and snails) and some fish found on or near the seafloor (in waters typically less than 200 m deep; Cameron et al. 2010). Bearded seals of the Beringia DPS primarily feed on bivalves and crustaceans, along with fishes such as sculpins, cods, and flatfishes (Dehn et al. 2007; Quakenbush et al. 2011a; Crawford et al. 2015; Quakenbush et al. 2020).

Bearded seals vocalize intensively underwater in association with territorial and mating behaviors, which occur in the spring (Van Parijs et al. 2003; Van Parijs and Clark 2006). NMFS defines the functional hearing range for phocids (earless seals) as 40 Hz to 90 kHz (NMFS 2024a).

Additional information on bearded seal biology and habitat is available at:

- [Bearded Seal Species Description](#)
- [2010 Status Review](#)
- [Marine Mammal Stock Assessment Report: Pinnipeds-Phocids](#)
- [Bearded Seal Critical Habitat](#)

Beringia DPS Bearded Seal Critical Habitat

NMFS issued a final rule designating critical habitat for the Beringia DPS of bearded seals in the northern Bering, Chukchi, and Beaufort seas on April 1, 2022 (87 FR 19180; Figure 2). On September 26, 2024, the U.S. District Court for the District of Alaska vacated the critical habitat designations for ringed seals and bearded seals under the ESA and remanded the rules to NMFS for further consideration (State of Alaska v. Nat'l Marine Fisheries Serv., Case No. 3:23-cv-00032-SLG, 2024 WL 4298114 (D. Alaska Sept. 26, 2024)). NMFS and the Center for Biological Diversity separately appealed that decision. Since that time, NMFS moved to dismiss

⁴ Northwest Arctic Borough. 2016. Important areas for marine and coastal species. Pages 415-529 in Iñuunialiqput Iliługu Nunannguanun: documenting our way of life through maps. Northwest Arctic Borough, Kotzebue, Alaska. Accessed at: <https://www.nwabor.org/subsistence-mapping-program/digital-atlas/>, (December 2019).

both appeals, and the Ninth Circuit has dismissed NMFS's. In the interim, while the Center for Biological Diversity's appeal remains active, our consultations under section 7(a)(2) of the ESA will continue to address effects to ringed seal and bearded seal critical habitat when requested so that action agencies have the benefit of NMFS's analysis of the consequences of proposed actions on the critical habitat in the event that the appeal is successful.

The essential physical or biological features of critical habitat designated for the Beringia DPS of bearded seals are: 1) sea ice habitat suitable for whelping and nursing, which is defined as areas with waters 200 meters or less in depth containing pack ice of at least 25 percent concentration and providing bearded seals access to those waters from the ice; 2) sea ice habitat as a platform for molting, which is defined as areas with waters 200 meters or less in depth containing pack ice of at least 15 percent concentration and providing bearded seals access to those waters from the ice; and 3) primary prey resources to support bearded seals: waters 200 meters or less in depth containing benthic organisms, including epifaunal and infaunal invertebrates, and demersal fishes (50 CFR 226.229).

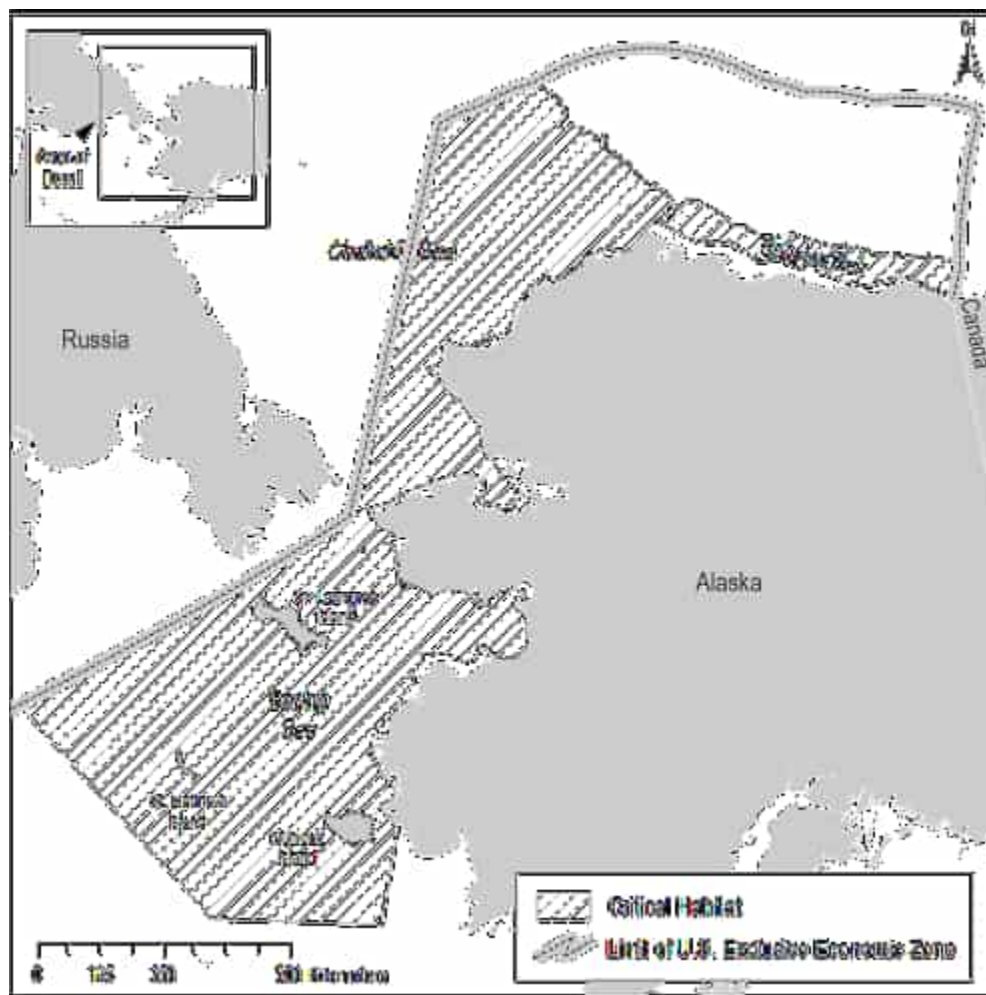


Figure 3. Critical habitat for the Beringia DPS of bearded seals.

Bearded seals and critical habitat in the action area

Project activities will overlap with Beringia DPS bearded seal critical habitat, and may overlap with bearded seals in small numbers. Most bearded seals that overwinter in the Bering Sea are expected to migrate north into the Chukchi and Beaufort Seas as sea ice recedes, though some remain in the Bering Sea during the open water period and bearded seal summer distribution is quite broad. While adult bearded seals have rarely been seen hauled out on land (Burns 1981; Nelson 1981), juvenile bearded seals may use terrestrial sites during the period of minimum ice extent (Olson et al. 2020). Juvenile seals have been observed hauled out on land along lagoons and rivers in some areas of Alaska, such as in Norton Bay (Huntington 2000), near Wainwright (Nelson 1981), and on sandy islands near Barrow (Cameron et al. 2010). Though considered rare, community members and news outlets^{5,6} have also reported bearded seals as far south as Nome in ice-free months, it is possible that bearded seal presence may overlap with the proposed action.

Arctic Ringed Seal

NMFS published a final rule listing the Arctic subspecies of ringed seals (*Pusa hispida hispida*) as threatened under the ESA on December 28, 2012, primarily due to threats associated with long-term reductions in sea ice and on-ice snow expected to occur within the foreseeable future (77 FR 76706).

A reliable population estimate for Arctic ringed seals is not available (Muto et al. 2022). Kelly et al. (2010) estimated the total population in the Chukchi and Beaufort seas in Alaska to be at least 300,000 based on estimates from aerial surveys conducted in the late 1990s and 2000 (Frost et al. 2004; Bengtson et al. 2005), which they noted is likely an underestimate since the Beaufort Sea surveys were limited to within 40 km of shore. In the Bering Sea, as discussed by Muto et al. (2022), Conn et al. (2014) calculated an abundance estimate of 174,418 ringed seals (95 percent confidence interval: 141,588 to 201,090) in these waters using a limited sub-sample of aerial survey data collected from the U.S. portion off the Bering Sea in 2012. Because this estimate did not account for availability bias or include ringed seals in shorefast ice, the actual number of ringed seals in the U.S. portion of the Bering Sea is likely much higher (Muto et al. 2022). A 2021 survey of the Beaufort Sea by NMFS (analysis pending), in combination with previous surveys in the Bering and Chukchi Seas (Boveng et al. In Prep), will allow for the determination of an estimate of ringed seal abundance in waters surrounding Alaska. It is anticipated that the total estimate of seals in this region will exceed 1 million individuals (NMFS 2024b).

Arctic ringed seals are highly associated with sea ice, which they use as a platform for whelping and nursing pups in spring, molting in spring to early summer, and resting throughout the year (Kelly et al. 2010)(Figure 3). Ringed seals are able to open and maintain breathing holes in the ice, which allows them to inhabit heavily ice-covered areas. At some breathing holes with

⁵ <https://alaskapublic.org/news/2015-12-22/stranded-seal-in-nome-released-into-wild>

⁶ <https://www.nomenugget.com/news/seal-pups-and-walrus-calves-found-stranded-regional-beaches>

sufficient snow cover, ringed seals excavate lairs in snowdrifts on the surface of the ice within which they rest and give birth to and nurse pups (Smith and Stirling 1975; Williams et al. 2006; Hauser et al. 2021). These subnivean lairs are important to pup survival because they provide shelter from extreme cold and concealment from predators (Lukin and Potelov 1978; Smith et al. 1991; Smith and Lydersen 1991; Stirling and Smith 2004).



Figure 4. Approximate annual timing of Arctic ringed seal reproduction and molting. Yellow bars indicate the “normal” range over which each event is reported to occur and orange bars indicate the “peak” timing of each event (Kelly et al. 2010).

During winter and spring, ringed seals are found throughout the Chukchi and Beaufort seas (Frost 1985; Kelly 1988), and aerial surveys indicate that they use nearly the entire ice field over the Bering Sea shelf (Braham et al. 1984; Lindsay et al. 2021). Most ringed seals that winter in the Bering and southern Chukchi seas are thought to migrate north in spring as the ice recedes (Frost 1985). Tracking data indicate that ringed seals extensively use the continental shelf waters of the Chukchi and Beaufort seas during the open-water season, and some seals make excursions into deep waters north of the shelf break (Crawford et al. 2012; Quakenbush et al. 2019; Quakenbush et al. 2020; Von Duyke et al. 2020). Ringed seals (primarily juveniles) have also been observed near river mouths and in lagoons in some areas during the open water season, especially during fall (Oceana and Kawerak 2014; Gryba et al. 2021).

