

Wildlife Hazard Evaluation
Of the
Akiak Landfill-Septage Lagoon Relocation Project
(September 1, 2020 – September 3, 2020)



Prepared for:

Akiak Native Community
PO Box 52127
Akiak, Alaska 99552

Submitted by:

United States Department of Agriculture
Animal and Plant Health Inspection Service
Wildlife Services
9001 E. Frontage Road
Palmer, Alaska 99645

*Work Performance per Cooperative Service Agreement No. 20-7302-7117-RA.
Project was monitored by Mike Linnell, State Director, Washington and Alaska.*

Background

Akiak is a Native community located along the west bank of the Kuskokwim River approximately 42 miles northeast of Bethel. The 2010 U.S. Census population for Akiak was 346 residents. The community is located within the vast Yukon-Kuskokwim Delta. Akiak Airport (AKI) is located about 2,000 feet from the existing landfill and honey bucket lagoon; plans are currently underway to close the existing facilities and construct new facilities further away from the airport in response to a home relocation project.

The Akiak Home Relocation and Managed Retreat Project has been developed in response to the extreme riverine erosion that began in May 2019, which resulted in the loss of up to 75 feet of riverbank in the community. The project involves moving threatened homes that are currently along the riverbank to a new subdivision located near the existing landfill location. Due to health concerns, the existing landfill and honey bucket lagoon will be relocated. The new landfill will be located approximately 3,000 feet west of the current landfill, while the honey bucket station will be moved 1,500 feet north. The proposed location of the new landfill is labeled as the Alternative #1 New Solid Waste Site on Figure 1, it is located approximately 4,100 feet north-northwest of the Runway 03 threshold. The proposed location of the new honey bucket and septage lagoon is labeled as New HB & septage lagoon on Figure 1.

