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FOR IMMEDIATE RELEASE

Flagler County UAS (drone) Program partners with TruWeather Solutions for improved low-altitude sensing

August 19, 2024 – The Flagler County Unmanned Aircraft Systems (UAS or drone) Program has joined forces with TruWeather Solutions to increase its low-altitude sensing capability.

"The real-time weather data we get from TruWeather has had a huge impact on our operations, especially as we start flying Beyond the Visual Line of Sight (BVLOS)," said UAS Program Coordinator Bruno Luna. "There's a lot to consider when operating BVLOS, so having a platform that has all the pertinent data on one screen is a huge time saver."

Continuous innovation and adaptation are crucial to overcoming adverse weather-related obstacles – heavy rains, high winds, extreme temperatures, fog (or smoke), and mist – to ensure that Flagler County's drones can operate safely and effectively in less-than-ideal conditions.

"Winds and reduced visibility can complicate overwatch and monitoring missions, as both factors can impair the data quality and instrument performance of the onboard sensors, such as the optical cameras and thermal imager," said Meteorologist James Luehrs, TruWeather Solutions. "The complexity of weather impacts is further heightened when missions take place beyond the visual line of sight."

The ongoing improvements and innovations in drone technology and weather infrastructure will continue to enhance Flagler County's UAS capabilities, making it a model for modern emergency response strategies.

"Our drone team must deal with coastal weather – and areas further inland – with dense vegetation and fog that affect visibility during flights," Luna said. "This can be challenging during normal operations and cause delays. Finding the right weather forecasting tools can make a big difference for overall safety, especially as we start to fly BVLOS missions around the county."

The Flagler County Unmanned Aircraft Systems Program is an innovative initiative that has grown significantly since its inception in 2019. The county has leveraged drone technology for various public safety and environmental monitoring purposes, thus expanding the capabilities and applications of the program.

"What started as a tool for marketing and situational awareness has evolved to support search-and-rescue missions, disaster response, land management applications, and public safety operations," said Chief Information Officer Matt Rivera. "These innovations mark a promising future for the program."

Since 2019, drones have been used successfully used to find a missing kayaker and assist in multiple other rescue missions. The drones can be equipped with high-resolution cameras and thermal imaging sensors to conduct aerial overwatch of wildfire-prone areas to detect hotspots and smoldering areas that may not be visible to the naked eye. Using LiDAR and multi-spectral sensors can effectively locate ladder fuels (which can carry fire burning in low-growing vegetation into taller vegetation) hidden under tree canopies, and measure vegetation biomass during the wildfire preseason.

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