

## Proposal

The purchase and utilization of an unmanned aerial vehicle to add to the capabilities and improve the efficiency of the New Haven police department.

## Summary

Reckless dirtbike and ATV riders in the City of New Haven and its surrounding towns have been harassing and terrorizing citizens for decades. Their disregard for motor vehicle and criminal laws presents both a physical threat to pedestrians and other vehicles and contributes to a feeling of lawlessness, lack of safety and a decreased quality of life for area residents and visitors. Enforcement attempts have been feeble and erratic, hampered by legitimate concerns for the safety of innocent victims who may be injured during pursuits of these riders by the police. The effect of the lack of enforcement has been the encouragement of ever riskier behaviors and the brazen flouting of local and state laws.

The effect of these riders on the city has both a monetary and psychological cost. Damage to city property and officers injured during attempts to apprehend the riders have resulted in large financial costs to the city in the form of destroyed parks and fields, lost manpower and a physical cost born by hurt officers. In addition to motor vehicle accidents in which the riders evaded responsibility and fled, pedestrians struck have been struck and some of the riders themselves have been injured or killed as a result of their actions. Psychologically, citizens lose the enjoyment of public spaces which are invaded by, and degraded by, packs of reckless riders and simultaneously lose faith in the ability of law enforcement to combat a blatant social ill.

Technology in the form of social media and camera phones have made the problem worse, with riders and affiliates filming their antics, encouraging others to do the same. The problem continues unabated with no end in sight. However, I feel that the same advances in technology that allow the riders to broadcast their exploits can be used by law enforcement to more efficiently arrest them and seize the offending vehicle: through the utilization of a UAV equipped with a video camera.

Commercial UAVs can give this department the ability to do what we have thus far been unsuccessfully trying to accomplish: the rapid identification, arrest, and seizure of illegal dirtbike/ATV riders and their vehicles with the goal of deterring such behavior in the future. The utilization of such a piece of equipment would also have ancillary benefits to this department well beyond dirtbikes. It can perform myriad functions: search and rescue, disaster assistance, crowd control, hazardous device identification, etc. It would also continue to showcase the New Haven police department as progressive, forward-thinking agency which is seeking to use the latest technology to complement its commitment to foot patrol level community policing.

## Basic SWOT analysis

### 1. Strengths

The purchase and utilization of a commercial UAV would be a force multiplier and have a material and psychological effect for citizens and officers. As a piece of hardware, the UAV would provide this department with capabilities which we do not have now. With respect to dirtbike/ATV riders, it would reinforce the existing policy of not pursuing such vehicles in order to mitigate the risk to the general public while still allowing for effective enforcement. By operating at an altitude which allows for the documentation of their behavior via video without engaging in a pursuit, the public is not put at additional risk. A live feed would give officers the ability to identify where the vehicles are being stored when not ridden and the substantiation of criminal charges in the event of an arrest. Video documentation would also help corroborate charges and would assist in rem seizures of the vehicles, keeping them off the streets in the future. Funds from asset forfeiture could then be used by the department at the administration's discretion.

Psychologically, the utilization of a UAV would help to counter the perception that dirtbikes can operate with impunity in the area. Dirtbike/ATV riders wouldn't be able to hear the UAV and after the first few arrests are made public it would create a constant sense of uncertainty about whether they are going to be arrested and have their bikes seized when they return home. It would also give the public a sense of relief that an issue they have long complained about is finally being addressed by the police. And what officer wouldn't love the opportunity to walk into the driveway of a dirtbiker who has spent the day driving by us doing wheelies and giving us the middle finger, arresting him and seizing the bike?

With regard to other potential uses, a UAV with a flight time of 3 hours could be used to assist any of the emergency services teams in their respective missions, the CRASH team in reconstructing an accident, locating missing persons or assessing damage in a disaster situation. Deploying to the area following a foot or car pursuit in which the suspect is thought to have thrown a gun or contraband would be help to ensure that the entire known path is searched. A UAV equipped with thermal and night vision technology would help with searches in the dark. I walked through the woods in the area bounded by Whalley Avenue, Valley, Emerson and East Ramsdell Streets looking for a missing person for at least 4 hours before I found him, dehydrated and needing dialysis treatments. A search of the area with a UAV could have located him in a fraction of that time.