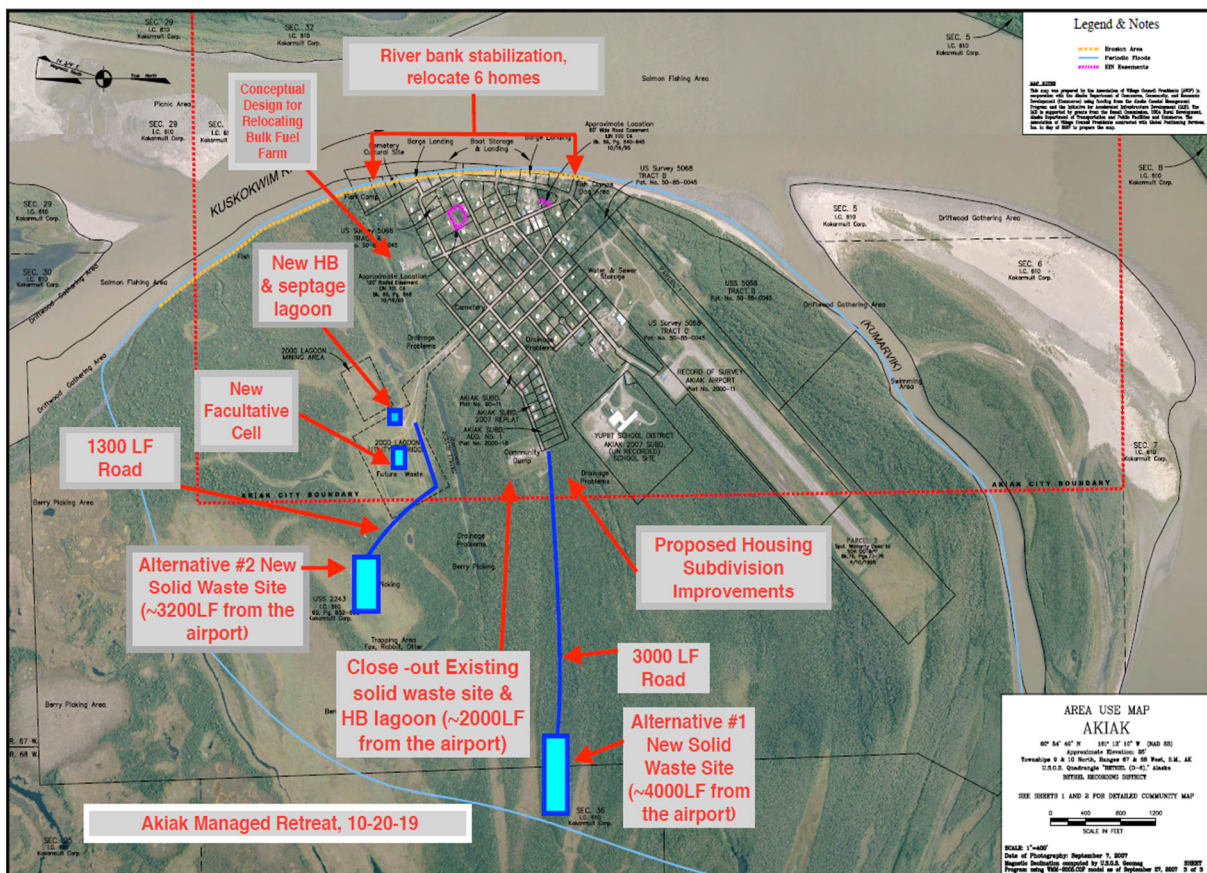


Figure 1 Akiak Managed Retreat Layout. Akiak, Alaska 2020

The U.S. Department of Agriculture's, Wildlife Services program (WS) is nationally recognized by the Federal Aviation Administration (FAA) as having expertise in assessing and managing wildlife hazards at airports. A *wildlife hazard* is defined as: *The potential for a damaging collision between wildlife on or near an airport.* Wildlife attractants (e.g. sources of food, open water, and protective cover) are often found on or near an airport and frequently increase the risk of a wildlife strike.

The Akiak Native Community requested that WS conduct a wildlife hazard evaluation in Akiak to meet the requirements (40 CFR 258 section 258.10) from the FAA for the relocation of the community's solid waste site and septage lagoon. This assessment was completed to determine the impact that wildlife may have on aircraft landing and departing from AKI as a result of relocating the existing landfill and honey bucket lagoon. Akiak Airport is a state-owned public-use airport serving the Akiak area. Runway 3/21 is located to the east of the community, is 3,196 feet (974 m) long and 75 feet (23m) wide. Both piston-powered and turbine-powered aircrafts utilize the airport.

Landfills are known to attract gulls, ravens, and other scavenging birds; all of which have been documented in the FAA National Wildlife Strike Database as causing damage to aircraft. Both ravens and gulls have been observed near AKI. It is important to determine whether the proposed new Akiak landfill or any other natural or man-made area near the airport attracts wildlife that pose a threat to aircraft operations at AKI.

The FAA Advisory Circular (AC) 150/5200-33C establishes separation recommendations for hazardous wildlife attractants of 5,000 feet between landfills and airports serving piston-powered aircraft, and 10,000 feet between landfills and airports serving turbine-powered aircraft. The FAA also recommends, for all airports 5 statute miles between hazardous wildlife attractants and the air operations area (AOA) for the protection of approach, departure and circling airspace (AC 150/5200-33C, Section 1-4).

Seasonal factors contribute to the wildlife activity in the area, and it should be noted that a site visit provides only a "snapshot" of wildlife activity which may not be indicative of future wildlife use.

History of Wildlife Hazards at Akiak

According to the FAA National Wildlife Strike Database, no wildlife strikes have been reported at AKI. However, nationally, most wildlife strikes go unreported, as pilots are often unaware of the need and how to report strikes. The lack of reported wildlife strikes is not an indication of a lack of wildlife hazards at an airport. Aircraft routinely experience damaging strikes in Alaska, and fatal accidents resulting from wildlife strikes in recent years highlight the very real threat posed by birds to smaller aircraft.

WS made inquiries with multiple pilots that routinely fly into AKI if they've ever had a strike while operating at the airport. None had experienced a strike at AKI and stated that ravens and gulls are the most common birds they see when flying into Akiak. Pilots indicated that the overall wildlife hazards at Akiak seemed low throughout the year. Local residents were also questioned

about wildlife strikes and general wildlife hazards around the airfield. None had heard of a wildlife strike at AKI or indicated any significant wildlife hazards associated with the airport. There are currently no systematic wildlife hazard control activities taking place at AKI and there is no record of such activities having taken place in the past.

Habitat

The area is a vast, flat wetland/tundra complex interspersed by countless ponds, lakes, and meandering rivers. Narrow bands of riparian, black spruce-hardwood, mixed black spruce-balsam poplar, alder, and balsam poplar woodlands make up most of the vegetation in and around Akiak. While most of the vegetation is low growing (generally less than 20 feet in height), some taller trees were observed in proximity to the existing landfill. While WS could not access the proposed location of the new landfill it appears that the area is largely absent of any taller vegetation that would be preferred roosting for bird species utilizing the landfill for foraging.

