

Upgrade and Repair of Critical Volcano Monitoring Instruments

FY2016 Request: \$500,000
Reference No: AMD 60704

AP/AL: Appropriation **Project Type:** Renewal and Replacement
Category: Public Protection
Location: Statewide **House District:** Statewide (HD 1-40)
Impact House District: Statewide (HD 1-40) **Contact:** Jean Davis
Estimated Project Dates: 07/01/2015 - 06/30/2020 **Contact Phone:** (907)465-2422

Brief Summary and Statement of Need:

As part of a Federal-State (USGS-DGGS) cooperative agreement, the Department of Geological & Geophysical Surveys (DGGS) volcanology section is responsible for helicopter and fuel contracting and logistics in support of volcanic monitoring station installation, upgrades, and maintenance for the Alaska Volcano Observatory. This funding will provide helicopter, fuel, and logistical support for all Alaska Volcano Observatory field operations to install, repair, and upgrade volcanic monitoring instruments at high-threat volcanoes in Alaska.

Funding:	<u>FY2016</u>	<u>FY2017</u>	<u>FY2018</u>	<u>FY2019</u>	<u>FY2020</u>	<u>FY2021</u>	<u>Total</u>
Fed Rcpts	\$500,000						\$500,000
Total:	\$500,000	\$0	\$0	\$0	\$0	\$0	\$500,000

<input type="checkbox"/> State Match Required	<input checked="" type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input type="checkbox"/> On-Going
0% = Minimum State Match % Required		<input checked="" type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

Operating & Maintenance Costs:

	<u>Amount</u>	<u>Staff</u>
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	0
Totals:	0	0

Prior Funding History / Additional Information:

No prior funding history.

Project Description/Justification:

Rapid detection of volcanic activity is critical in protecting threats to life, health, and the economy. Several high-threat volcanoes in Alaska are currently inadequately equipped with monitoring instruments and repairs and upgrades are needed to bring this equipment back to operational status.

Seismic, infrasound, and GPS instruments allow scientists at the Alaska Volcano Observatory to detect early signs of volcanic unrest. This information allows the observatory to provide timely and accurate information on volcanic hazards, and warnings of impending dangerous activity to the public and to local, state, and federal officials.

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This project will provide helicopter, fuel, and logistical support for all Alaska Volcano Observatory field operations to install, repair, and upgrade volcanic monitoring instruments at high-threat volcanoes in

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Alaska, including the Cook Inlet volcanoes near Anchorage (Spurr, Redoubt, Iliamna, Augustine, Fourpeaked) and volcanoes on the Alaska Peninsula and in the Aleutians that have experienced instrument failure (i.e. Aniakchak volcano).

The project directly addresses the DGGs statutory mission (AS § 41.08.020) to determine "...the potential geologic hazards to buildings, roads, bridges, and other installations and structures." It also supports AS § 41.08.017: "**b**) Systematic collection, evaluation, archival, and distribution of geologic data and information on earthquakes, volcanic eruptions, and engineering geology and identification of potential seismic, volcanic, and other geological hazards throughout the state are in the public interest and necessary to orderly, safely, and cost-effective development in the state."

The project also directly addresses DNR's core service to "Mitigate threat to the public from natural hazards by providing comprehensive fire protection services on state, private, and municipal lands, and through identifying significant geological hazards."

Line Item	Amount
71000 - Personal Services (position detail below)	\$100,000
72000 – Travel (fieldwork, meetings)	0.0
73000 – Contractual (helicopter, imagery)	\$350,000
74000 - Commodities	\$50,000
75000 - Capital Outlay	0.0
77000 - Grants	0.0
Total Request	\$500,000

Position Detail:

Existing PFT positions in Fairbanks:

- 10-2117 Geologist V
- 10-2030 Analyst Programmer IV
- 10-2016 Geologist III
- 10-2085 Geologist IV

Without this volcanic monitoring instrument upgrade and repair, AVO will be unable to warn of impending volcanic events at several high-threat, active volcanoes in Alaska, putting life, health and the economy at risk.