### 2. Weaknesses

I think the biggest initial weakness is that the program would be new, both at the departmental and state level, so policies, standard operating procedures and training would all have to be developed, along with a place in the budget. There is overlap with how the state police utilize their manned aircraft and how I would imagine it would operate here, so some of what they do

could be imported to this department. There are also other agencies nationwide that currently use UAVs and we may be able to use their programs to provide some insight on how they might operate here. In view of such difficulties there may be some bureaucratic inertia with convincing the necessary decision makers, particularly at the political level, to commit to spending tens of thousands of dollars for a new program and piece of equipment.

### 3. Opportunities

The use of a UAV to assist in departmental operations would put New Haven in the national spotlight as one of the first larger police agencies, and the first in Connecticut, to deploy such a device. It would be an opportunity to showcase a best practice in dealing with a large quality of life issue while also adding a huge capability to this agency that could be used by several different units. It would save the city money over the long run while preserving our commitment to solving and preventing criminal acts committed in our community with the least amount of force required.

### 4. Threats

I would divide the initial threats into three separate areas: financial costs, perception by the community and legality. First, a commercial grade UAV is an expensive capital purchase, with some models costing between \$10,000-\$20,000 (or more, depending on models and configurations). Added to that is the cost of training several officers in the safe use of the machine, along with continued maintenance to ensure flight-worthiness. Such training could be equal to the cost of the unit, making a \$30,000 to \$40,000 investment a realistic cost. However, I would argue that the annual cost of allowing the status quo, as born by city departments such as the police and parks, to continue is at least as expensive. Taking even a high cost of \$40,000 and amortizing that over a conservative estimate of five years of service, the department would essentially pay \$8,000 annually for a large increase in officer efficiency, the resolution of a chronic issue, and an expanded set of capabilities.

For example, during my time in narcotics, my unit and other detectives and officers were assigned to a 8 hour dirtbike detail on the day of a mass ride in which close to 100 riders were present at different times. There were at least 15 of us present, with a mix of officers, detectives and supervisors. Calculating an officer paid at grade A, approximately \$33 an hour, that is a cost of \$264 per officer, multiplied by 15 people is about \$4,000. To that amount is the cost of repairing the damage to city fields where the riders were meeting and tearing up. The effect was the seizure of 16 bikes and almost 10 arrests, which was good. But how often can the department divert that amount of resources, especially from intelligence units and detectives? As calculated above (and not including the cost of cleanup and repair born by other city departments), a single day of enforcement with that many officers is equivalent to 10-14% of the total cost of a UAV program. Contrast that deployment of resources with using a UAV, controlled by two officers, to monitor a dirtbiker, radio in the location where it's stopped, and have several available patrol officers move in to make the arrest. That is a huge increase in

efficiency and frees other officers to better apply their time. The offending rider would face whatever charges are appropriate and would be held liable for any damages, such as to parks or fields, that were caused.

The second threat, perception by the community, is harder to quantify. No one wants to live in a world patrolled by Big Brother so any suspicions regarding spying on the community must be immediately allayed with clear objectives on what the UAV will be used for by this department. There are strong legal precedents for the aerial surveillance of public spaces and the technology has been constantly improving with a corresponding decrease in price. But, if public perception comes out strongly against the implementation of this program, it could kill the it before it gets going. Seattle, WA police department experienced that setback in 2013 with their attempt at starting a program. Again, a clear mission statement on UAV use from the inception of the program would be important to garnering the support of the public, local lawmakers and other stakeholders such as the ACLU.

With recent events still fresh in the public mind, such as the revelations of the NSA surreptitiously capturing cell phone data and the national debate over the militarization of the police, this is an issue in which the public could turn against local government. However, I would argue that the topic of dirtbikes/ATVs, along with the other benefits mentioned, is enough of an issue for residents that the perception of this piece of equipment could be directed in a positive direction by the department. Their increased proliferation, in the form of toys and hobbyist use, has also served to increase the familiarization of them with the public, which I would think would decrease much of the potential community pushback from the police deploying them.

The third potential threat, their legality, seems to have been resolved already in Connecticut at the state level. A bill just passed in Hartford, An Act Concerning the Use of Drones, allows for the police use of such equipment in several scenarios. Among them are imminent threats to safety, search and rescue operations and the patrolling of public property. The legislature has order POSTC to come up with a model policy on the use of UAVs by January 1, 2017. New Haven should be part of that discussion.

## Conclusion

I think that when weighed against the costs of the status quo, calculated in damage to city and private property along with worker's compensation costs related to officer injuries, the implementation of UAV program would reduce the amount of money the city annually spends to combat illegal ditbike/ATVs. The increase in capabilities gained by the department would also benefit several different units and give us additional options in a multitude of scenarios.

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