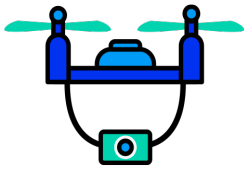
SMART GRANTS PROGRAM



MHA Drone Project: Planning and Protocol Development

Three Affiliated Tribes of the Fort Berthold Reservation

PROJECT PARTNERS

Nueta Hidatsa Sahnish (NHS) College
University of North Dakota
Northern Plains UAS Test Site
Airspace Link
Thales
Valkyrie UAS Solutions

The MHA Nation Tribal Council & Planning and Grants-CEDS Office
Elbowoods Memorial Health Center
MHA Nation Interpretive Center, GIS Water Resources Office, Legal Department, Health Administration, and Nation Drone Advisory Board
Boys and Girls Club of TAT
New Town Public Schools

PROJECT CHALLENGE

This Project will address the need for increased access to medications, and other basic lifesaving and emergency support, on the Tribal lands of the Three Affiliated Tribes (TAT) of the Fort Berthold Reservation located in remote and rural areas of northwest North Dakota. This Project is designed to build a sustainable foundation to integrate the use of UASs/Drones, which are repeatable and scalable, to support the well-being of Tribal members. Specifically, the project will demonstrate the use of UASs/drones to ensure better access to medical care and equipment between Twin Buttes, ND, and New Town, ND across the Missouri River.

IMPACT

The location of the Project is on the Tribal Lands of the Three Affiliated Tribes (TAT), located in northwestern North Dakota. It serves members of the TAT by providing (1) a community assessment to determine the need for future use cases of UASs/drones, (2) a resource describing the economic viability of using drones to improve the quality of life, (3) support for enhancing Tribal workforce in aeronautics in collaboration with the University of North Dakota, Nueta Hidasta Sahnish (NHS) College and the Boys and Girls Club of TAT, and (4) planning for the integration of Beyond Visual Line of Sight (BVLOS) operations through the Vantis network on Tribal lands.

CURRENT STATE OF THE ISSUE

The limitations in access to medications and emergency services are the consequence of the flooding of Tribal lands to build the Garrison Dam. Consequently, a once-mile-long bridge connects six segments creating the need for extensive travel to receive healthcare. For example, traveling from New Town, ND to Twin Buttes, ND is now 96 miles while if you cross the river, it is approximately 40 miles or less depending on your landing and takeoff locations. This project is developing infrastructure to address this concern through autonomous systems to ensure access to key medically related transport.

STAGE 1 OUTCOMES

Planned outcomes include (1) conducting a proof-of-concept protocol flight simulating the transportation of time-critical medication between New Town, ND's Elbowoods Memorial Health Center (EMHC), and Twin Buttes, ND medical clinic, (2) establishing a certificate program between NHS College and UND to advance the capacity in the application of autonomous systems, (3) developing accurate economic models to examine the impact of UAS introduction to the MHA Nation economy, and (4) completing of an assessment identifying additional use cases.

STAGE 2 VISION

Structural and meaningful connectivity will exist in the application of the use of drones for MHA Nation through the Vantis network to allow flights that are BVLOS. Stage 2 funding will provide resources to develop needed infrastructure for this connectivity. The next phase of funding will (1) build on the government-to-government relationships developed in Stage 1, (2) continue to support and develop the locally trained workforce, (3) apply additional use cases based on the needs identified in the assessment and (4) build on a greater understanding of the autonomous system to address basic needs.