

Space Coast TPO Operating Manual

Procedure: PR-22-08

Title: Unmanned Aircraft Systems

Approval Signature:


TPO Executive Director

Approved: 10/1/2021
Revised:

1. **Purpose.** The purpose of this Unmanned Aircraft System (UAS) or drone, procedure is to establish scope and governance of Unmanned Aircraft Systems (UAS) activities for the Space Coast Transportation Planning Organization (SCTPO) and the use of UAS on or over transportation areas of interest. It also serves to establish the Designated UAS Authority responsible for overseeing UAS activities at the SCTPO. This procedure requires that all SCTPO sponsored UAS operations taking place on-site or off-site, will be conducted in a manner ensuring individual privacy and safety, in accordance with all applicable Federal, State, and Local laws.
2. **Authority.**
 - a. The acting UAS Coordinator is responsible for approving any UAS activities in SCTPO areas of interest, activities or events.
 - b. SCTPO UAS Coordinator: Steven Bostel
3. **Definitions. Federal Aviation Administration (FAA)** – A division of the Department of Transportation that inspects and rates civilian aircraft and pilots, enforces the rules of air safety, and installs and maintains air-navigation and traffic-control facilities.

Unmanned Aircraft System (UAS) – An unmanned aircraft system, sometimes called a drone, is an aircraft without a human pilot onboard – instead, the drone is controlled from an operator on the ground. Sometimes prefaced as a Small Unmanned Aircraft System (sUAS).

Unmanned Aerial Vehicle (UAV) - An unmanned aerial vehicle is a powered, aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can fly autonomously or be piloted remotely.

Drone - The common term for UAV, UAS, and sUAS.

Remote Pilot-in-Command (RPIC) - The official term given by the FAA for the individual who either directly operates the UAS or directly supervises another individual operating the UAS. The Remote Pilot in Command must have the proper FAA UAS pilot certifications and abide by the necessary FAA regulations and this procedure.

Designated UAS Authority – The individual, department, or committee designated by the [Company Name] as authorized to provide oversight for UAS activities.

4. **Eligibility.** TPO employees that wish to operate a SCTPO UAS must first obtain approval from their supervisor. Once approval has been granted they must take the steps necessary to prepare for and pass the FAA part 107 Exam and obtain a remote pilot certificate. Once properly trained and licensed, the employee must follow the flight procedures outlined below. Employees that are not licensed remote pilots may fly under the direct supervision of someone who is with supervisor approval.

5. **Operating Rules.**

- a. The remote pilot in command must conduct a pre-flight inspection. The remote pilot should record the pre-flight inspection via hard copy document or appropriate web-based application.
- b. The remote pilot may not go forward with the operation if he or she believes that there are any physical or mental conditions, drug- or alcohol-induced or otherwise, that would interfere with the safe operation of the UAS.
- c. The remote pilot must maintain visual line-of-sight at all times.
- d. Where possible, a visual observer should assist in operations.
- e. No operations over people unless those people are directly participating in the operation.
- f. Operations within daylight hours only. SCTPO UASs may operate during twilight hours (30 minutes before official sunrise to 30 minutes after official sunset) if the UAS has anti-collision lighting.
- g. UASs must always yield the right-of-way to other aircraft.
- h. Maximum ground speed of 100 mph (87 knots).
- i. Maximum altitude of 400 feet above ground level. i. A UAS may go above 400 feet if it remains within 400 feet of a structure.
- j. Operations must stay within Class G airspace – well away from airports. However, should the pilot in command determine that to perform SCTPO duties operations may move into Class B, C, D or within the lateral boundaries of the surface area of Class E airspace, the remote pilot must request and receive permission from the appropriate Air Traffic Controller.

Operations should also, where practicable, stay at least one mile away from heliports, including hospitals with heliports.

- k. UASs may only fly when visibility is at least at 3 miles.
- l. No operations from a moving aircraft.
- m. No operations from a moving vehicle unless the operation is over a sparsely populated area.
- n. No careless or reckless operations (e.g., no stunt flying).
- o. No carriage of hazardous materials.
- p. In the event of operations that lead to serious injury, loss of consciousness, or property damage of at least \$500, it is the remote pilot's responsibility to make an official report to the FAA. This can be done in coordination with designated SCTPO supervisors or personnel.