Arctic ringed seals typically lose a significant proportion of their blubber mass in late winter to early summer and then replenish their blubber reserves in late summer or fall into winter (Ryg et al. 1990; Young and Ferguson 2013; Quakenbush et al. 2020). Diet studies indicate that ringed seals in Alaska eat a wide variety of vertebrate and invertebrate prey species, but certain prey species, such as Arctic cod, saffron cod, shrimps, and amphipods occupy a prominent role in their diet (Dehn et al. 2007; Quakenbush et al. 2011b; Crawford et al. 2015; Quakenbush et al. 2020).

The behavioral context of ringed seal underwater vocalizations is not well known, but they are thought to play a role in the seals’ reproductive behavior (Stirling 1983; Kelly 2022). NMFS defines the functional hearing range for phocids (earless seals) as 40 Hz to 90 kHz (NMFS 2024a). A study on the hearing of captive ringed seals suggests that the species has the ability to detect signals surrounded by background noise (Sills et al. 2015).

More information on ringed seal biology, habitat, and distribution is available at:

- [Ringed Seal Species Description](#)
- [Marine Mammal Stock Assessment Report: Pinnipeds-Phocids](#)
- [2024 Status Review Arctic Ringed Seal Critical Habitat](#)

Arctic Ringed Seal Critical Habitat

Designated critical habitat for the Arctic ringed seal was published April 1, 2022 (87 FR 19232). Arctic ringed seal critical habitat comprises an area of marine habitat in the northern Bering, Chukchi, and Beaufort seas (Figure 4). On September 26, 2024, the U.S. District Court for the District of Alaska vacated the critical habitat designations for ringed seals and bearded seals under the ESA and remanded the rules to NMFS for further consideration (State of Alaska v. Nat'l Marine Fisheries Serv., Case No. 3:23-cv-00032-SLG, 2024 WL 4298114 (D. Alaska Sept. 26, 2024)). NMFS and the Center for Biological Diversity separately appealed that decision. Since that time, NMFS moved to dismiss both appeals, and the Ninth Circuit has dismissed NMFS's. In the interim, while the Center for Biological Diversity's appeal remains active, our consultations under section 7(a)(2) of the ESA will continue to address effects to ringed seal and bearded seal critical habitat when requested so that action agencies have the benefit of NMFS's analysis of the consequences of proposed actions on the critical habitat in the event that the appeal is successful.

The following physical and biological features associated with Arctic ringed seal critical habitat were identified as essential to the conservation of the species: 1) snow-covered sea ice habitat suitable for the formation and maintenance of subnivean lairs used for sheltering pups during whelping and nursing, which is defined as waters 3 meters or more in depth (relative to mean lower low water, MLLW) containing areas of seasonal landfast (shorefast) ice or dense, stable pack ice, that have undergone deformation and contain snow drifts of sufficient depth to form and maintain birth lairs (typically at least 54 centimeters deep); 2) sea ice habitat suitable as a platform for basking and molting, which is defined as areas containing sea ice of 15 percent or more concentration in waters 3 m or more in depth (relative to MLLW); and 3) primary prey resources to support Arctic ringed seals, which are defined to be small, often schooling, fishes, in particular, Arctic cod, saffron cod, and rainbow smelt; and small crustaceans, in particular, shrimps and amphipods (50 CFR 226.228).

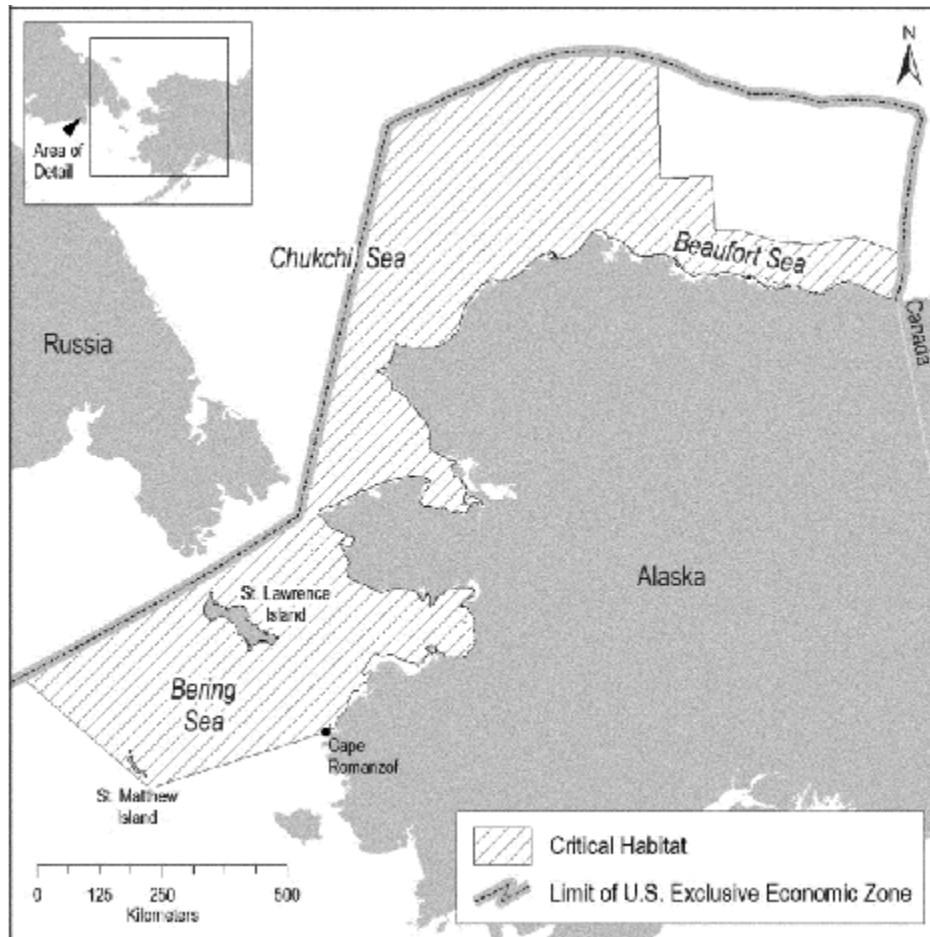


Figure 5. Ringed seal critical habitat.

Arctic ringed seals and critical habitat in the action area

Project activities will overlap with Arctic ringed seal critical habitat, but are unlikely to overlap with Arctic ringed seals. The proposed action will occur in the ice-free months, and most ringed seals that overwintered in the Bering Sea are expected to migrate north into the Chukchi and Beaufort Seas with the receding sea ice edge, where they will spend their summer months.

Western North Pacific DPS Gray Whale

The gray whale (*Eschrichtius robustus*) was originally listed as endangered in 1970 (35 FR 8491, June 2, 1970 (baleen whales listing); 35 FR 18319, December 2, 1970 (gray whales)). The Eastern North Pacific (ENP) DPS stock was delisted on June 16, 1994 (59 FR31094), when it reached pre-exploitation numbers. The Western North Pacific (WNP) population of gray whales remains listed as endangered. Critical habitat has not been designated for WNP DPS gray whales. The WNP DPS gray whales are considered to be gray whales that spend all or part of their lives in the western North Pacific in the waters of Vietnam, China, Japan, Korea (Republic of Korea and/or Democratic People's Republic of Korea), or the Russian Far East, including southern and southeastern Kamchatka but not necessarily areas north of 55°N in eastern

Kamchatka (NMFS 2023). Some WNP DPS gray whales spend part of their time in U.S. waters. The population size of the WNP DPS gray whales was estimated from photo-ID data for Sakhalin and Kamchatka at 290 non-calf whales in 2016 (90 percentile intervals = 271-311; Cooke et al. 2017; Cooke 2018). The non-ESA-listed ENP DPS gray whale population is estimated at approximately 19,260 individuals (Eguchi et al. 2024).

Gray whales travel alone or in small, unstable groups and are bottom feeders that remove infaunal invertebrate prey and sediments by suction (Oliver and Slattery 1985). WNP gray whales feed during the summer and fall in the Okhotsk Sea off northeast Sakhalin Island, Russia, and off southeastern Kamchatka in the Bering Sea (Damon-Randall 2023; NMFS 2023). The non-listed ENP population of gray whales feed mainly in the Chukchi, Beaufort, and northwestern Bering seas, with the exception of a small number of whales that summer and feed along the Pacific coast between Kodiak Island, Alaska and northern California (Carretta et al. 2022). The strong matrilineal fidelity exhibited by the whales feeding off Sakhalin Island, suggests behavioral separation of the WNP DPS from the ENP gray whales feeding in the northern Bering Sea (NMFS 2023). Therefore, we do not expect WNP DPS gray whales to be in the Alaskan waters of the Bering Sea.

In the North Pacific Ocean, the current migratory route and wintering areas of the WNP DPS of gray whales is complex and not fully understood (Weller et al. 2015; Weller et al. 2016). Studies support a trans-Pacific Ocean migration for some animals during the winter to areas off Canada, the U.S. West Coast, and Mexico. However, other animals stay in the western North Pacific Ocean and migrate south along the coast of Asia in the winter (Omura 1988; Brownell Jr et al. 2007; Weller and Brownell Jr 2012; Weller et al. 2015; Weller et al. 2016). Satellite tag tracks, photo-identification, and genetic matches between Sakhalin, Kamchatka, Canada, the U.S., and Mexico have identified 60 individuals known to travel between the eastern North Pacific Ocean and western North Pacific Ocean (Weller et al. 2012; Mate et al. 2015; Urban R. et al. 2019; Martinez-Aguilar et al. 2022) leaving open the question about the proportion of the Western North Pacific DPS of gray whales that remain in the western North Pacific Ocean year-round. The number of Western North Pacific DPS of gray whales remaining in the western North Pacific Ocean year-round is small, likely fewer than 100 individuals (Cooke 2018). The specific migration route and timing of the WNP DPS grays are unknown making it very difficult to predict when and where they might pass through the Aleutian Island chain or along the coast of Alaska.

