NORTHWEST ARCTIC BOROUGH ASSEMBLY
RESOLUTION 22-04

A RESOLUTION OF THE NORTHWEST ARCTIC
BOROUGH ASSEMBLY APPROVING ADOPTION OF A WINTER
TRAIL STAKING POLICY, AND FOR RELATED PURPOSES.

WHEREAS: the Northwest Arctic Borough is the home rule regional
government for Northwest Alaska; and

WHEREAS: on an annual basis, the Borough supports winter trail staking
programs throughout the region; and

WHEREAS: in order to promote uniform standards and improvement of
winter trails in the region, the Borough wishes to adopt a winter trail staking
policy; and

WHEREAS: adoption of a winter trail staking policy will help improve
the quality and consistency of trails while communicating clear standards for
Borough villages participating in trail staking programs; and

WHEREAS: the Assembly wishes to approve the winter trail staking
policy to further the best interests of the Borough and its residents.

NOW THEREFORE BE IT RESOLVED: the Northwest Arctic
Borough Assembly approves a winter trail staking policy in substantially the same
form as accompanies this resolution.

PASSED AND ADOPTED THIS 23rd DAY OF FEBRUARY 2022.

Nathan Hadley, Jr., Assembly President

PASSED AND APPROVED THIS 23rd DAY OF FEBRUARY 2022.

Dickie Moto, Sr., Mayor
SIGNED AND ATTESTED TO THIS 23rd DAY OF FEBRUARY 2022.

Helena Hildreth, Borough Clerk

ATTEST:
Northwest Arctic Borough
WINTER TRAILS PROGRAM
Ambler Buckland Candle Deering Kiana Kivalina
Kobuk Kotzebue Noatak Noorvik Selawik Shungnak

MISSION:
Maintain and restore trail markers on existing winter trails connecting
the communities within the Northwest Arctic Borough

Northwest Arctic Borough Winter Trail Staking Policy
Adopted February 2022

1. Introduction and Background.

The Borough maintains trail markers and shelter cabins along approximately 1,000
miles of trails that connect the region’s 11 communities. Distances between villages
range from approximately 10 miles to over 120 miles. The Borough’s trail network
connects 14 populated locations, provides 12 shelter cabins along the routes, and includes
43 trail way points. The region’s trails cross a variety of ecosystems and varying
topography, including tundra, coastline, lakes, forests, hills, lowlands, river valleys.
Consequently, travel via trail is impacted by freeze-up and break-up of rivers and lakes.

This Policy provides a uniform approach to winter trail staking within the
Borough. Climate change has made winter travel more unpredictable and dangerous. It
has also made the Borough’s winter trail staking program more difficult because of later
and unpredictable freezing interrupted by periodic warm-ups. Traversing open water and
variable weather events can make certain routes unusable.

Winter trails are an essential part of life and transportation within the Borough.
Travel between villages in the winter occurs primarily on snowmachine. Travel to
hunting camps by snowmachine is also common. Consequently, the region’s winter trail
network is a critical part of daily life.

2. Annual Trail Staking Program.

A. On an annual basis, as funding is available, the Borough will partner with local
village governments for winter trail marking, maintenance, and repair.

B. The winter trail staking program will utilize memoranda of agreement to outline
program terms.

C. Compensation will be provided on a per-mile basis.
D. The Borough will encourage local village governments to apply directly for state and federal trail maintenance funding.

3. Prioritizing Trail Funding.

A. On an annual basis, the Borough will prioritize trail funding for each trail staking area in the following order:

i. Ice trails between Borough communities, including some densely populated camp areas, as well as ice portions of overland trails connecting Borough communities.

ii. Maintenance of overland trails between NAB communities.

iii. Other high-traffic or high-search incident trails.

iv. Bridge maintenance or repair on trails listed above in (i) and (ii).

v. Shelter cabin maintenance or repair on trails listed in (i) and (ii).

B. The Borough may modify this prioritization through memorandum of agreement with individual villages.

4. Trail Marker Distance.

The standard distance between markers is 100 feet, but that can be adjusted if the conditions require closer spacing. Areas that regularly get white-out conditions might need the markers closer together. In open areas with a clear line of sight, the distances can be greater.

Trail markers should be visible in opposite directions on either side of each marker. Please see the attachment labeled “Minimum Standards for Staking Ice and Overland Trails - Exhibit B” for details on markers for water bodies.


A. The Borough will endeavor to provide adequate supplies for villages to utilize annual trail staking programs. Village governments are responsible for collection and maintenance of all trail staking supplies.

B. As supplies allow, trails must utilize 6 to 8-foot fiberglass rods with reflective tape wrapped around the top of each pole just below the bolted pole connection as
depicted on Exhibit C. Willows and wood markers may only be used to supplement fiberglass markers as needed.

