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## JBLM considered for airflow project

By Dean Siemon Northwest Guardian

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To reduce energy costs at aircraft painting hangars, the Naval Facilities Command Engineering and Expeditionary Warfare Center is searching for the best sites for airflow reduction tests, including Joint Base Lewis-McChord.

Funded by the Department of Defense's Environmental Security Technology Certification Program, the test examines if hangars at military installations for painting can safely lower the airflow rate to reduce energy costs in all military branches.

A team performed preliminary tests May 13 at Gray Army Airfield on Lewis Main, and May 14 and 15 at Hangar 6 on McChord Field.

The project will visit a number of installations to find four where testing will be conducted this fall. Representatives from the project say there is a good chance JBLM will be one of them.

"It's a different configuration than most hangars," said Scott Hermon, NAVFAC EXWC environmental engineer. "The people are very cooperative. Both buildings meet the different criteria."

The selection process requires the group to test four types of hangars — for small helicopters, large helicopters, small to medium fixed wing utility aircraft and larger fixed wing aircraft.

"We are finding that each hangar is a little bit different," said James Bennett, research engineer for the National Institute of Occupational Safety and Health. "We would like to find enough regularity in our results and conclusions that we can make a solid statement for the (Uniformed Facilities Criteria)."

JBLM provides two of the four categories with small and large painting hangars to test. The certification program would be JBLM's third and largest environmental project run under the Directorate of Public Works' Sustainability Program. The others involve remote energy modeling in buildings.

"The reason is the teamwork of the Navy, Air Force and Army," said Sakhawat Amin, Public Works energy program coordinator. "There are three components that are working here and that will be showcased with this project."

The military standard for velocity of air traveling through an average aircraft hangar is 100 feet per minute, based on data from the 1950s. The goal is a 25 percent decrease, lowering airflow rates to 75 feet per minute.

"We want to be able to prove first that we can reduce it and not impact the safety of the personnel," Hermon said.

When spraying paint onto a large aircraft, there is what Hermon calls "a little overspray," spread by the airflow into the ventilation system.

The examination team hopes a reduction in the airflow velocity would not only create energy savings, but also cut costs for air filters. The average cost for replacing an entire set of air filters in a military aircraft hangar is about \$30,000, according to Hermon.

There are also savings for construction of future hangars if the airflow rates are lowered for all installations.

"You can look for smaller equipment and smaller fans," Bennett said. "If you can buy equipment that's optimized for the lower flow rate, then that's more efficient than dialing that flow rate down."

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Studies are scheduled to take place elsewhere, including Marine Corps Air Station Cherry Point in Havelock, N.C., the Sioux City Air National Guard Base in Iowa and Naval Station Coronado in San Diego, Calif.

Testing at the four hangars will produce data used to adjust the old airflow standard. The project is estimated to take two years.

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