Based on the best available information, it is expected that approximately 100 percent of the gray whales found in the western North Pacific Ocean feeding areas (Sakhalin, Kamchatka), wintering areas (Japan and China), and migratory corridor (Eastern Russia, North Korea, South Korea, Vietnam, and Japan) are from the Western North Pacific DPS (Damon-Randall 2023). It is expected that approximately 0.4 to 1.6 percent of the gray whales found in the eastern North Pacific Ocean wintering areas (Mexico) and migratory corridor (United States West Coast [Alaska, Washington, Oregon, and California], Canada, and Mexico) are from the Western North Pacific DPS (Damon-Randall 2023). Therefore, there is a low likelihood that a gray whale from the WNP DPS will be encountered in Alaskan waters along the Aleutian Islands, Gulf of Alaska, and Southeast Alaska.

No data are available regarding WNP DPS gray whale hearing and little regarding communication; but we assume that it is similar to the ENP DPS gray. Individuals produce broadband sounds within the 100 Hertz to 12 kHz range (Dahlheim et al. 1984; Jones and Swartz 2009). The most common sounds encountered are on feeding and breeding grounds, where “knocks” with a source level of roughly 142 decibels have been recorded (Thomson and Richardson 1995). Gray whale rattles, clicks, chirps, squeaks, snorts, thumps, knocks, bellows, and sharp blasts at frequencies of 400 Hz to 5 kHz have been recorded in Russian foraging areas (Petrochenko et al. 1991). NMFS categorizes gray whales in the low-frequency cetacean functional hearing group, with an applied frequency range between 7 Hz to 36+ kHz (NMFS 2024a).

More information can be found at:

- [Gray Whale Species Description](#)
- [Marine Mammal Stock Assessment Report: Cetaceans-Large Whales](#)
- [2023 WNP DPS Gray Whale Status Review](#)

Western North Pacific gray whales in the action area

WNP DPS gray whales do not range into the Bering Sea. Therefore, WNP DPS gray whales do not overlap with the proposed action and are not considered further in this assessment.

North Pacific Right Whale

The right whale (*Eubalaena* spp.) was listed as an endangered species under the ESCA in 1970 (35 FR 8491, June 2, 1970 (baleen whales listing); 35 FR 18319, December 2, 1970 (right whales listing)), and continued to be listed as endangered following passage of the ESA. NMFS later divided northern right whales into two separate endangered species: North Pacific right whales (*E. japonica*) and North Atlantic right whales (*E. glacialis*; 73 FR 12024, March 6, 2008). There are likely fewer than 500 North Pacific right whales remaining with less than 50 individuals estimated to remain of the eastern population found in Alaskan waters (Muto et al. 2022). The larger western population, on the coast of Russia and Japan, is outside of United States jurisdiction, so will not be considered further in this consultation.

The eastern North Pacific right whale is distributed from the Bering Sea to Baja California and has been sighted as far west as the Hawaiian islands (Kennedy et al. 2012). Sightings are rare, with the highest number seen in a single year was 17 distinct individuals, sighted over multiple ship surveys in the Southeastern Bering Sea (Wade et al. 2006). North Pacific right whales are primarily found in coastal or shelf waters but sometimes travel into deeper waters. From spring to fall, their distribution is dictated by the distribution of their prey. It is currently unknown if North Pacific right whales migrate to warmer habitats during winter as no migratory route or breeding and calving grounds have been identified and right whales have been sighted and detected acoustically in Alaskan waters in winter months (Wright et al. 2018b; NMFS 2022).

The North Pacific right whale is the first right whale species documented to produce song and it is hypothesized that these songs are reproductive displays (Crance et al. 2019). The singers

whose sex could be determined were all males and it is unknown if females also sing. Four distinct song types were recorded at five distinct locations in the southeastern Bering Sea from 2009-2017. A study of right whale ear anatomy suggests a total possible hearing range of 10 Hz to 22 kHz (Parks et al. 2007). NMFS categorizes right whales in the low-frequency cetacean functional hearing group, with an applied frequency range between 7 Hz to 36+ kHz (NMFS 2024a).

Bering Sea

Passive acoustic recorders located in the Bering Sea and Unimak Pass in the Aleutian Islands have detected right whales in the Bering Sea in most months of the year, with a peak in occurrence in known foraging habitats during summer (Wright 2016; Wright et al. 2018a; Crance et al. 2019). Detections were made at Unimak Pass during most months of the year, supporting the idea that right whales may use this area as more than just a corridor to enter and leave the Bering Sea (Wright et al. 2018a). In February 2022, there was an opportunistic sighting of two North Pacific right whales feeding north of Unimak Pass in the Aleutian Islands. This sighting is of particular interest as it is the first time right whales have been visually sighted in the area during that time of year (previous detections have been through acoustic moorings (Wright et al. 2018a)). Video footage confirmed that the whales were feeding, an activity not expected during the winter months when their prey is not as plentiful.

Numerous right whale detections have occurred in the critical habitat area of the southeastern Bering Sea, consistent with satellite tagging results and sightings (Zerbini et al. 2015; Crance et al. 2017; Crance et al. 2019). Detections and sightings have also occurred in the northern Bering Sea, including in the vicinity of St. Lawrence Island (Wright et al. 2019; Matsuoka et al. 2022), and acoustic detections have been increasing in frequency in recent years in this area (Wright et al. 2019).

North Pacific Right Whales in the Action Area

North Pacific right whales show preference for coastal and shelf waters, and are present in the Bering Sea most of the year. Therefore, overlap with North Pacific right whale individuals and project activities may occur, but encounters are highly unlikely due to the rarity of the whales.

Information on biology and habitat of the North Pacific right whale is available at:

- [North Pacific Right Whale Species Description](#)
- [Marine Mammal Stock Assessment Reports: Cetaceans-Large Whales](#)
- [North Pacific Right Whale Critical Habitat](#)

Fin Whale

The fin whale (*Balaenoptera physalus*) was decimated by commercial whaling in the 1800s and early 1900s. It was listed as an endangered species under the ESCA in 1970 (35 FR 8491, June 2, 1970 (baleen whales listing); 35 FR 18319, December 2, 1970 (fin whale listing), and continues to be listed as endangered following passage of the ESA. Critical habitat has not been designated

for fin whales. There are no reliable estimates of current and historical abundances for fin whales, and there continue to be uncertainties in their population structure (Muto et al. 2022). Based on dedicated line-transect surveys of the offshore waters of the Gulf of Alaska conducted by Rone et al. (2017), the best provisional abundance estimate in the northeast Pacific is 3,168 fin whales. However, this is an underestimate because these surveys covered only a small portion of fin whale range, and no correction factors were computed for this data (Muto et al. 2022).

Fin whales occur throughout the North Pacific, from the northeastern Chuckchi Sea to the Tropic of Cancer. They occur mostly offshore but frequently enter exposed coastal areas. It has been presumed that fin whales undergo regular long-range migrations between high latitude summer feeding grounds and lower-latitude winter calving grounds like other baleen whales. However, there is evidence that fin whales exhibit more complex and varied movement patterns, and do not perform concerted seasonal long-term migrations (Mizroch et al. 2009). Their winter distribution and location of primary calving areas (if any) are not well understood (Young et al. 2023). In any one season, fin whales can occur at many different latitudes, possibly depending on their age or reproductive state; movements can be inshore/offshore or north/south (NMFS 2010). Fin whales also exhibit residency patterns in some parts of their range (i.e., the Gulf of California and East China Sea) (Mizroch et al. 2009). Fin whales remain in Alaskan waters through the winter (Moore et al. 2006; Mizroch et al. 2009; Rice et al. 2021), and there is recent evidence for both feeding and reproductive behavior in high latitudes during winter (Koot 2015). However, it is not clear whether the fin whales that occur in northern latitudes in the winter represent year-round resident individuals, or if staggered migration patterns occur that result in at least some whales being present at all times.

Fin whale distribution is primarily driven by prey availability, which includes schooling fish, euphausiids, and copepods. Fin whale concentrations in the northern North Pacific and Bering Sea generally form along frontal boundaries, which are highly productive mixing zones between coastal and oceanic waters. These nutrient rich waters can sustain high biomasses of phytoplankton and zooplankton and correspond roughly to the continental shelf edge (NMFS 2010). Fin whales in the Gulf of Alaska are found consistently along the shelf break; passive acoustic monitoring studies recorded fin whales at more sites on or near the continental shelf compared to seamount sites in deeper water (Rice et al. 2021). Historical whaling data provide further evidence that fin whales are strongly associated with the shelf edge; habitat models based on catch data identified the continental slope as essential habitat for fin whales (Gregr and Trites 2001).

Fin whales produce a variety of low-frequency sounds, with their primary call types centered around 20 Hz and 40 Hz. These are highly stereotyped, frequency down-swept, loud (as high as 189 dB re 1 μ Pa at 1 m), and short duration ($\sim$ 1 second) (Watkins 1981; Wiggins and Hildebrand 2020). The 20 Hz note is the most commonly reported fin whale sound. Males produce 20 Hz pulses in repetitive doublet or triplet sequences (song); singing is only exhibited by males and is considered a reproductive display (Croll et al. 2002). The note pattern (i.e., singlets or doublets), internote interval, and sometimes frequency of the songs varies geographically among regions (Watkins et al. 1987; Hatch and Clark 2004). This geographic variation may reflect population structure. The 40-Hz call is not well understood, but evidence suggests it is associated with feeding behavior and may serve a foraging function (Watkins 1981; Širović et al. 2013).

While there is no direct data on hearing in low-frequency cetaceans, the applied frequency range is expected to be between 7 Hz and 36+ kHz (NMFS 2024a). Estimates based on scans of a fin whale calf skull indicate the range of best hearing for fin whale calves to range from approximately 20 Hz to 10 kHz, with maximum sensitivities between 1 to 2 kHz (Cranford and Krysl 2015).

Fin whales in the action area

Given their extensive range and year-round presence in Alaskan waters, the proposed action may overlap with fin whales. However, fin whales are typically found in deep water (Matsuoka et al. 2013; Rone et al. 2017) away from the immediate coast (Clarke et al. 2020), and show preference for frontal boundaries that aggregate prey. Therefore, encounters with fin whales are unlikely.

