

Environmental Analysis of the Alaskan Region's Capstone Program

Program Purpose

The Capstone Program is an urgent initiative to improve commercial flight safety in western Alaska. It will utilize modern Global Positioning System-based avionics and data link communications technology to enable operational enhancements and deliver more timely information to improve the pilot's situational awareness.

Background

In August, 1998, in response to a request from the FAA Administrator, the Alaskan Region, with help from its aviation industry council, conceived the "Capstone Program" as an accelerated safety program to improve the poor safety record in Alaska. It will incorporate National Transportation Safety Board recommendations for more aviation weather reporting and provide a first-time instrument approach capability for ten remote village airports identified as high priority locations by air carriers. The Capstone program will also help to validate the following three operational enhancements recommended by the Radio Telecommunications Conference of America (RTCA), an FAA Advisory Council: Flight Information System (FIS) for Special Use Airspace (SUA) Status, Weather, Wind-Shear, NOTAMs, and PIREPs; Cost Effective Controlled Flight into Terrain (CFIT) Avoidance; and Enhanced See and Avoid. For FY 1999, Congress appropriated \$11 million to accomplish the Capstone Program in Alaska.

Proposed Capstone Program Activities

The Capstone Program includes the following proposed Federal actions:

- Procure, install, and certify currently available avionics equipment, on a voluntary basis, in approximately 200 aircraft used for commercial service operations in the Bethel area of western Alaska. Avionics systems will include a GPS receiver approved for instrument flight rules (IFR) use; automatic dependent surveillance-broadcast (ADS-B) equipment; a data link communications system; a GPS-based terrain data base and moving map; and a multi-function display (MFD).
- Procure and install ADS-B data link transmitter/receiver ground equipment within existing FAA facilities and joint FAA/military facilities at the following 12 locations within the Capstone Program area where power and ground communications are available: Bethel, Aniak, St. Marys, Kipnuk, Anvik, St. Michael, Holy Cross, Tatalina, Sparrevohn, King Salmon, Cape Romanzof, and Cape Newenham.
- Prepare a first-time, GPS-based, non-precision instrument approach procedure for one or more runways at each of the following 10 village airports: Kalskag, Kipnuk, Kwingillingok, Mountain Village, Platinum, Russian Mission, Scammon Bay, St. Michael, Holy Cross, and Koliganek.
- Procure and install a basic automated weather observation system at these 10 remote airports and possibly connect the system to a telephone communications system so that a pilot can remotely obtain the airport's weather observation for flight planning and also can acquire the current observation in flight as required to initiate an instrument approach to the airport.
- Acquire and transmit advanced weather products and other flight information system (FIS) messages to participating aircraft.
- Furnish aircraft ADS-B position reports and two-way pilot-controller and pilot-dispatcher messages to FAA air traffic control and flight service facilities and aircraft operators.

- Provide participating aircraft with an ADS-B position report advisory of other nearby participating aircraft to enhance the pilot's see and avoid capability.
- Install a Gateway Processor and/or program the Micro-Enroute Automated Radar Tracking System (M-EARTS) at the Anchorage Air Route Traffic Control Center (ARTCC) to receive, process, store, and display ADS-B aircraft position reports in a manner similar to existing radar displays.
- Furnish technical training for pilots, FAA personnel, and other involved persons.
- Provide for an independent program analysis and documentation of safety improvements and air carrier benefits derived from the operational enhancements.

Environmental Processing Requirements

All program activities conducted by the Federal Aviation Administration are subject to requirements of the National Environmental Policy Act of 1969 and 27 related statutes, directives, and orders. FAA Orders 1050.1D, "Policies and Procedures for Considering Environmental Impacts," and 5050.4A, "The Airport Environmental Handbook," provide guidance for environmental analysis processing procedures.

Initial Review of the Capstone Program

A team of eight Alaskan Region personnel representing the Assistant Chief Counsel, Real Estate, Procurement, Air Traffic, Airway Facilities, Flight Procedures, and Airports programs, and the Alaskan Region's Environmental Network Chair conducted an initial review of the Capstone Program as required by Order 1050.1D. All team members have been appropriately trained and are experienced in environmental analysis and procedures required to support FAA programs. The initial review was conducted to determine if this program could significantly affect the human environment with respect to noise, land, air and water quality; whether development will be located in wetlands, coastal zones, historic or archeological sites, areas inhabited by endangered species, or areas protected under DOT Section 4(f); or whether any action would be highly controversial on environmental grounds.

Team Analysis, Findings, and Conclusions

The environmental review team considered each of the above Federal actions proposed in the Capstone Program.

