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Dr. Frank Kelly
Regional Director
National Weather Service Alaska Region
222 West 7th Avenue #23
Anchorage, AK 99513

Re: NWS Surface Observing Network Assessment and Draft Plan for Modernizing and Optimizing the Network in Alaska

Dear Dr. Kelly:

The Aircraft Owners and Pilots Association (AOPA), representing more than 400,000 members nationwide, submits the following comments in response to the National Weather Service's (NWS) Surface Observing Network Assessment and Draft Plan for Modernizing and Optimizing the Network in Alaska. Weather is critically important to the aviation community, nowhere more so than in Alaska. With the large size of the state, the sparse network of airports, significant terrain, and lack of road infrastructure, aviation provides a critically important means of transportation. Much of the aviation activity in Alaska is conducted under Visual Flight Rules (VFR) due to a lack of robust navigation aids combined with terrain and climate constraints which results in the possibility of icing conditions during any month of the year.

AOPA is concerned with the transition to automated sensors outlined in the plan which would result in a net loss of observations in a part of the country that is already lacking weather reporting stations. Pilots need assurance that accurate and reliable weather data is consistently available. Many sites identified in the analysis as secondary, and thus slated for decommissioning, are of critical importance to general aviation pilots. The sites identified in the analysis to close operational gaps appear to be restricted to marine sites. There are multiple gaps inland that AOPA would request get additional study.

Sites identified for automation

It is not clear from the NWS draft plan how sites identified as Mission Critical are to be replaced with "automated sensors for 24x7 coverage." We believe it is a viable alternative to deploy weather stations at various locations where observers currently exist at VFR airports and other non-airport locations. Data from the weather stations replacing these observers should be reported in a format which is compatible with existing outlets such as Flight Service, Direct User Access Terminal (DUAT) and other online systems. To date, the Whittier and Central stations that have been set up are not being received over the normal distribution networks. For the greatest value and accessibility to pilots, it is important that replacement stations provide a complete set of weather elements, including ceiling and visibility, to allow for informed decisions in support of aviation safety.

While aviation certified automated weather stations make direct measurements as opposed to the "estimates" provided by A-PAID observers, they also have limitations with regard to the sensors used that can misrepresent actual weather conditions. The limited views by the ceilometers and visibility sensors lead to reports which at times are not representative of conditions around the station.

The Federal Aviation Administration (FAA) has implemented a system of weather cameras in Alaska which provide a form of visual data that supplements the automated weather stations. These weather cameras serve

only as secondary weather information sources, and cannot be used as a sole source. While these resources have gone a long way to help overcome limitations of the automated sensors, they currently only function during daylight hours, making it difficult to identify trends during hours of darkness. AOPA supports the configuration of an automated station combined with an FAA weather camera to provide a robust data set of benefit to both Instrument Flight Rules and VFR pilots, as well as aviation forecasters.

Observation sites identified for closure

Based on comments received from pilots in the area, AOPA has the following concerns regarding stations labeled as “supplemental” in the NWS plan, which are slated for closure.

Healy and Cantwell: These stations are situated along a major VFR route through Windy Pass, the shortest route between the two largest cities in the state. Weather is often stacked up against the mountains on either side of the range while the Automated Weather Observation System (AWOS) at McKinley Park often reports clear and unrestricted visibility. The weather camera at Summit helps get a feel for the Cantwell side, however having a ceiling and visibility observation close to the south end of the pass is important to aviation operations. The same is true of Healy River, on the north side, where there is no weather camera, making the observation from Healy the sole report in this area.

Central: This station provides the only aviation observation in a large basin along the Yukon River extending to Eagle Summit to the west. Three public use airports are located in this area. Without this observation, the nearest aviation weather is from Ft. Yukon, 60 nautical miles to the north or Eagle, 100 nautical miles to the east. An aviation surface observation is clearly needed in this region.

Willow: In the Mat-Su Valley, the Willow airport serves as an alternate airport for pilots to use when wind conditions shut down Palmer and Wasilla. Conditions at Willow are also different from those experienced at Talkeetna, further up the Sustina Valley. Willow should be considered a mission critical reporting point.

Big River Lakes: This location is an important indicator of conditions at the east side of Lake Clark pass, a major flight route between south central and southwest Alaska. Conditions reported at Trading Bay are helpful for the general conditions along west Cook Inlet, but do not provide information needed to evaluate the east end of Lake Clark Pass, which our members have identified as a choke point along this route. The weather cameras on the east end of Lake Clark Pass are located at too high an elevation to provide information needed for VFR operations decision making, so co-locating with the weather camera in this situation is not recommended.

Sheep Mountain: This station is located at a critical point leading into Tahnetta Pass. Weather reported at this location is a key indicator for pilots concerning VFR flight out of Anchorage and the Mat Su Valley to the east. This location should be considered mission critical.

The lack of comments on the other stations proposed for closure is not necessarily an indicator of lack of need, only that AOPA didn't receive comments in the period of time allowed to comment on this plan. AOPA will continue to look for input from pilots on other sites.

Sites identified to close operational gaps

The NWS plan identifies “critical gaps” in the surface observation network that may provide opportunities for new investment in automated sensors. We note that almost all of the sites identified are at coastal locations. While there is no doubt that more coastal weather is needed in Alaska, it is likely that there are gaps

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in other inland parts of the state. For example, the entire North Slope region has no aviation surface observing sites that are in close proximity to the coast or in the Brooks Range. We also received comments that suggested more weather reporting was needed along the west side of Cook Inlet for travel down the inlet, or along alternate passes through the Alaska Range during times when Lake Clark Pass is not open. We would like to see additional consideration given to the needs of the aviation community across the state before finalizing the gap analysis portion of this document.

Summary

While we support consideration of other means of collecting weather, it is of critical importance that the amount of weather data available to forecasters and pilots for operational decision making remains robust, consistent, and reliable. Alaska accounts for only 6 % of the nation's aviation weather reporting stations. The high volume of general aviation operations in the state of Alaska, compounded by weather and terrain concerns, necessitates a more robust network of weather observing stations. Based on the average density of reporting stations in the contiguous 48 states, Alaska would need 2.6 times as many stations as it has today just to catch up to the rest of the country.

The automation of weather observing sites in Alaska cannot be at the expense of availability of data for the aviation community. Many sites identified as secondary are actually of critical importance to general aviation pilots. Finally, additional evaluation of gaps in the weather observation stations must be completed for inland areas. We are committed to working with both the NWS and FAA to help find solutions to augmenting and modernizing the weather reporting network in Alaska.

Sincerely,



Heidi J. Williams
Senior Director
Airspace and Modernization

cc. Bob Lewis, FAA Alaska Regional Administrator
Jeff Osiensky, NWS Alaska Regional Aviation Meteorologist