C. Markers should be assembled before taken out to the field for installation whenever possible.

D. The markers do not need to be removed at the end of the winter season.

E. Communities have the option of proposing a different trail marker design from this Policy as long as they meet the follow criteria:

i. Markers must provide a high level of visibility when viewed from any angle.

ii. Markers must be constructed and installed in such a way that they require minimal maintenance and can withstand high winds and frost jacking.

iii. Markers must be constructed from durable, cost-effective materials.

iv. Markers must be free-standing without requiring anchoring into the ground.

v. Unless a waiver of standard practices is approved, the legs of the tripod may not be buried in the ground nor may a tripod be connected to an anchor that is in the ground. It is acceptable to anchor a tripod to nearby vegetation, or fasten reflective sheeting directly to a tree.

6. **Trail Routing.**

   Whenever possible, trails should be routed over public land or with the written authorization (easement, etc.) of private landowners.

7. **Policy Amendment.**

   This Policy should be amended and supplemented as appropriate.
EXHIBIT A
Trail Inventory

Figure 5 - Primary Northwest Arctic Borough Winter Trails

<table>
<thead>
<tr>
<th>Trail</th>
<th>Distance (miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kobuk – Shungnak</td>
<td>10</td>
</tr>
<tr>
<td>Kiana – Noorvik</td>
<td>20</td>
</tr>
<tr>
<td>Shungnak – Ambler</td>
<td>25</td>
</tr>
<tr>
<td>Buckland – Deering</td>
<td>40</td>
</tr>
<tr>
<td>Kvalina – Noatak</td>
<td>45</td>
</tr>
<tr>
<td>Deering – Lane River</td>
<td>50</td>
</tr>
<tr>
<td>(Shishmaref trail)</td>
<td></td>
</tr>
<tr>
<td>Noatak – Kotzebue</td>
<td>50</td>
</tr>
<tr>
<td>Kiana – Kotzebue</td>
<td>50</td>
</tr>
<tr>
<td>Noorvik – Kotzebue</td>
<td>50</td>
</tr>
<tr>
<td>Selawik – Buckland</td>
<td>50</td>
</tr>
<tr>
<td>Kvalina – Point Hope</td>
<td>80</td>
</tr>
<tr>
<td>Shungnak – Selawik</td>
<td>80</td>
</tr>
<tr>
<td>Kvalina – Kotzebue</td>
<td>85</td>
</tr>
<tr>
<td>Noatak – Kiana</td>
<td>120</td>
</tr>
<tr>
<td>Kiana – Ambler</td>
<td>80</td>
</tr>
</tbody>
</table>

Table 3 - Northwest Arctic Borough – Major Trails
EXHIBIT B
Minimum Standards for Staking Ice and Overland Trails

- Trails or trail segments should follow as straight a line, as possible.
- Stakes must be no further than **100 feet apart**, and can be as close as 50 feet, or as conditions require (i.e. up to **200 feet in confined river corridors**).
- Stakes (willows) must be at least 4 feet high and 2" in diameter. Tripods must be 6 feet high.
- Stakes should be securely anchored in the ice. Tripods must be fastened together at the top.
- Reflector tape must be applied 36" - 60" on willows, 36" AND 60" stapled on tripods.
- Minimum reflector size shall be 1 ½" wide x 3" long (1 ½" x 6" folded onto itself).
- Changes of direction should be gradual, with adequate markers to show the change.
- Abrupt changes in direction, if necessary, should be marked as shown below.
- All reflective tapes must be removed from ice trails in late spring.

![Diagram showing staking guidelines]

Use RED markings for open water, severe drop offs, or any dangerous and impassable area

Use YELLOW markings for pressure ridges, cracks or any passable but dangerous areas

Reduce spacing to 50' maximum at intersection or change of direction.

Use plywood sign with a reflective tape arrow and village abbreviation (i.e. OTZ, ORV, WLK, IAN).
EXHIBIT C
Trail Marker Construction

SIGNALS SHALL BE BOLTED WITH #12-74 X 1-1/2" PLATED MACHINE SCREWS, WASHERS AND NUTS THROUGH 1/4" PRE-DRILLED HOLE IN EACH LEG.

APPLY 3' LENGTH OF 2" WIDE REFLECTIVE TAPE WRAPPED AROUND EACH LEG BELOW SIGNAL.

8' X 1/8" DIA. ROUND STAINLESS STEEL WIRE AND WASHER, BOLTED, TO SECURE MARKER TO VEGETATION.

(ATTACH) USE SHORT LENGTH #8 STAINLESS STEEL WIRE THROUGH 1/4" PRE-DRILLED HOLES IN EACH LEG AND TIE OFF.

ONE 3' LENGTH OF 6" WIDE REFLECTIVE TAPE WRAPPED AROUND EACH LEG BELOW SIGNAL.

THREAD APPROXIMATELY 6' #8 STAINLESS STEEL WIRE THROUGH 1/4" PRE-DRILLED HOLE IN EACH LEG AND TIE OFF.