



WINDHAM POLICE DEPARTMENT CRIME LAB

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Detective Eugene T Gallant
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TO: Chief Kevin Schofield

FROM: Detective Eugene Gallant, Officer Jason Burke

RE: Unmanned Aerial Vehicle (UAV) Proposal

DATE: February 28, 2017

Aerial photographic evidence has long been an essential part of crash and crime scene investigation. This has proven even more true in scenes involving prosecution. Up to this point the only option to obtain these pictures has been from one of the Fire Department's ladder trucks. These platforms work but are limited in their versatility, require more resources and are not always available. Recently there has been a dramatic cost reduction in the UAV market making this a very cost effective way of getting essential photographic evidence. What would take a ladder truck up to two hours could be accomplished in about 20 minutes with a UAV and eliminate the man power needs that are attached to a ladder truck. Along with the obvious evidentiary benefits a UAV could also be a valuable public safety asset. Some of the additional uses for such a tool include:

- Evaluation of HAZMAT scenes
- Forest/brush fire investigation
- Search for missing persons.

There are three components that need to be addressed before a UAV program can be put into place and made operational:

Policy

Because of the public perception, safety and fourth amendment issues surrounding the use of UAV's a comprehensive policy needs to be in place before any program can go into effect. A draft policy, which was based on the Maine Criminal Justice Academy's model policy, has been written and is attached to this proposal. Some of the main points of the policy are as follows:

- UAV pilots must be licensed by the FAA
- Any UAV activity other than routine evidence gathering over public property must be authorized by the Chief of Police.
- Any UAV activity over private property will be considered a search under the fourth amendment and require a warrant.
- UAV's will never be equipped with weapons or any kind of facial recognition software.

Licensing

There are two options for the licensing of UAV pilots:

1. Apply for a public safety exemption from the FAA. This would allow anyone in the Police Department to fly the UAV. These exemptions take a long time to obtain and limit the amount of control the Department has over who flies the UAV.
2. Require authorized UAV users to obtain a “drone” pilots license. The process for this is to either take a UAV pilots course or self-study course through the FAA. Once this is complete the prospective pilot would then schedule a written test through an FAA authorized testing center. I have been in contact with Maine Instrument Flight in Augusta, the cost of the test is \$150.00 and usually takes about a month to schedule.

For the purposes of this proposal we are recommending the Department choose option two. This is the option outlined in the draft policy.

Purchase

After a great deal of research, myself and Officer Burke have compiled a list of three prospective products all ranging in price and capability:

DJI Phantom 3

The least expensive of the three. This is also the model owned by Mahlon Hanson from the Windham Fire Department. This unit has been used at two separate crash scenes so we have first-hand knowledge of its performance and capabilities.

to search results for: phantom 3



DJI Phantom 3 Standard w/ 2.7K Camera and 3-Axis Gimbal & Manufacturer Accessories + 2 Extra DJI Batteries + SSE Aluminum Hard-Shell Case + Multi-Battery Charging Board for DJI Phantom 3 + MORE

by SSE

★★★★☆ 130 customer reviews | 106 answered questions

Price: **\$769.99** Prime

Get \$40.00 off instantly: Pay \$729.99 upon approval for the Amazon.com Store Card. [Learn more](#)

In Stock.

Want it Tuesday, Feb. 28? Order within **21 hrs 23 mins** and choose **Two-Day Shipping** at checkout. [Details](#)

Ships from and sold by SSE Photo & Video.

Color: **Standard**



Size: **EVERYTHING YOU NEED**

Advanced Complete **EVERYTHING YOU NEED** Essential Starter Ultimate

- Easy to Fly: An intelligent flight system automatically keeps your Phantom 3 Standard in the air and under your control.
- Amazing Images: Take stunning 2.7K HD videos and 12 Megapixel photos with the integrated aerial camera.
- Stable Footage: DJI's advanced gimbal stabilization technology gives you movie-quality results no matter how you fly.
- Enjoy the View: A live video feed gives you a 720p HD real-time view of what your camera sees right on your mobile device.
- Peace of Mind: Fly up to 25 minutes on a single charge, and the Intelligent Flight Battery will automatically remind you when power is running low.

DJI Phantom 4

This is the new version of the above product. Improvements include better camera performance and collision avoidance.



DJI Phantom 4 Quadcopter Backpack Bundle: Includes 2 Phantom 4 Batteries, Phantom 4 Backpack, 16GB MicroSD Card and more...

by DJI

★★★★★ 26 customer reviews | 40 answered questions

Price: **\$1,249.99 & FREE Shipping**

Item is eligible: **No interest if paid in full within 12 months** with the Amazon.com Store Card. [Apply now](#)

Note: Not eligible for Amazon Prime.

In Stock.

Get it as soon as March 1 - 6 when you choose **Expedited Shipping** at checkout.

Ships from and sold by [eDigitalUSA](#).

- DJI Phantom 4 Bundle
- The New DJI Phantom 4 will avoid obstacles automatically. Track moving subjects automatically using ActiveTrack. TapFly lets you fly with a tap of the finger.
- 28 minute maximum flight time, maximum control range of 3.1mi (5km). Maximum speed of 44mph (72kmh).
- Tracking sensors - Internal tracking by smartphone sensors. See-through front shield enabling smartphone cameras for augmented reality apps
- Note: Tablet/SmartPhone is Not Included

New (1) from \$1,249.99 & FREE shipping.

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Pro Portable External Hard
Drive - WIFI USB 3.0 - WDBS...

★★★★★ 118

~~\$249.99~~ **\$179.99** [Prime](#)

DJI Inspire 1

The advantage of the Inspire series is a redundant battery system and modular camera. The redundant battery system allows for an on-board heater which means the Inspire can operate at temperatures down to 14 degrees. The Inspire 2 was just released and that model can operate down to -4 degrees (this is the model the State Police is looking at). The Phantom series can only operate down to 32 degrees (although in compiling this research I have found that the Phantom series is routinely flown at lower temperatures, care just needs to be taken in watching battery levels and keeping extra warm/charged batteries on hand).



DJI Inspire 1 V2.0 Bundle with TB47 Intelligent Flight Battery, Remote Harness, 16GB MicroSD Card and more...

by DJI

★★★★★ 2 customer reviews | 7 answered questions

Price: **\$1,999.00 & FREE Shipping**

Note: Not eligible for Amazon Prime.

In stock.

Get it as soon as March 6 - 9 when you choose **Expedited Shipping** at checkout.

Ships from and sold by [eDigitalUSA](#).

- DJI's new propeller and installation kits feature a smoother, even more reliable locking mechanism. This optimization has drastically reduced the abrasion that is common with propeller installation, therefore prolonging the propeller's overall service life.
- The new motor's performance has also been improved, providing a greater sense of control.
- Included professional 4K camera and 3-axis stabilization gimbal
- Live, wireless HD video transmission via DJI Lightbridge
- Dedicated remote with flight and camera controls

New (1) from \$1,999.00 & FREE shipping.

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