TR-240666 Follow Up Questions for GCPF Applicant with Responses

1. How many drone units (UAS) does Marysville PD currently have?
    a. How are they assigned?
    b. Assigned to individual officers? Who? How is that determined?
    c. Kept at station and signed out for a shift?

2. Does MPD have take-home cars?

3. Does MPD have motorcycle units for traffic enforcement?

4. How will the drone(s) be assigned?
    a. How will it be determined who gets the drone(s)?
    b. Will they be signed out from the station for the shift?
    c. If individually assigned, what happens when the officer is on vacation? Does someone else use the drone?
    d. What is the proposed schedule for use?

5. Has the city considered No Trespassing signs, or signs warning of drone surveillance?

6. What is the difference between a UAS and a DFR program?

EST. 1891
MARYSVILLE
WASHINGTON

MARYSVILLE POLICE DEPARTMENT

Erik Scairpon, Chief of Police

September 24, 2024

Grade Crossing Protective Fund Grant Application Supplemental

Mr. Mike Turcott,

Thank you for the opportunity to provide additional information regarding our application for the Grade Crossing Protective Fund grant. Below are the details you requested:

1. **Current Drone Inventory:**
    - **(1) DJI Matrice M30:** IP Rating 55 (suitable for inclement weather)
    - **(1) Autel Evo 2:** No IP rating
    - **(2) DJI Mini Pro:** No IP rating (primarily for indoor use)

The M30's IP rating is crucial for safety and operational versatility, particularly in the Pacific Northwest's varied weather conditions.

It is important to note that only one of our drones (M30) can fly in inclement weather. Drone manufacturers continue to advance their technology to comply with these changes including Ingress Protection (IP Rating) for drones. IP, which stands for Ingress Protection (and sometimes referred to as International Protection ratings), is a globally recognized standard that indicates the level of protection an electronic device has against external elements like dust and water. Established by the International Electronic Commission, this rating system has gained traction across continents, from Europe to Asia and the USA. The IP rating offers insights into the resilience of a drone's mechanical parts against environmental factors. It is a two-digit code, where:

- The first digit represents protection against solid objects.
- The second digit indicates protection against liquids.

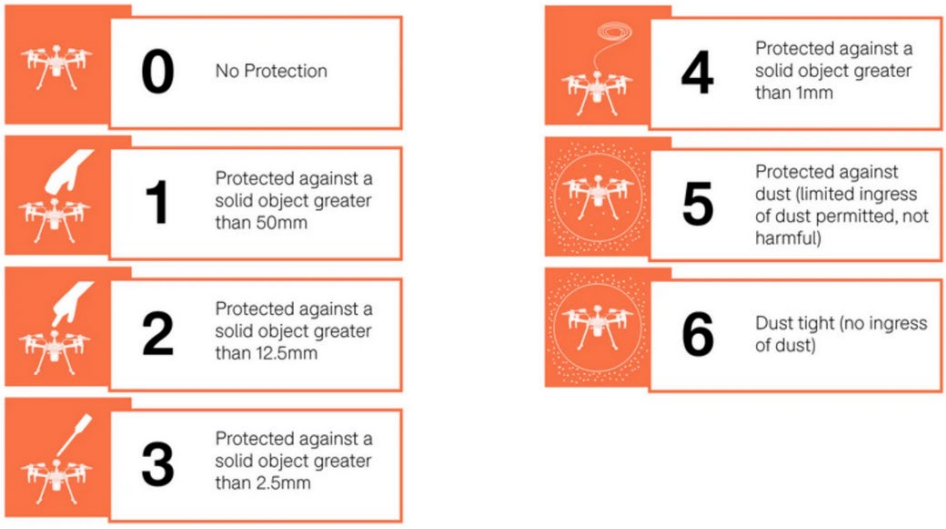
For instance, an IP rating of "IP43" suggests a certain level of protection against solid objects and a specific resistance to moisture. The higher these numbers, the better the protection. A rating of "0" implies no protection at all.

Occasionally, manufacturers might add an extra letter, like "M," to signify resistance against specific conditions or materials, such as oil or high voltage.