6. Operating Limitations – Waivers.

- a. All remote pilots must make sure UAV operation falls within the standard FAA Part 107 operating rules.
- b. If it becomes clear that compliance with a certain or multiple of Part 107's limitations is not practical to get the full benefit of SCTPO's UAS usage, the remote pilot or responsible individual should bring such to the attention of the UAS coordinator or other assigned supervisor.
- c. SCTPO will then make an application to the FAA for a waiver for the specific Part 107 limitation.
- d. Waivers are available for:
 - i. Operation from a moving vehicle or aircraft (§ 107.25)*
 - ii. Daylight operation (§ 107.29)

- iii. Visual line of sight aircraft operation (§ 107.31)*
 - iv. Visual observer (§ 107.33)
 - v. Operation of multiple small unmanned aircraft systems (§ 107.35)
 - vi. Yielding the right of way (§ 107.37(a))
 - e. Operation over people (§ 107.39)
 - f. Operation in certain airspace (§ 107.41)
 - g. Operating limitations for small unmanned aircraft (§ 107.51)
7. **Pre-Flight/Post Flight.** Pre-Flight Checklists and Mission Logs must be conducted for each UAS mission by the SCTPO or by a third-party for the SCTPO. If more than one drone is flown during the same mission, each drone and its flight details must be recorded on the Mission Log report. Mission Log reports can be a handwritten log or be recorded in a flight application on a smart device.
8. **Type of Projects for Drone Use.** Space Coast TPO staff shall identify when use of drone footage could be used for a project that will enhance efforts to support decision making options or visually aid project team and/or the public on either existing conditions or analyzing benefits of a transportation improvement. Video footage of public engagement events should also be considered to promote future events and/or provide feedback.
9. **Data Collection.** All data collection (e.g., images, video) should be protected and maintained in strict compliance with organizational policies and procedures. Whenever possible, the UAS should divert sensors away from occupied structures and uninvolved persons to minimize inadvertent, unapproved data collection.
10. **Accident Reporting.** In case of a UAS mishap, the RPIC is responsible for safe custody of the UAS until the aircraft has been taken into custody by proper authority.

Per Part 107, any operation that results in serious injury, loss of consciousness, or property damage of at least \$500 should be reported to FAA within 10 days. The report may be submitted to the appropriate FAA Regional Operations Center (ROC) electronically or by telephone.

11. **Sanctions.** Any violations of company policies by an individual will be dealt with in accordance with applicable company policies and procedures, which may include disciplinary actions up to and including termination of employment.

Fines or damages incurred by individuals or units that do not comply with this procedure will not be paid by the SCTPO and will be the responsibility of those persons involved.

12. **Resources.** FAA's general page for Unmanned Aircraft Systems information:

<https://www.faa.gov/uas/>

FAA Drone Zone <https://faadronezone.faa.gov/#/>

FAA B4UFly Mobile App https://www.faa.gov/uas/where_to_fly/b4ufly/

FAA Summary of Small Unmanned Aircraft Rule (Part 107):

https://www.faa.gov/uas/media/Part_107_Summary.pdf

FAA's Becoming a Pilot:

https://www.faa.gov/uas/getting_started/part_107/remote_pilot_cert/

FAA's Sample Preflight Inspection Checklist:

<https://www.faasafety.gov/files/gslac/courses/content/451/1458/Preflight%20Inspection%20Checklist.pdf>

An Early Survey of Best Practices for the Use of Small Unmanned Aerial Systems by the Electric Utility Industry: <https://info.ornl.gov/sites/publications/files/Pub73072.pdf>

U.S. DHS Best Practices for Protecting Privacy, Civil Rights & Civil Liberties In UAS Programs: <https://www.dhs.gov/sites/default/files/publications/UAS%20Best%20Practices.pdf>

13. **Request Process.**

- a. Any employee may approach their immediate supervisor and request to be considered for UAS pilot training and operation. A written request with a list of potential use cases is required for approval consideration.
- b. Supervisor shall review request within 10 business days. If supervisor approves of request, the supervisor must then seek approval from the Executive Director.

14. **Term.** Any UAS Operational agreement may be terminated at any time by either management or the employee.