Additional information on fin whale biology and habitat is available at:

- [Fin Whale Species Description](#)
- [Marine Mammal Stock Assessment Reports: Cetaceans-Large Whales](#)
- [2019 Status Review](#)

Humpback Whale

The humpback whale (*Megaptera novaeangliae*) was listed as endangered under the ESCA in 1970 (35 FR 8491, June 2, 1970 (baleen whales listing); 35 FR 18319, December 2, 1970 (humpback whale listing)). Congress replaced the ESCA with the ESA in 1973, and humpback whales continued to be listed as endangered. NMFS conducted a global status review that led to changing the status of humpback whales under the ESA and dividing the species into 14 distinct population segments (DPS) (81 FR 62259, September 8, 2016). Of these 14 DPSs, NMFS listed four as endangered, one as threatened, and delisted the remaining nine. Three DPSs occur in waters of Alaska. The Western North Pacific DPS is listed as endangered; the Mexico DPS is listed as threatened; and the Hawaii DPS is not listed (81 FR 62259, September 8, 2016).

The Hawaii DPS population is estimated to be 11,540 animals (CV=0.04) with an annual growth rate between 5.5 and 6.0 percent. The Mexico DPS is comprised of approximately 2,913 animals (CV=0.7; Wade 2021) with an unknown, but likely declining, population trend (81 FR 62259; September 8, 2016). Approximately 1,084 animals (CV=0.09) comprise the Western North Pacific DPS (Wade 2021). Humpback whales in the Western North Pacific remain rare in some parts of their former range, such as the coastal waters of Korea, and have shown little sign of recovery in those locations.

Whales from these three DPSs overlap on feeding grounds off Alaska, and are visually indistinguishable unless individuals have been photo-identified on breeding grounds and again on feeding grounds. All waters off the coast of Alaska may contain ESA-listed humpbacks.

Humpback whales produce a variety of vocalizations ranging from 20 Hz to 10 kHz (Silber 1986; Richardson et al. 1995; Au 2000; Erbe 2002; Au et al. 2006; Vu et al. 2012). NMFS

categorizes humpback whales in the low-frequency cetacean functional hearing group, with an applied frequency range between 7 Hz and 36+ kHz (NMFS 2024a).

Bering Sea/Aleutian Islands/Chukchi and Beaufort Seas

The abundance estimate for humpback whales in the Bering Sea and Aleutian Islands is estimated to be 7,758 (CV= 0.2) animals, which includes whales from the unlisted Hawaii DPS (91 percent), threatened Mexico DPS (7 percent), and endangered Western North Pacific DPS (2 percent; NMFS 2021; Wade 2021) (Table 3). These same DPS proportions apply for the Chukchi and Beaufort seas. Humpback whales have increasingly been recorded during surveys in the eastern Chukchi Sea (67°–72°N, 157°–169°W) from July to October primarily over the continental shelf (Brower et al. 2018). During similar aerial surveys in 1982–1991, there was a complete lack of sightings of these whales (Brower et al. 2018). It is unknown if this is an indicator of population recovery, changing environmental conditions, or increased survey effort (Brower et al. 2018).

The area around the Aleutian Islands from Umnak Island northeastward along the Alaska Peninsula has been identified as a Biologically Important Area for humpback whales (Brower et al. 2022). Telemetry data from Kennedy et al. (2014) supported findings of historical data showing that humpback whales congregate in the shallow, highly productive coastal waters north of the eastern Aleutian Islands, between Unimak and Samalga Passes. The extremely high proportion of foraging within the narrow band 200 km east and west of Unalaska Bay further emphasizes the importance of the waters off the eastern Aleutian Islands for humpback whales (Kennedy et al. 2014). Annual vessel-based, photo-identification surveys in the Shumagin Islands from 1999 to 2015 identified 654 unique individual humpback whales between June and September (Witteveen and Wynne 2017).

Table 3. Percent probability of encountering humpback whales from each DPS in the North Pacific Ocean (columns) in various feeding areas (on left; Wade 2021).

Summer Feeding Areas	North Pacific Distinct Population Segments (DPS) (percent)			
	Western North Pacific (endangered)	Hawaii (not listed)	Mexico (threatened)	Central America (endangered)
Kamchatka	91	9	0	0
Aleutian I / Bering / Chukchi Seas	2	91	7	0
Gulf of Alaska	1	89	11	0
Southeast Alaska / Northern BC	0	98	2	0
Southern BC / WA	0	69	25	6
OR/CA	0	0	58	42
Note that in the past iteration of this guidance, upper confidence intervals were used for endangered DPSs. However, the revised estimates do not have associated coefficients of variation to cite. Therefore, the point estimate is being used for each probability of occurrence.				

Additional information on humpback whale biology and natural history is available at:

- [Humpback Whale Species Description](#)
- [Marine Mammal Stock Assessment Reports: Cetaceans-Large Whales](#)
- [Humpback Whale Critical Habitat](#)
- [Occurrence of Listed Humpback Whales off Alaska](#)

Humpback whales in the action area

Humpback whales are expected to be present in high numbers in their Alaskan feeding grounds during the summer months. Given their widespread range, relative abundance, their opportunistic foraging strategies, and frequent near-shore occurrence, humpback whales may overlap with project activities.

Western DPS Steller Sea Lion

The Steller sea lion (*Eumetopias jubatus*) was listed as a threatened species under the ESA effective December 4, 1990 (55 FR 49204, November 26, 1990). Based on genetic, morphological, ecological, and population trend data, NMFS reclassified the Steller sea lion into two DPS's, effective June 4, 1997 (62 FR 24345, May 5, 1997). The western DPS, comprised of animals originating from breeding sites west of 144° W longitude, was listed as endangered due to persistent decline and lack of recovery, while the eastern DPS remained listed as threatened. Effective on December 4, 2013, the eastern DPS was removed from the endangered species list (78 FR 66140, November 4, 2013).

The western stock of the Steller sea lion decreased from 220,000 to 265,000 animals in the late 1970s to less than 50,000 in 2000 (Loughlin et al. 1984; Loughlin and York 2000; Burkanov and Loughlin 2005). The sharp drop in abundance of the western DPS observed in the 1980s was caused largely by a steep decline in juvenile survival and a smaller decline in adult survival (York 1994; Holmes and York 2003). The minimum population estimate for the U.S. portion of the range of western DPS Steller sea lions in 2023 was 49,320 Steller sea lions; 11,987 pups (95 percent credible interval of 11,291-12,703) and 37,333 non-pups (95 percent credible interval of 34,274-40,245), respectively (Sweeney et al. 2023). Non-pups and pups in the western DPS of Alaska increased 1.05 and 0.50 percent y-1, respectively, between 2007 and 2022; however, there was high variability among regions (Sweeney et al. 2023). Steller sea lions in the western Aleutian Islands region continued to decline, along with pups in the adjacent central Aleutian Islands region. East of Samalga Pass, Aleutian Islands, pup production slowed or plateaued in the early 2010s, with subsequent non-pup plateauing or declines starting in the late 2010s in all regions (Sweeney et al. 2023). The 2014-2016 North Pacific marine heatwave (PMH), one of the most severe heatwaves ever recorded, resulted in reduced survival of adult female Steller sea lions in the Gulf of Alaska and reduced survival of adult female and adult male Steller sea lions in Southeast Alaska (Hastings et al. 2023) indicating that Steller sea lion populations in Alaska remain sensitive to environmental anomalies such as these (Suryan et al. 2021; Hastings et al. 2023).

Steller sea lions range throughout the North Pacific Ocean occurring from central California along the Pacific Rim through Alaska and Russia to Japan (Kenyon and Rice 1961; Loughlin et al. 1984). The western DPS of Steller sea lions are primarily found north of Sumner Strait in Southeast Alaska (Hastings et al. 2020). Most adult Steller sea lions occupy rookeries during the summer pupping and breeding season (mid-May through July) and exhibit a high level of site fidelity (Raum-Suryan et al. 2002; Hastings et al. 2017). During the breeding season, some juveniles and non-breeding adults occur at or near the rookeries, but most are on haulouts (sites that provide regular retreat from the water on exposed rocky shoreline, gravel beaches, and ice) (Call and Loughlin 2005; Ban and Trites 2007). Steller sea lions disperse widely after the breeding season, likely to access seasonally important prey resources (Gende and Sigler 2006; Sigler et al. 2009; Womble et al. 2009). During fall and winter many sea lions disperse from rookeries and increase use of haulouts, particularly on terrestrial sites but also on sea ice in the Bering Sea (Calkins 1998).

Steller sea lions forage near and off shore, in both benthic and pelagic zones, and eat a wide variety of prey, including many species of fish and cephalopods (including squid and octopus) (Pitcher and Calkins 1981; Calkins and Goodwin 1988; Calkins 1998; Sinclair et al. 2013; Tollit et al. 2017), and occasionally other marine mammals and birds (Pitcher and Fay 1982; NMFS 2008). During the breeding season, adult females must forage close enough to her rookery to return often to nurse her pup. Females attending pups usually forage within 20 nautical miles of breeding rookeries (Merrick and Loughlin 1997), which is the basis for designated critical habitat around rookeries and major haulout sites. Steller sea lions are not known to migrate annually, but individuals, especially juveniles and males, may disperse widely outside of the breeding season (Raum-Suryan et al. 2004; Trites et al. 2006; Lander et al. 2009; Jemison et al. 2013; Fritz et al. 2016; Sigler et al. 2017; Jemison et al. 2018).

The ability to detect sound and communicate underwater is important for a variety of Steller sea lion life functions, including reproduction and predator avoidance. NMFS categorizes Steller sea lions in the otariid pinniped functional hearing group, with an applied frequency range between 60 Hz to 68 kHz in water (NMFS 2024a).

Information on Steller sea lion biology and habitat is available at:

- [Steller Sea Lion Species Description](#)
- [Marine Mammal Stock Assessment Reports: Pinnipeds-Otariids](#)
- [2020 Status Review](#)
- [Occurrence of Western DPS Steller Sea Lions East of 144° W. Longitude](#)
- [Steller Sea Lion Critical Habitat](#)

WDPS Steller sea lions in the action area

Western DPS Steller sea lions are highly mobile and have large ranges. Additionally, numerous salmon spawning streams and rivers that may attract Steller sea lions occur along the cable installation route, and some landfall sites occur up rivers (e.g., Yukon River). Therefore, the proposed action may overlap with Western DPS Steller sea lions.

Effects of the Action

“Effects of the action” are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action (50 CFR 402.02). The applicable standard to find that a proposed action may affect but is “not likely to adversely affect” listed species or critical habitat is that all of the effects of the action are expected to be insignificant, extremely unlikely to occur, or completely beneficial. “Insignificant effects” relate to the magnitude of the impact and are those that one would not be able to meaningfully measure, detect, or evaluate; insignificant effects should never reach the scale where take occurs.

While the ESA does not define “harass,” NMFS issued guidance interpreting the term “harass” under the ESA as to: “create the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering” (Wieting 2016). NMFS considers the following steps to assess whether proposed activities are likely to harass.