On November 3, 1998, the Alaska Department of Transportation and Public Facilities (DOTPF), sponsor of the 10 involved village airports, wrote to advise FAA that the proposed GPS-procedures do not affect Section 4(f) land or property defined in Section 106 of the Historic Preservation Act. DOTPF further stated there is no reason the actions should be controversial on environmental grounds. The new procedures are not likely to have any impact on natural, ecological, cultural, or scenic resources of national, state or local significance. This includes impacts on endangered species, wetlands, flood plains, coastal zones, prime or unique farm lands, energy supply and natural resources. The procedures will not affect resources protected by the Fish and Wildlife Coordination Act and will not affect the availability of adequate relocation housing, nor involve the relocation of persons or businesses. The proposed procedures will not divide or disrupt any established community or planned development near the airports. They will not cause an increase in surface traffic or congestion. The procedures will not have a significant impact on noise levels of any noise sensitive areas nor have an impact on any air quality standards, water quality, or a public water system. The procedures will not be inconsistent with any Federal, state, or local law or administrative determination relating to the environment. The new procedures will not affect, directly or indirectly any human beings by creating impacts on the environment. Two airports originally considered for the Capstone Program, Tooksook and Chevak, were replaced on December 22, 1998, by the Industry Council with Holy Cross and Koliganek due to schedule conflicts with planned airport development

projects which would have impacted runway locations and alignments. A letter from Alaska DOTPF on March 2, 1999, provided the same recommendations for categorical exclusions at these two new Capstone locations.

The Alaska DOTPF submitted FAA Forms 7480-1 for each of the ten village airports involved in the Capstone Program on November 10, 1998, and March 2, 1999, and requested that the status of each airport be changed from VFR to IFR operations.

The team concluded from its analysis that the Capstone Program will not produce any change in the aircraft types used to service the villages, the frequency or schedule of flights, or impact other factors which might tend to increase noise exposure such as the relocation of approach and departure flight paths. In addition to safety and efficiency improvements, two favorable consequences of the Capstone Program would be a slight reduction in the number of missed approaches and a reduction in the number of flights diverted due to weather conditions at the airport.

Determination of Categorical Exclusion

Based on its findings and conclusions, the environmental review team determined that the Capstone Program may be Categorically Excluded from further processing in accordance with Order 1050.1D, Paragraph 31.a.; Appendix 1, Paragraphs 5.n., p., q., w. and x.; Appendix 3., Paragraph 4.h.; and Appendix 4., Paragraphs 4., h. and k. Order 5050.4A, Paragraph 23.a.(3), also provided for exclusion of weather observation equipment of airports. An environmental assessment is not required. Although not necessary or provided for in the referenced orders, the team prepared this report to document its review and determination for the program files.

Extraordinary Circumstance Consideration

The environmental review team determined there was potential for a related Federal action to become highly controversial; that is, a contemplated FAA regulatory action to lower the floor of controlled airspace within the Capstone Program area, and potentially other areas of Alaska, to 1,200-feet above ground level. (FAA Order 1050.1D requires that a proposed Federal action, normally categorically excluded, that is likely to be highly controversial on environmental grounds, shall be the subject of an environmental assessment and thus cannot be categorically excluded.)

The Air Traffic Division is requesting comments from the public by March 31, 1999, on this potential airspace change and, based on the comments received, could eventually work toward a Notice of Proposed Rulemaking to implement the airspace action.

A subsequent legal review by the Office of Assistant Chief Counsel, confirmed the review team's position on this matter: The potential for significant controversy associated with lowering the floor of controlled airspace would not be based on environmental grounds. Such controversy, if it should develop, would in reality be based on opposition to more stringent flight restrictions on VFR operations conducted within the newly-designated controlled airspace. VFR operations in uncontrolled airspace may be flown in minimum weather conditions of 1-mile visibility and clear of clouds. Once airspace is classified as controlled, the Federal Aviation Regulations require 3-miles visibility for VFR flight and aircraft must remain 500-feet below, 2,000-feet horizontally from, and 1,000-feet above clouds. In this instance, the team believes the contemplated designation of controlled airspace will not significantly increase the number, frequency, or timing of aircraft flights, the type of aircraft operated, the noise produced, or otherwise affect those factors associated with impact to the environment.

Environmental Review Team Concurrence

The following FAA Alaskan Region personnel participated in the initial program review of the Capstone Program in accordance with FAA Order 1050.1D and concur with the determination that the program is categorically excluded from further environmental processing.

Ellis R. McElroy, AAL-4	<u> -signed </u>	Date	<u> 3/19/99 </u>
Howard Martin, AAL-7	<u> -signed </u>	Date	<u> 3/23/99 </u>
Clarence E. Goward, AAL-536	<u> -signed </u>	Date	<u> 3/24/99 </u>
Bradley R. Platt, AAL-471	<u> -signed </u>	Date	<u> 3/23/99 </u>
Merle Perrine, ANC FPO	<u> -signed </u>	Date	<u> 3/23/99 </u>
Patricia Sullivan, AAL-610	<u> -signed </u>	Date	<u> 3/24/99 </u>
Mary J. Boden, AAL-54	<u> -signed </u>	Date	<u> 3/24/99 </u>
Russ Collins, AAL-55 (AIM)	<u> -signed </u>	Date	<u> 3/24/99 </u>

Program Manager Acceptance

As Manager of the Capstone Program, I have reviewed the above environmental analysis of the proposed federal actions and concur with the determination that all planned activities are categorically excluded from further environmental processing.

John R. Hallinan, AAL-1s	<u> -signed </u>	Date	<u> 3/25/99 </u>
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