

# Flying UAVs in Vermont: Lessons Learned

The University of Vermont (UVM) is currently undergoing a research project funded by USDOT entitled “Rapid Exploitation of Commercial Remotely Sensed Imagery for Disaster Response & Recovery”. This is the first university research project in the State of Vermont which will use Unmanned Aerial Vehicles (UAVs). To assist in future UAV projects, we have compiled a list of lessons learned about purchasing and flying UAVs in Vermont. This list will be updated as the project progresses.

- **Certificate of Authorization (COA).** Some UAV vendors (e.g. Gatewing) will only sell to organizations that can obtain a COA. The COAs can only be issued to public agencies. Some public colleges and universities within the United States are considered public agencies, but for various legal reasons UVM is not considered a public agency. Opinions on whether or not COAs are required for university research differed among the other universities we spoke with who operate UAVs. Some have obtained COAs, some believe that no COA is required as they are operating under 400ft, and others work with their state transportation agency to secure cleared airspace. We decided to purchase a UAV that did not require a COA.
- **Authorization for Flights.** All UAV flights will need to be scheduled and approved by Guy Rouelle at the Vermont Agency of Transportation.
  - Step One: Guy Rouelle at the Vermont Agency of Transportation should be contacted at the onset of the project. He should be provided with a project summary and scope of work. Flight will require a Mission Profile and during this initial conversation Mr. Rouelle will tell you exactly what information to include in the Mission Profile and how far in advance to submit it. Also, depending on where you want to fly and at what altitude, you may need a Certificate of Authorization (COA) for the flight. If your organization is not an Agency of the State, we recommend that you choose flight paths that are outside of restricted airspace and below 400ft AGL to avoid the COA requirement. Confirm with Mr. Rouelle as to whether or not your project will require a COA.
  - Step Two: Send a Mission Profile to Guy Rouelle at least 1-2 weeks ahead of the schedule flight. The more information you can provide ahead of time, the better. The Mission Statement should include:
    - UAV departure point,
    - route of flight,
    - altitude,
    - duration of flight,
    - preprogrammed profile or remotely controlled
  - Step Three: Guy Rouelle will contact FAA and Portland FSDO, if necessary. Also, Mr. Rouelle will obtain a Special Airworthiness Certificate (SAC), if necessary.
- **Restricted Airspace.** The general rule of thumb is that UAVs should be flown 5 or more miles away from designated airports and Camp Johnson. However, different airports have different requirements, and some additional restricted airspace exists within Vermont. Work with Guy Rouelle when selecting a flight location.
- **Flight Altitude.** The UAV should be operated below 400ft AGL to avoid the need for FAA clearance.