1. Whether an animal is likely to be exposed to a stressor or disturbance (i.e., an annoyance).
2. The nature of that exposure in term of magnitude, frequency, duration, etc. Included in this may be type and scale as well as considerations of the geographic area of exposures (e.g., is the annoyance within a biologically important location for the species, such as a foraging area, spawning/breeding area, or nursery area?).
3. The expected response of the exposed animal to a stressors or disturbance (e.g., startle, flight, alteration [including abandonment] of important behaviors); and;
4. Whether the nature and duration or intensity of that response is a significant disruption of those behavior patterns which include, but are not limited to, breeding, feeding, sheltering, resting, or migrating.

The potential effects of the proposed action on listed species and critical habitat include:

- Acoustic disturbance from cable-laying equipment, vessels and associated DP systems
- Disturbance due to physical presence of vessels
- Vessel strike
- Contamination from spills
- Substrate disturbance

Acoustic Thresholds

Since 1997, NMFS has used generic sound exposure thresholds to determine whether an activity produces underwater sounds that might result in impacts to marine mammals (70 FR 1871, 1872, January 11, 2005). NMFS developed comprehensive guidance on sound levels likely to cause injury to marine mammals through onset of permanent and temporary threshold shifts (PTS (Level A harassment) and TTS; 89 FR 84827, April 3, 2024). NMFS is in the process of developing guidance for behavioral disruption (Level B harassment). However, until such guidance is available, NMFS uses the following conservative thresholds of underwater sound pressure levels, expressed in root mean square (rms), from broadband sounds that cause behavioral disturbance, and referred to as Level B harassment under section 3(18)(A)(ii) of the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1362(18)(A)(ii)):

- impulsive sound: 160 dB_{rms} re 1 µPa
- continuous sound: 120 dB_{rms} re 1µPa

The generalized hearing range for each hearing group is provided in Table 4.

Table 4. Underwater marine mammal hearing groups (NMFS 2024a).

Hearing Group [^]	ESA-listed Marine Mammals in the Action Area	Generalized Hearing Range*
Low-frequency (LF) cetaceans (Baleen whales)	Fin whales, Mexico DPS humpback whales, Western North Pacific humpback whales North Pacific Right whales	7 Hz to 36+ kHz
Phocid pinnipeds (PW) (true seals)	Arctic Ringed seals and Beringia DPS bearded seals	40 Hz to 90 kHz
Otariid pinnipeds (OW) (sea lions and fur seals)	Western DPS Steller sea lion	60 Hz to 68 kHz

[^] Southall et al. 2019 indicates that as more data become available there may be separate hearing group designations for Very Low-Frequency cetaceans (blue, fin, right, and bowhead whales) and Mid-Frequency cetaceans (sperm, killer, and beaked whales). However, at this point, all baleen whales are part of the LF cetacean hearing group, and sperm, killer, and beaked whales are part of the HF cetacean hearing group. Additionally, recent data indicate that as more data become available for Monachinae seals, separate hearing group designations maybe appropriate for the two phocid subfamilies (Ruscher et al. 2021; Sills et al. 2021).

* Represents the generalized hearing range for the entire group as a composite (i.e., all species within the group), where individual species' hearing ranges may not be as broad. Generalized hearing range chosen based on ~65 dB threshold from composite audiogram, previous analysis in NMFS 2018, and/or data from Southall et al. 2007; Southall et al. 2019. Additionally, animals can detect very loud sounds above and below that generalized hearing range.

+ NMFS is aware that the National Marine Mammal Foundation successfully collected preliminary hearing data on two minke whales during their third field season (2023) in Norway. These data have implications for not only the generalized hearing range for low-frequency cetaceans but also on their weighting function. However, at this time, no official results have been published. Furthermore, a fourth field season (2024) is proposed, where more data will likely be collected. Thus, it is premature for us to propose any changes to our current Updated Technical Guidance. However, mysticete hearing data is identified as a special circumstance that could merit re-evaluating the acoustic criteria in this document. Therefore, we anticipate that once the data from both field seasons are published, it will likely necessitate updating this document (i.e., likely after the data gathered in the summer 2024 field season and associated analysis are published).

In addition, NMFS uses the following thresholds for in-air sound pressure levels from broadband sounds that cause Level B behavioral disturbance under section 3(18)(A)(ii) of the MMPA (16 U.S.C. 1362(18)(A)(ii)):

- 100 dB_{rms} re 20μPa for non-harbor seal pinnipeds

Acoustic disturbance

Sources of acoustic disturbance associated with the proposed action include vessels, the dynamic positioning system utilized by the cable laying ship, and equipment associated with cable laying operations.

Cable-laying/burial equipment

In-situ data on noise associated with cable laying is scarce. There are limited field studies on noise emissions during installation of subsea electric cables (Nedwell and Howell 2004; Bald et al. 2015). However, these cable laying methods involved pre-cut trenching with a forecutter (i.e., rock trenching), and the reported sound pressure levels are not applicable for telecom cables; pre-cut trenching will not occur in this project. During installation of surface-laid cables, sound generation will be restricted to the noise generated by the installation ship. Surface lay of cables is essentially silent, and passive plough burial has a very low noise impact (OSPAR 2023). Additionally, the sound generated by burial tools (e.g. water jet) is comparable to that of a small dredging operations, and sound emissions from activities associated with subsea cable installation generally do not exceed background shipping noises (OSPAR 2023). Currently, there are no clear indications that noise impacts related to the installation and operation of subsea cables pose a high risk of harming marine fauna, and underwater noise linked to undersea cables remain low (Taormina et al. 2018). Cable installation will also be spatially localized and temporary. The impact of cable installation and burial is expected to be minor and brief, therefore we conclude the acoustic effects of cable installation and burial equipment on listed marine mammals is insignificant.

Vessel noise

Underwater vessel noise may disturb or temporarily mask communication between marine mammals. Some marine mammals have also been known to alter their own signals to compensate for increased ambient noise levels (Au et al. 1974; Di Lorio and Clark 2010; Parks et al. 2011), incurring energetic costs in the process. Behavioral reactions of marine mammals to vessels vary depending on the type and speed of the vessel, the spatial relationship between the animal and the vessel, the species, and the behavior of the animal (e.g., feeding, traveling) prior to the disturbance from the vessel. Considerable variability in response type and magnitude has been observed for similar noise exposures as a function of species, age/sex class, individual behavioral state, and a suite of interacting biological and ecological contextual factors (Southall et al. 2021). Individual animals' past experiences with vessels also appear to be important in determining an individual's response.

Ambient noise can mask communication between sea lions and affect their ability to detect predators (Richardson and Malme 1993; Weilgart 2007). Steller sea lions are frequently observed hauling out in areas experiencing a high level of vessel traffic and human activity such as boat marinas and navigation buoys (Jeffries et al. 2000; Fisheries and Oceans Canada 2010). Potential impacts to Steller sea lions from acoustic disturbances may occur at haul-outs and near rookeries, where in-air vessel noise could cause behavioral responses (avoidance of the sound source, spatial displacement from the immediate surrounding area, trampling, and abandonment of pups) (Calkins and Pitcher 1982; Kucey 2005). The proposed cable laying route is greater than 100 nm to the nearest designated sea lion haul out at St. Lawrence Island. With the implementation of mitigation measures, distance from known haul-outs, and the majority of the action occurring offshore, it is unlikely that vessels associated with this action will disturb large numbers of hauled-out Steller sea lions.

Vessel noise has the potential to mask communication between seals (Terhune et al. 1979). However, Funk et al. (2010) noted among vessels operating in the Chukchi Sea where received sound levels were <120 dB, 40 percent of observed seals showed no response to a vessel's presence, slightly more than 40 percent swam away from the vessel, 5 percent swam towards the vessel, and the movements of 13 percent of the seals were unidentifiable. Richardson et al. (1995) found vessel noise does not seem to strongly affect seals in the water, concluding that seals on haul-outs often respond more strongly to vessels. During the proposed action in the ice-free month, the vessels are not expected to encounter hauled-out ice-associated seals.

Acoustic masking is also of concern for cetaceans, particularly for baleen whales because they vocalize at low frequencies over long distances, and their communication frequencies overlap with many anthropogenic sounds such as shipping traffic. Some baleen whales have adjusted their communication frequencies, intensity, and call rate to limit masking effects. For example, fin whales have reduced their calling rate in response to boat noise (Watkins 1986) and right whales have been observed changing vocal behavior due to shipping sound that caused an increase in overall background noise (Parks et al. 2011).

The primary underwater noise associated with vessel operations is the continuous cavitation noise produced by the propeller arrangement (Richardson et al. 1995). Generally, vessel noise levels increase with increasing speed and increasing vessel size, but propulsion type and horsepower can also be important factors. Small vessel noise may be more significant than large vessel noise, and vice versa, for certain animals (Kipple and Gabriele 2007). The CLV is expected to be 320-379 ft and produce sound source levels up to 180 dB re μ Pa at 1 m. This sound source level will decline to 120 dB within 10 km. Sound source verification studies by Kipple and Gabriele (2007) showed that large vessels traveling at 10 knots emit a range low frequency sounds that overlap with hearing ranges of all of the listed marine mammals discussed herein. However, large vessels in this study emitted peak spectra at 30 Hz and 90 Hz. These frequencies fall outside the most sensitive hearing ranges for baleen whales, seals, and sea lions (Southall et al. 2019), and thus are not perceived as loud signals at frequencies where the sound energy is most concentrated.

A tug and barge may also be used in this action for cable laying activities in nearshore or shallow waters. Tugs have higher speed engines and propellers than larger fueling vessels or barges. The

smaller vessel noise spectra peak around 300 Hz with a source level ranging from 145-170 dB re 1 μ Pa depending on if the tug is pulling an empty or loaded barge (Richardson et al. 1995). Continuous sounds for sea going barges have been measured at a peak sound source level of 170 dB re 1 μ Pa at 1 m, and they are emitted at dominant frequencies of less than 5 kHz, but generally are emitted at frequencies less than 1 kHz (Miles et al. 1987; Richardson et al. 1995). The source level of approximately 170 dB re 1 μ Pa associated with oceanic tug boat noise will decline to 120 dB within 2.2 km of the source. Frequencies emitted from the tug and barge overlap with the hearing ranges of all of the listed marine mammals discussed herein. The majority of acoustic energy emitted by the vessels are at frequencies (<1 kHz) below the best hearing ranges for seals, sea lions, and baleen whales (Southall et al. 2019). Thus, they are not perceived as loud signals at the frequencies where the sound energy is most concentrated.