Average precipitation for the area is 16 inches (410mm) of rain and 50 inches (1270mm) of snow annually. Summer temperatures can range from 42° F (6°C) to 62°F (17°C) on average to wintertime temperatures ranging -2°F (-19°C) to -19°F (-28°C) on average.



Figure 2 Vegetation at the proposed honey bucket site. Akiak, Alaska 2020.

Observations

All observations were conducted September 1 – September 3, 2020, between the hours of 6:30am and 6:30pm. Scheduled passenger and cargo flights occur during these hours, although charters, non-scheduled cargo flights, and weather delays to scheduled flights may bring about aircraft movements outside of these times.

WS documented hazardous wildlife activity within close proximity to the landfill and runway at Akiak. Numerous common ravens were observed foraging and loafing at the existing landfill site. Ravens were documented flying across the runway on several occasions moving south to north. It is likely that ravens cross the runway as they fly to and from the landfill throughout the day.

Ravens were observed flying across the runway at altitudes within the flight paths of aircraft using AKI.

Other wildlife observed during our visit included rusty blackbirds. Sign of moose activity was also observed, although not near the runway.

Attractants

Several man-made attractants were observed influencing hazardous wildlife activity. Food is a crucial component and the greatest attractant to wildlife. The existing landfill at Akiak attracts scavenging birds (e.g. ravens) by providing critical foraging opportunities. The proposed landfill may reduce the amount of food available to scavengers if refuse is buried and/or incinerated. If not properly managed, it likely will remain an attractant for scavenging birds.

A review of the landfill's inspection records (AK DEC, 2016 Akiak Landfill Inspection Letter, dated 3/20/2017) indicated that the Akiak Native Community has greatly improved the management of its landfill. The inspector made notes indicating that it has a small working face, working burn unit, and a good collection system. All these efforts have a positive impact on reducing the number of birds attracted to a landfill. Operations of the new landfill should be maintained at or exceeding the level that was documented by the AK DEC in 2016.



Figure 3 Existing landfill. Akiak, Alaska 2020

Recommendations for the Proposed Landfill

- *Reduce wildlife use at the landfill* – A perimeter fence will help to deter mammals. Birds are attracted to landfills for loafing and foraging opportunities. Incinerating or burying refuse as frequently as possible will reduce available food sources. If bird activity increases, the rate of incineration or burial should also increase. If this does not reduce activity, a grid system may need to be erected over the landfill. Gulls and ravens will easily fly through a poorly designed grid, so spacing between wires will need to be small. WS has expertise in constructing such grids and can be contacted for further assistance, if a grid becomes necessary.
- *Document hazardous wildlife activity* – Wildlife activity that poses hazards at the airport and landfill should be formally documented and pilots should be informed of the need to report strikes and near misses. This information will be critical to properly evaluate the impacts once the proposed landfill is operational. Without this information, managers will be ill-equipped to determine if the landfill should increase the rate of incineration or burial or install an overhead grid to deter birds. Simply, one cannot manage what one does not measure.
- *Ensure proper disposal of animal waste* – Monitor the activity of birds along the Kuskokwim River during game processing seasons. Proper disposal of waste from fishing and hunting may be required to reduce the number of scavenging birds that are attracted to the area. Ensure that fish carcasses are disposed into deep water to make them inaccessible to scavenging birds and to allow the river's current to remove waste from the area. If animal waste from game processing is disposed in the landfill, incinerate or bury it immediately to avoid attracting scavengers.

Conclusions

Wildlife hazards exist at the AKI, but WS was unable to document any strikes or near misses. WS documented hazardous bird activity traveling across the runway coming to and from landfill, showing that the existing landfill is an attractant. This activity is expected to continue. The proposed landfill and honey bucket/septage lagoon project will significantly increase the distance between the landfill and honey buck/septage lagoon and the runway, but it will remain within the FAA's recommended separation distance. The proposed landfill and honey bucket/septage lagoon itself are not likely to change the existing wildlife hazards, positively or negatively, at AKI. While the proposed actions are not likely to change the existing threats at AKI, it is imperative that the operators of the new facilities remain aware that improper management could impact the safety of the community.