Installation of weather systems with AIS stations

Primary goal is to transmit real-time weather through AIS directly to vessels and mariners to improve maritime safety

Data also available through AOOS data portals and NDBC

NWS utilizes data for forecasting

2020 IOOS Fill the Gaps Campaign
Supporting up to 6 new Arctic WX sites

CONSIDERATION: Requires off-grid power across much of Arctic
Original proposal was for installation of an AIS Receive/Transmit and WX Installation on NE Cape of St. Lawrence Island (estimated install cost $100K)

- After some careful evaluations, the NE Cape option was estimated to be cost prohibitive without substantially more funding

“It has the potential to be the most expensive AIS/WX station in Alaska.”

(Ed Page, 24 Sep 2019)

- Communications (satellite) costs several thousands $$ annually alone
- Long-term O&M costs are expected to be high for service and operations
- Local community support was not as high as previously implied
- According to NWS, the existing Gambell and Savoonga AIS/WX and FAA Wx at airports satisfy the NWS need
- Locals and Brian Brettschneider from NWS/Fairbanks suggested SE on SLI better
MXAK offered alternative proposal in September 2019
Install 3 (up to 6) weather stations and AIS Transmit capability in gapped areas of the Arctic

Challenges of locating suitable sites and hosts:
• Entering into MOUs/contracts with land or infrastructure owners
• Permits (state, federal, tribal)
• NEPA per above if on tribal community land
• Costs due to location and remoteness (on grid/off grid, communications, distance from road service)

MXAK offered 6 options...Kivalina was added to the list later:
• St. Paul Island
• St. George Island
• Point Lay
• Kotzebue
• Shishmaref
• Point Hope
• Kivalina
AOOS also asked for input on priorities from NWS and ACCAP

NWS: MXAK should target sites with no existing NWS or FAA Wx observations if possible

NWS Fairbanks: Would love one on Little Diomede Island

MXAK: Purpose is to provide localized near the water obs for mariners through AIS

AOOS: Possible to put one on Fairway Rock if HFR goes there in 2020....but not certain

<table>
<thead>
<tr>
<th>Location Wx already?</th>
<th>MXAK Priority</th>
<th>NWS Priority Anchorage</th>
<th>NWS Priority Fairbanks</th>
<th>ACCAP Priority</th>
<th>AOOS</th>
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<tbody>
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<td>Shishmaerf</td>
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</table>
EXTRA SLIDES IN CASE SOMEONE WANTS TO SEE WHERE EXISTING STATIONS ARE
St. George Island

Proposed MXAK Station
Point Lay