A ~150 ft landing craft may also be used in this action during cable laying activities in shallow water. Sound source verification studies by Kipple and Gabriele (2007) showed vessels between 100 and 250 ft produced a mean sound source level of 178 dB re μ Pa at 1 m while traveling at 10 knots. This sound source level is expected to decline to 120 dB within 7,356 m. Sound source verification studies by Kipple and Gabriele (2007) showed that large vessels traveling at 10 knots emit a range of low frequency sounds that overlap with the hearing ranges of all of the listed marine mammals discussed herein. However, large vessels in this study emitted dominant peak spectra at 30 Hz and 90 Hz. These frequencies fall outside the most sensitive hearing ranges for baleen whales, seals, and sea lions (Southall et al. 2019), and thus are not perceived as loud signals at the frequencies in which the acoustic energy is most concentrated.

A small vessel of opportunity (~40 ft) may also be used in this action for cable laying activities in shallow waters. Sound source verification studies by Kipple and Gabriele (2007) showed vessels between 20 and 40 ft produced a mean source level of 168 dB re μ Pa at 1 m while traveling at 10 knots. This sound source level is expected to decline to 120 dB within 1,585 m. In this study, medium sized vessels traveling at 10 knots emitted a range of low frequency sounds that overlap with the hearing ranges of all of the listed marine mammals discussed herein. Vessels of smaller size classes emitted spectra peaks at 63, 125, 1,000, and 2,500 Hz; some of these overlap with the most sensitive hearing ranges for baleen whales, seals and sea lions.

Vessels in transit typically travel in a consistent and predictable direction and speed, essentially providing a gradually increasing signal of their approach. Consequently, we would not expect a startle response from any individual marine mammal. Individuals may exhibit deflection from the vessel noise, engage in low level avoidance behavior, exhibit short-term vigilance behavior, or experience and respond to short-term acoustic masking behavior, but these behaviors are expected to be very short in duration and not likely to result in significant disruption of normal behavioral patterns or affect the animals in a biologically meaningful way. The adherence to mitigation measures, such as maintaining watch for marine mammals, reducing vessel speed in the vicinity of marine mammals, and avoiding direct approach to marine mammals, are expected to further reduce the potential for listed whales or pinnipeds to react discernibly to project vessels. Additionally, while undergoing cable laying activities, all vessels will operate at 2 knots. Therefore, sound source levels are expected to be much lower for the majority of the project than those reported for 10 knot speeds. While marine mammals are likely to be exposed to vessel noise, the effects are expected to be too small to detect or measure. Therefore, we conclude that

the effects of project-related vessel noise on the ESA-listed whales and pinnipeds in the action area are insignificant.

Dynamic positioning (DP) systems

The CLV will use a dynamic positioning (DP) system, which is expected to be the dominant sound source associated with cable laying activities. DP systems are used to control a vessel's position by means of propellers and thrusters via onboard computers that receive real-time input from global positioning systems (GPS) and active acoustic positioning systems. These allow for the CLV to follow a predetermined track with high accuracy (Tetra Tech 2013). DP systems produce both high-frequency and low-frequency sounds. The active acoustic positioning systems used in DP are functionally analogous to echosounders, and are thus a source of high-frequency sound. However, these acoustic systems are generally quieter than other sound components from DP because their pulses are short, narrowband in frequency, have narrow and downward directed beam widths, and their high frequency results in faster attenuation (BOEM 2023). Therefore, it is highly unlikely a marine mammal will be exposed to the high frequency components of the DP system.

Higher amplitude and lower frequency sound components of DP systems come from the vessel thrusters (BOEM 2023). Depending on the direction they are pushing, thrusters produce sound that is highly variable in directionality and source level. They are prone to cavitation even at relatively low operation speeds, leading to high source levels. There are not consistent sound source measurements for DP thrusters due to the high directionality of the source and variability in vessel type and size, type of thruster, and operational conditions (BOEM 2023). Despite variable sound source levels, sounds from DP thrusters are generally below 1 kHz (BOEM 2023), which falls below the most sensitive hearing ranges for low-frequency cetaceans, sea lions, and seals (Southall et al. 2019), and thus they are not perceived as loud signals. Therefore, we do not expect marine mammals to respond to DP thruster noise in a biologically significant way. Additionally, vessel operators will operate their vessel thrusters (both main drive and dynamic positioning) at the minimum power necessary to accomplish the work (mitigation measure #25). Lastly, NMFS has concluded that sound produced by DP thrusters is similar to that produced by transiting vessels and will not result in harassment of marine mammals (85 FR 36537). Deflection and avoidance behavior are expected to be the most consequential responses in those instances where there is any response at all, but we do not expect noise associated with the DP system will result in long-term effects to marine mammals. The impact of DP systems is expected to be very minor, and thus adverse effects to listed marine mammals will be immeasurably small. Therefore, we conclude that the effects from DP systems on listed marine mammals are insignificant.

Physical presence of vessels

It is not clear whether the marine mammal response of avoidance when a surface vessel moves towards it is caused by the physical presence of a surface vessel, the underwater noise generated by the vessel, or an interaction between the two (Goodwin and Cotton 2004; Lusseau 2006). However, studies suggest that the behavioral responses of marine mammals to surface vessels are

similar to their behavioral responses to predators (Evans et al. 1992; Blane and Jaakson 1994; Evans et al. 1994).

Project-specific vessels could result in a temporary disturbance that alters an animal's natural behavior. The mere presence and movements of ships in the vicinity of seals and sea lions can cause disturbance to their normal behaviors (Calkins and Pitcher 1982; Kucey 2005; Jansen et al. 2006; Jansen et al. 2010). Numerous studies of interactions between surface vessels and marine mammals have demonstrated that free-ranging marine mammals engage in avoidance behavior when surface vessels move toward them.

Disturbances from vessels may motivate pinnipeds to leave haulout locations and enter the water (Kucey 2005). Greene and Moore (1995) concluded that the effects of vessel traffic on pinnipeds are generally negligible to non-existent when they are in the water. Similarly, studies by Bisson et al. (2013) found pinnipeds in the Chukchi Sea during the 2012 open-water season responded to a moving vessel by looking at the vessel (42 percent) or doing nothing (38 percent). Steller sea lions are often observed hauling out in areas experiencing a high level of vessel traffic and human activity, such as boat marinas and navigation buoys (Fisheries and Oceans Canada 2010; Jeffries et al. 2000), and appear to tolerate vessel presence. Vessel presence in close proximity to haul-outs or rookeries, however, could cause behavioral response such as avoidance, spatial displacement from the immediate area, trampling, and abandonment of pups (Calkins and Pitcher 1982; Kucey 2005). However, with the implementation of mitigation measures, distance from known major haul outs for Steller sea lions, and lack of ice platforms for ice-associated seals, it is unlikely that vessels associated with this action will disturb large numbers of hauled-out pinnipeds.

Based on a suite of studies of cetacean behavior to vessel approaches (Bauer and Herman 1986; Au and Green 2000; Nowacek et al. 2001; Magalhaes et al. 2002; Williams et al. 2002; Goodwin and Cotton 2004; Bain et al. 2006; Lusseau and Bejder 2007), the set of variables that help determine whether animals are likely to be disturbed by surface vessels include 1) the number of vessels, 2) distance between the animal and the vessel, 3) vessel speed and vector, and 4) behavioral state of the animal(s). Most animals tended to reduce their visibility at the water's surface and move horizontally away from the source of disturbance or adopt erratic swimming strategies (Williams et al. 2002; Lusseau 2003; Lusseau 2006). In the process, dive times may increase, vocalizations and breaching may decrease, individuals in groups may move closer together, swimming speeds may increase, and direction of travel may change to avoid the source of disturbance (Kruse 1991; Evans et al. 1994). Some individuals have also been documented to dive and remain motionless, waiting until the vessel moved past their location.

Humpback whale reactions to approaching boats are variable, ranging from approach to avoidance (Payne 1978; Salden 1993). Humpbacks show no reaction at distances beyond 800 m when they are feeding (Krieger and Wing 1986). Humpback whales are especially responsive to fast moving vessels, exhibiting aerial behaviors such as breaching or tail/flipper slapping (Jurasz and Jurasz 1979). However, temporarily disturbed whales often remain in the area despite the presence of vessels (Baker et al. 1988; Baker et al. 1992). Fin whales have been documented to respond to vessels at distances of about 1 km (Edds and Macfarlane 1987). Watkins (1981) found that fin and humpback whales appeared startled and increased their swimming speed to avoid

approaching vessels. Studies by Vermeulen et al. (2012) assessed the behavioral responses of right whales to controlled vessel approaches and demonstrated significant reductions in social interactions, and significant alteration or disruption to traveling and resting states.

Previous monitoring efforts have indicated a lack of adverse effects to marine mammals from cable-laying vessels. This is supported by recent marine mammal observations in the PSO reports from the 2022 Aleutians I Fiber Optic Cable (FOC) project (Smultea et al. 2022) and the initial Quintillion cable installation project in 2016 (Green et al. 2018). The following information was provided by the PSO reports from these projects.

- In 2016 and 2017, reactionary behaviors were documented during only two to three percent of all cetacean observations. Reactions included change of direction, avoidance, and swimming speed increase.
- None of the remaining 299 groups or 669 cetacean individuals encountered over the two years of monitoring exhibited a reaction to the presence of the cable ship.
- A majority of pinniped groups and individuals in 2016 and 2017, respectively, did not react to vessel activities. The most commonly observed reaction was “look”, meaning the animal acknowledged the presence of the vessel. Other reactions included diving, increased swimming speed, or clearly changing travel direction. No reactions were indications of the animals exhibiting threat or flee responses but were rather more curiosity or avoidance behaviors.
- The 2022 PSO report from the Aleutians I FOC project recorded similar results. Out of 196 observations comprising 378 marine mammals, only 1.5 percent of individuals were observed to react to the presence of the FOC vessel. All reactions recorded were incidences of Steller sea lions (3) or sea otters (2) orienting to look at the vessel.

Project vessels will emit continuous sound while in transit, which will alert marine mammals to their presence. Therefore, a startle response is not expected. Rather, deflection and avoidance are expected to be common responses. The adherence to mitigation measures, such as maintaining watch for marine mammals, reducing vessel speed in the vicinity of marine mammals, and avoiding direct approach to marine mammals, are expected to further reduce the potential for ESA-listed whales or pinnipeds to react discernibly to the transiting project-specific vessels. While marine mammals are likely to be exposed to project vessels, the effects are expected to be too small to detect or measure, therefore NMFS concludes that the effects of project-related vessel presence on the ESA-listed whales and pinnipeds in the action area are insignificant.