The "Why" IP Rating is important for drones and our need to purchase newer drones that have this technology. The IP rating system was developed to give potential buyers a clearer understanding of a product's features and its suitability for various environments. For drone operators, this rating is pivotal for several reasons:

1. **Safety**: A higher IP rating ensures that the drone's critical components are safeguarded against harmful elements, ensuring longevity and safe operation.

2. **Versatility**: Knowing the IP rating can help pilots gauge if their drone can withstand challenging weather conditions, such as light rain or dusty environments.
3. **Performance**: Drones with a high IP rating typically have superior components, ensuring optimal performance even in less-than-ideal conditions. For instance, a drone like the DJI M30 with an IP55 rating assures users of its resilience against water exposure from any angle including rain. However, it should not ever be completely submerged in water.



Factors that should be considered when selecting drones for law enforcement agencies today include mission-specific capabilities, durability and reliability, ease of use, and data security. It is essential to choose a drone model that aligns with the specific requirements of the mission, withstands diverse weather conditions, is user-friendly, and ensures secure data transmission and storage.

2. **Drone Assignment:**
    - Drones are housed at the police department and checked out by on-duty UAS pilots. We have 7 licensed UAS pilots, 5 assigned to the Patrol Squads, 1 in the Detectives Division, and 1 in the Traffic Unit.
    - Each pilot can take a drone on their shift, though this can be limited when multiple pilots are available. Currently, we do not assign drones full-time to officers due to our inventory constraints, but we aim to provide each pilot with a dedicated drone as our fleet expands.
3. **Patrol Vehicle Usage:**
    - Marysville does have a take-home car program, and Officers are assigned to their own vehicle that they typically take home. When officers are on vacation, their vehicle and equipment remain at the department, and their drones would be available to another pilot if needed during their absence.
4. **Traffic Units:**

- The Marysville Police Department currently does not have motorcycle units for traffic enforcement. However, in October 2023 we reactivated our Traffic Unit, which is comprised of a Sergeant and four traffic officers, all of them assigned their own patrol vehicle. The traffic team members are the ones who forensically map crime and collision scenes using the drone.

5. **Drone Assignment Process:**
   - As we acquire new drones, we will prioritize assigning them to pilots based on operational needs and training levels. Each pilot will have access to a drone, ensuring they are equipped for a range of scenarios. For example, responding the emergency incidents, and checking the rail lines, city parks, and other authorized facilities.
6. **Use Schedule:**
   - We intend to maximize drone availability by aligning pilot schedules with anticipated operational demands, allowing for flexible deployment based on incidents. Currently, our pilot's schedules and assignments allow for drone deployments 2/3 of the time in a 24-hour period. By the end of the year with the addition of additional drones, we will be at 24/7 coverage.
7. **Grant for No Trespassing Signs:**
   - While we have not previously considered a GCPF grant for "No Trespassing" signs or drone surveillance warnings, we are open to exploring this. The city public works has a sign shop and about 10 years ago, we did make no trespassing signs and put them from 1st St to 116th St. Unfortunately, these have been vandalized and stolen over time.
8. **UAS vs. DFR Programs:**
   - The difference between UAS and DFR programs is two separate programs using drones differently. For example, a UAS program is an Unmanned Aircraft System (UAS) that provides enhanced operational capability, safety, and situational awareness for first responders and the community. This program uses individual drones, piloted by FAA-licensed drone pilots in specific situations.
   - The Unmanned Aircraft System (UAS) program is focused on enhancing operational capabilities for first responders through individual drone deployments for specific incidents which we use now.
   - The DFR program, in contrast, allows for rapid aerial response to emergencies, and other authorized deployments where drones can be operated remotely to provide real-time situational awareness before ground units arrive. We aspire to implement a DFR program within the next five years.

- Currently Redmond Police Department is the only Washington State police agency authorized for this program. More law enforcement agencies in Washington State are working to become authorized for DFR.

Thank you for your consideration. We look forward to the potential impact of this grant on our UAS capabilities.

Best regards,

James Maples
Sergeant (Traffic/UAS)