Vessel strike

Vessels transiting the marine environment have the potential to collide with or strike marine mammals (Laist et al. 2001; Jensen and Silber 2004a), resulting in serious injury or mortality to the animal. The probability of strike events depends on the frequency, speed, and route of the marine vessels, as well as distribution of marine mammals in the area. Laist et al. (2001) found that while all sizes and types of vessel can strike a whale, ships greater than 80 meters and those going faster than 14 knots were most likely to cause severe or fatal injuries. Similarly,

Vanderlaan and Taggart (2007) found that the chances of lethal injury to a large whale are greater than 50 percent at vessel speeds higher than 11.8 kts.

The project-related vessels in this action have the potential to strike a marine mammal along the cable-laying routes. Large whales, particularly humpback whales, are more likely to be struck than small cetaceans or pinnipeds. A total of 28 vessel strikes occurred in Alaskan waters between 2016 and 2020, the majority of which were humpback whales (n=18), followed by 3 fin whales, 3 unidentified whales, 2 sperm whales, 1 killer whale, and 1 Steller sea lion (Muto et al. 2022). Previous studies have also documented humpback whales as the most frequent subjects of vessel strike, accounting for 86 percent of reported collisions in Alaska (Neilson et al. 2012). The majority of strikes (76 percent) were reported in Southeast Alaska, however, where both vessel traffic and humpback whale density are concurrently high in summer months when humpbacks are feeding. Humpback whale densities are not expected to be as high in the action area; there is only a 7 percent chance that humpback whales will be from the threatened Mexico DPS, and a 2 percent chance that humpback whales will be from the endangered Western North Pacific DPS. Therefore, in the unlikely event that a project vessel collided with a humpback whale it would be highly unlikely that the whale would be from a listed DPS. Furthermore, implementation of mitigation measures (i.e., adherence to the Alaska Humpback Whale Approach Regulations) will reduce the likelihood of a project vessel striking a humpback whale.

While strip strike is one of the leading causes of North Atlantic right whale mortality⁷, there are no documented injuries to North Pacific right whales by ship strike in waters off Alaska (NMFS unpublished data). Given their low abundance estimate, it is highly unlikely that project barges will encounter a North Pacific Right whale. Additionally, project vessels will not transit through North Pacific Right whale critical habitat. Adherence to mitigation measures (i.e., remaining at least 460 m (500 yards) from North Pacific right whales, having a PSO onboard) will reduce the likelihood of vessel collision with North Pacific right whales.

Around the world, fin whales are killed and injured in collisions with vessels more frequently than any other whale (Laist et al. 2001; Jensen and Silber 2004b; Douglas et al. 2008). From 2012-2020, there were two documented injuries by ship strikes of fin whales in Alaska (NMFS unpublished data). One vessel-strike of a fin whale occurred while the commercial vessel was traveling over 18 knots, which is significantly faster than the vessels associated with this action. Adherence to mitigation measures (i.e., keeping watch for marine mammals while underway, traveling at less than 5 knots (9 km/hour) when within 274 m (300 yards) of a whale and avoiding changes in direction and speed when within 274 m (300 yds) of a whale, not positioning vessel(s) in the path of a whale, and not cutting in front of a whale) will make collision with a fin whale highly unlikely.

In Alaska, our data indicates that cetaceans are more frequently involved in vessel strikes than are pinnipeds, and this is consistent with data from other regions (Barcenas-De La Cruz et al. 2018) of high sea lion abundance. Although risk of vessel strike has not been identified as a

⁷ <https://www.fisheries.noaa.gov/species/north-atlantic-right-whale>

significant concern for Steller sea lions, the recovery plan for this species states that Steller sea lions may be more susceptible to ship strike mortality or injury in harbors or in areas where animals are concentrated, e.g., near rookeries or haul-outs (NMFS 2008). There are no Steller sea lion haul-outs or rookeries along the cable-laying route. If sea lions are encountered, they may be able to avoid vessel interactions due to their relatively small size and high degree of maneuverability. With the implementation of mitigation measures (i.e., maintaining a watch for marine mammals at all times while underway) makes the occurrence of vessel strike on a Western DPS Steller sea lion highly unlikely.

To date, no bearded or ringed seal carcasses have been found with propeller marks and there is no record of bearded or ringed seal stranding due to vessel strike (NMFS unpublished data). Given the seasonal timing of the proposed action, ringed and bearded seals are more likely to be outside of the action area due to their life history traits and optimal foraging habitats that are closely tied to sea ice. Because the action period is during ice-free months, it is unlikely that the project vessels will overlap spatially or temporally with ringed or bearded seals; we consider encountering a ringed or bearded seal along project transit routes to be rare, and thus vessel strike to be exceedingly unlikely.

Mitigation measures are in place to minimize exposure of marine mammals to vessel activities (speed restrictions, timing restrictions, and approach restrictions). Furthermore, the majority of vessel operations will be conducted at 2 knots. Therefore, we consider vessel strike extremely unlikely to occur and therefore discountable.

Spills

There is risk of an oil spill associated project vessels during any of the proposed activities. Several different petroleum products may be associated with a spill, such as hydraulic oil, engine lubricant, gasoline, or diesel fuel. Collision, equipment failure, and grounding are the three main accident types associated with large spills (Dalton and Jin 2010). The effects of oil are determined by its chemical properties, such as molecular weight and solubility. Some compounds (typically the lower molecular weight substances) are acutely toxic, yet exhibit rapid dissipation and removal from the environment. Other forms of oil, such as tar or weathered oil, are less toxic but persist in the environment (Neff 1990). It is also possible for some fractions of oil, such as aromatic hydrocarbons, to interact synergistically (Rice et al. 1983).

Oil spills can affect marine mammals through various direct and indirect pathways. Direct pathways include inhalation, ingestion, and dermal contact/absorption, each of which can trigger a variety of physiological responses with potential consequences for health and long-term survival and/or reproduction (Helm et al. 2015). Inhalation of volatile, highly toxic aromatic compounds of oil poses the greatest acute health threat due to severe damage to the respiratory system. Ingestion of oil through grooming or consumption of contaminated prey has been documented to damage internal organs and organ systems (Engelhardt 1983; Helm et al. 2015). Contact exposure can cause temporary damage of the mucous membranes, eyes, or epidermis (Hansen 1985; Geraci 1990; St. Aubin 1990) and other external soft tissue areas (Helm et al. 2015). External oiling may interfere with thermoregulation for species that rely on fur for insulation, which can lead to life-threatening hypothermia (Helm et al. 2015, Engelhardt 1983).

Indirect pathways are effects associated with contamination that results in alterations in marine food webs, which may result in reductions in prey availability, injury to prey, or increases in predation (Helm et al. 2015).

For pinnipeds that rely primarily on blubber for insulation, external oiling does not significantly disrupt their ability to maintain core body temperature, and pinnipeds other than fur seals are less threatened by the thermal effects of oil-fouled fur (Helm et al. 2015, St. Aubin 1990). Studies have shown that oil has no effect on the relatively poor insulative capacity of the pelts of sea lions, bearded seals, and ringed seals (Kooyman et al. 1976). However, heavy oiling may result in death by smothering or interfere with an animal's capability to swim, resulting in drowning (St. Aubin 1990). Other studies on the toxicological effects of oil on pinnipeds demonstrated changes in respiratory epithelium consistent with inhalation of toxic fumes. In addition to respiratory surfaces, the eyes, oral cavity, and anal and urogenital orifices were found to be especially sensitive to prolonged contact with oil. Behavioral studies indicated that while pinnipeds are able to detect oil through vision and/or sense of smell, they do not show a strong avoidance response (St. Aubin 1990). Therefore, pinnipeds are likely to come into contact with oil if it enters their habitat, and they may be at an increased risk should an oil spill occur near a breeding colony, haul-out, or important foraging area.

Cetaceans can be exposed to oil through direct contact with the skin, eyes, mouth, and blowhole, inhalation of volatile fumes at the surface of the water, or ingestion of contaminated prey or water during feeding events. Unlike furbearing seals and sea lions, cetaceans are not at risk of uncontrolled heat loss through oiled-skin. They lack hair or fur and are constantly sloughing skin cells; oil does not readily adhere to cetacean bodies and thus does not compromise insulation (Helm et al. 2015). Additionally, studies detailed in Geraci et al. (1990) showed that cetacean skin is nearly impermeable to oil owing to tight intercellular bridges and the unusual thickness of their epidermis, even when the skin is compromised by an injury such as an open wound. Several studies referenced in a review by Helm et al. (2015) suggest that the inhalation of volatile toxic fractions at the air-water interface is the most concerning threat to cetaceans, rather than exposure through ingestion or absorption through the skin. Inhalation of toxic vapors may lead to inflammation of mucous membranes, lung congestion, and ultimately pneumonia (Hansen 1985). Toxicants that are inhaled can accumulate in blood and other tissues, leading to liver damage and other physiological malfunctions (Geraci 1990). Evidence for adverse health effects of oil exposure is supported by comparison health assessments between dolphins affected by the Deepwater Horizon oil spill to dolphins from non-oiled sites; dolphins in oil-affected areas had low hormone and blood sugar levels, were underweight, and showed signs of liver and/or lung damage (Schwacke et al. 2014).

When oil is released at the surface, it spreads out horizontally creating a slick. Larger droplets have the potential to coalesce and concentrate at the surface. While all marine mammals spend considerable time at the surface for feeding, breathing, swimming, or resting, baleen whales may be particularly at risk to oil exposure via ingestion due to their feeding strategies. They display a variety of surface feeding patterns, such as skim feeding exhibited by right whales, bubble net feeding by humpback whales, and lunge feeding by humpbacks and fin whales that have a greater potential for ingesting oil when filtering large quantities of water (Helm et al. 2015). Heavy oil fouling of baleen plates may also interfere with feeding efficiency (Geraci 1990). A

variety of cetacean species can visually detect oil, and toothed whales have been documented to avoid it visually and through echolocation capabilities. There is also some evidence to suggest that both toothed and baleen whales may be able to detect oil via cutaneous signals and therefore avoid it (Helm et al 2015, Geraci 1990). However, species with restricted ranges or specific habitat requirements may experience prolonged exposure to oil if they are not able to shift their ranges to avoid a spill. Similarly, cetaceans with limited diets or that take advantage of seasonally abundant or geographically restricted prey resources (such as humpback whales and North Pacific right whales) may be disproportionately affected by an overlapping oil spill.

Large and very large oil spills are a low probability but high impact event in which large numbers of ESA-listed marine mammals could experience prolonged exposure to toxic fumes, and/or ingest large amounts of oil, which could result in injury and mortality to a substantial number of animals. Based on data⁸ from Alaska Department of Environmental Conservation (ADEC), the majority of spill incidents that occurred in Alaska since 1979 involved diesel fuel, bilge oil, or hydraulic oil at volumes of 500 gallons or less. Therefore, in the rare instance a spill does occur, it is highly unlikely to be a large spill. In the occurrence of a small spill, refined petroleum products such as gasoline, diesel fuel, and solvents rapidly dissipate into thin films. The toxic volatile components of these products dissipate from the environment quickly via evaporation (Neff 1990), therefore exposure of marine mammals, or their prey, would be highly localized and transient. The probability of contamination occurring at harmful concentrations is very small, and thus we conclude adverse effects to listed pinnipeds and cetaceans are highly unlikely and therefore discountable.

Substrate disturbance

Physical changes to substratum will occur during cable route preparation (pre-lay grapnel run) and burial of the cable (ploughing, jetting, beach/intertidal excavation). These methods may lead to the modification of benthic habitat. Ploughing and jetting have a quick recovery of bottom topography, as the trench is filled with displaced re-suspended material after excavation and cable laying (Taormina et al. 2018). In intertidal areas at the landfall locations, impacts to the substrate will occur over a much larger surface area, of the order of tens of meters, due the use of vehicles such as mechanical excavators, trucks, and trenching equipment that heavily re-work the substrate. Unburied cables may also cause changes to habitat. Wave action may cause the cable to shift resulting in direct interaction with the seafloor such as surface scraping, although this is expected to be spatially limited due to the small width of telecom cables. Surface laid cables may also locally alter the near-seafloor hydrodynamic regime. Cable installation, in some cases, may actually increase habitat heterogeneity and locally enriched biodiversity (OSPAR 2023).

Increased turbidity in the water column will occur as result of project-related seabed disturbance. However, this is expected to be temporary and localized; at any given location on a cable route, sediment plumes are expected to persist from a few hours to a few days (Taormina et al. 2018). Increased turbidity may affect marine mammal prey species. For example, sediment particles in

⁸ <https://dec.alaska.gov/Applications/SPAR/PublicMVC/PERP/SpillSearch>, accessed Feb. 12, 2023

the water column may lead to gill damage in fish or limit foraging efficiency for fish that detect prey visually. Nevertheless, particle resuspension should generally have negligible effects on marine ecosystems (Taormina et al. 2018). Furthermore, the temporary and localized increase in turbidity is not expected to exceed normal turbidity levels expected from increased wave action or storm event. Therefore, fish and other prey species are expected to be somewhat tolerant to turbidity. The amount of prey potentially affected is not expected to have an appreciable effect on the availability of suitable prey for ESA-listed species. For these reasons, changes to the benthic habitat and turbidity effects are likely to have an imperceptibly small effect on the prey resources and habitat, and we conclude that the adverse effects from substrate disturbance are insignificant.

Analyzing Effects Upon Critical Habitat

Ringed Seal Critical Habitat

Critical habitat for the Arctic ringed seal was designated April 1, 2022 (87 FR 19232). Critical habitat for the Arctic ringed seal extends to an area of marine habitat in the northern Bering, Chukchi, and Beaufort seas Figure 5. Below we evaluate effects to physical and biological features of ringed seal habitat, as defined in 87 FR 19232.

1. Snow-covered sea ice suitable for the formation and maintenance of subnivean lairs, defined as waters 3 meters or more in depth, with seasonal landfast ice or stable pack ice having snow drifts of at least 45 centimeters in depth to form and maintain birthing, whelping and nursing lairs.

Because this project will only occur in ice-free months, it will not overlap with PBF 1.

2. Sea ice for molting is defined as waters of 200 meters depth or less, with a pack ice concentration of at least 15 percent.

Because this project will occur only in ice-free months, it will not overlap with PBF 2.

3. Primary prey resources to support Arctic ringed seals, which are defined to be small, often schooling, fishes, in particular Arctic cod, saffron cod, and rainbow smelt; and small crustaceans, in particular, shrimps and amphipods.

The physical presence and noise associated with vessels and cable laying equipment could displace ringed seal prey from optimal ringed seal foraging habitat. However, vessel disturbance will be very limited spatially and temporally, as will the response of fish to the vessel(s). Although there may be some short-term disturbance to prey species, we do not expect it to decrease the availability of prey or otherwise compromise their health or fitness. Moreover, temporary vessel disturbance is not expected to permanently displace primary prey or modify habitat in a way that it can no longer support primary prey species. Effects related to vessel noise and vessel presence are very minor, therefore we conclude that that any adverse effects from vessel noise or vessel presence on PBF 3 are insignificant.

Small spills associated with project vessels may occur which may affect ringed seals' primary prey species. Petroleum hydrocarbons can persist in the food chain, particularly in species that have a low capacity to detoxify. Marine fish metabolize and excrete petroleum hydrocarbon quickly, therefore even in heavily oil-contaminated environments, most fish do not accumulate or retain high concentrations of petroleum hydrocarbons, and thus are not likely to transfer them to predators. Likewise, most marine crustaceans are also able to metabolize and excrete accumulated hydrocarbons quickly. Conversely, amphipods are very sensitive to oil and experience high mortality and slow recovery in response to spilled oil (Neff 1990). However, refined petroleum products such as gasoline, diesel fuel, and solvents rapidly dissipate into thin films. The toxic volatile components of these products dissipate from the environment quickly via evaporation. Oil droplets and fractions of lighter hydrocarbons partitioned into the water column are expected to disperse with turbulence such as wind and tidal action (Neff 1990), which facilitates further dissipation of contamination over time. Therefore, adverse effects to primary prey species would be highly localized and transient. The probability of contamination occurring at harmful concentrations is very small, and therefore we conclude adverse effects of a small spill to primary prey species are extremely unlikely to occur and are therefore discountable.

Bearded Seal Critical Habitat

Critical habitat for the Beringia DPS bearded seal was designated April 1, 2022 (87 FR 19180). Critical habitat for the Beringia DPS bearded seal extends to the outer boundary of the U.S. Exclusive Economic Zone (EEZ) in the Chukchi and Beaufort seas and south over the continental shelf in the Bering Sea (Cameron et al. 2010) (Figure 3). Below we evaluate effects to physical and biological features of bearded seal habitat, as described in 87 FR 19180.

1. Sea ice habitat suitable for whelping and nursing, which is defined as waters of 200 meters depth or less, with a pack ice concentration of at least 25 percent.

Because activities will only occur during the ice-free months, this project will not overlap with on PBF 1.

2. Sea ice for molting, which is defined as waters of 200 meters depth or less, with a pack ice concentration of at least 15 percent.

Because activities will only occur during the ice-free months, this project will not overlap with PBF 2.

3. Primary prey to support bearded seals occurring in waters of 200 meters depth or less and containing benthic organisms and fishes found on or near the seafloor.

The physical presence and noise associated with vessels and cable laying equipment could displace bearded seal prey (i.e., benthic fishes) from optimal bearded seal foraging habitat. Additionally, the cable itself, or related cable laying/burying tools (i.e., plow, PLGR, water jet) may scour or disturb the benthic substrate that supports

primary prey, or come into contact directly with prey organisms. Vessel effects and substrate disturbance will be very limited spatially and temporally, and it has been suggested that cable installation may actually increase habitat heterogeneity and locally enriched biodiversity (OSPAR 2023). Although there may be some short-term disturbance to prey species, we do not expect it to decrease the availability of prey or otherwise compromise their health or fitness. Moreover, temporary vessel disturbance is not expected to permanently displace primary prey or modify benthic habitat in way that it can no longer support benthic species. Effects related to vessel noise and vessel presence are very minor, therefore we conclude that that any adverse effects from vessel noise or vessel presence on PBF 3 are insignificant.

Small spills associated with project vessels may occur which may affect bearded seals' primary prey species. Heavier fractions of oil sink and eventually deposit in sediments on the benthos where they can persist for extended periods of time (Neff 1990). Bearded seals feed primarily on benthic organisms including invertebrates (crabs, shrimp, clams, worms, and snails) and some fish found on or near the seafloor. Benthic invertebrates, particularly bivalves, accumulate and retain higher concentrations of petroleum hydrocarbons than other taxa (Neff 1990). However, refined petroleum products such as gasoline, diesel fuel, and solvents rapidly dissipate into thin films. The toxic volatile components of these products also dissipate from the environment quickly via evaporation. Oil droplets and fractions of hydrocarbons partitioned into the water column are expected to disperse with wind and tidal action, which facilitates further dissipation of contamination over time. Because the probability of contamination occurring at harmful concentrations is very small, adverse effects to benthic organisms are highly unlikely. Therefore, we conclude that the adverse effects of small spills on PBF 3 are extremely unlikely to occur and are therefore discountable.

Conclusion

Based on this analysis, NMFS concurs with your determination that the proposed action may affect, but is not likely to adversely affect Mexico DPS humpback whales (*Megaptera novaeangliae*), Western North Pacific humpback whales (*Megaptera novaeangliae*), Western North Pacific gray whales (*Eschrichtius robustus*), Western DPS Steller sea lions (*Eumetopias jubatus*) Arctic ringed seals (*Pusa hispida hispida*), Arctic ringed seal critical habitat, Beringia DPS bearded seals (*Erignathus barbatus*), Beringia DPS bearded seal critical habitat, fin whales, (*Balaenoptera physalus*), or North Pacific right whales (*Eubalaena japonica*). Reinitiation of consultation is required where discretionary federal involvement or control over the action has been retained or is authorized by law and if (1) take of listed species occurs, (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered, (3) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter, or (4) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16).

Please direct any questions regarding this letter to Caroline Cummings at caroline.cummings@noaa.gov and to akr.prd.section7@noaa.gov.

Sincerely,

A handwritten signature in black ink that reads "Anne Marie Eich". The script is cursive and fluid.

Anne Marie Eich, Ph.D.
Assistant Regional Administrator
for Protected Resources

cc: anthony.high@usda.gov
genevieve.rozhon@erm.com

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