

OPEN SPACE ADVISORY COMMITTEE STAFF REPORT

MEETING DATE: April 18, 2016

AGENDA ITEM NUMBER: 3C

STAFF: Ann Bollinger, Open Space Administrator

REQUEST: **For Possible Action:** To review the use of unmanned aerial vehicles on open space properties and discuss whether an ordinance should be drafted.

GENERAL DISCUSSION:

Upon request by Vice-Chair Welch, staff is introducing the discussion about the potential use or prohibited use of unmanned aerial vehicles (UAV) (drones) on open space properties. Attached are several documents for your review including:

- Email from Paul Mouritsen, Manager of Constituent Services, Research Division of the Nevada Legislative Counsel Bureau summarizing the changes in the new state law
- Nevada Assembly Bill No. 239 (enacted during the 2015 Session)
- News articles from Carson City
- Discussions from the National Recreation and Park Association listserv and news articles from around the country

In this research, it appears that many jurisdictions are enacting regulations regarding the use of UAVs. Privacy, safety, and wildlife harassment are among the negative impacts. Similar to the new legislation about prohibiting operations of an unmanned aerial vehicle within a certain distance from critical facilities (such as county, city or town jail or detention facility and any prison, facility or institution under the control of the Department of Corrections), our department and others work with the low-risk inmates from the local jail and prison and any form of photographs or video is strictly prohibited. In the recent past, Carson City had an incident in which the Fire Department, with assistance from the inmates, was conducting a prescribed burn. A nearby resident filmed the burn, without approval and unknowingly about the impacts. Benefits of UAVs, on the other hand, may include assistance with land management and search and rescue operations.

Similar to the Carson City Airport Authority, one consideration is the review and granted permission for UAVs in certain areas or during special events. For instance, the Epic Rides mountain bike event might want to document the event from the air or a group might want to use Silver Saddle or the Fairgrounds/Fuji Park for an event.

It is important to learn and understand the overall impacts, concerns, and current regulations. Communication and coordination with the Carson City Airport Authority is essential, and Mr. Tim Rowe, Airport Manager, will join us at this meeting.

In addition to the one incident identified above, staff has received a second phone call from a resident with a commercial license in which there are apparently more stringent regulations. At this time, we agreed that he could fly his UAV at the south end of the Prison Hill Recreation Area.

RECOMMENDED ACTION: Staff does not have a recommended action.

On Monday, March 28, 2016 9:42 AM, "Mouritsen, Paul" <mouritsen@lcb.state.nv.us> wrote:

Dear Mr. Welch,

I write in reply to your inquiry regarding the regulation of drones in public lands. As you may be aware, the Legislature, during the 2015 Session, enacted [Assembly Bill 239](#).

Assembly Bill 239 regulates the operators of unmanned aerial vehicles (UAVs) and provides certain criminal and civil penalties for the unlawful operation or use of a UAV in this State. A person is prohibited from operating or using a UAV under certain circumstances including: (1) weaponizing and discharging the weapon; (2) operating a UAV within 500 feet horizontally or 250 feet vertically from a critical facility without written consent; and (3) operating a UAV within 5 miles of a public airport under certain circumstances.

The bill authorizes a person who owns or lawfully occupies real property in the State to bring an action for trespass against the owner or operator of a UAV that is flown at a height of less than 250 feet over the property under certain circumstances. A person may not bring an action for trespass if the UAV is: (1) lawfully in the flight path from landing at the airport, airfield, or runway; (2) in the process of taking off or landing; (3) under the lawful operation of a law enforcement agency; or (4) under the lawful operation of a business licensed in this State or a land surveyor under certain circumstances. A person who prevails in an action for trespass is entitled to recover treble damages for any injury to the person or the person's real property as a result of the trespass. In addition, a person may be awarded reasonable attorney's fees and costs and injunctive relief.

The measure establishes the circumstances under which a law enforcement agency may operate a UAV in this State. An agency may operate a UAV without obtaining a warrant: (1) if the agency has probable cause to believe that a person has committed a crime, is committing a crime, or is about to commit a crime and exigent circumstances exist making it unreasonable for the agency to obtain a warrant; (2) if a person provides written consent; (3) for conducting search and rescue operations; (4) if an imminent threat exists to life and safety of an individual or the public at large; or (5) upon the declaration by the Governor of a state of emergency or disaster.

A law enforcement agency is prohibited from operating a UAV for the purpose of gathering evidence or other information within the curtilage of a residence or any other location upon the property in the State at which a person has reasonable expectation of privacy, unless a warrant is first obtained. Any photograph, image, recording, or other information that is unlawfully acquired or gathered inconsistent with statute, and any evidence that is derived, is inadmissible in any judicial, administrative, or other adjudicatory proceeding and may not be used to establish reasonable suspicion or probable cause as the basis for investigating and prosecuting a crime or offense.

Assembly Bill 239 requires the Department of Public Safety, to the extent that money is available, to establish and maintain a registry of UAVs that are operated by public agencies in this State and requires the Department to adopt regulations prescribing the public purposes for which a public agency may operate a UAV. The Department is required to prepare and submit to

the Director of the Legislative Counsel Bureau a report outlining activities of public agencies regarding the operation of UAVs in the State.

This bill is effective on June 2, 2015, for the purposes of adopting regulations and performing preparatory administrative tasks and on October 1, 2015, for all other purposes.

I hope this is helpful.

Paul Mouritsen
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Research Division
Legislative Counsel Bureau
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Assembly Bill No. 239—Assemblymen Elliot Anderson, Ohrenschall, Hansen, Spiegel, Wheeler; Araujo, Benitez-Thompson, Bustamante Adams, Carrillo, Diaz, Flores, Joiner, Neal and Sprinkle

Joint Sponsor: Senator Manendo

CHAPTER.....

AN ACT relating to aircraft; regulating operators of unmanned aerial vehicles in this State; revising the definition of “aircraft” to include unmanned aerial vehicles; prohibiting the operation or use of an unmanned aerial vehicle under certain circumstances or for certain purposes; authorizing a law enforcement agency to operate an unmanned aerial vehicle at certain locations without a warrant under certain circumstances and for any other lawful purpose; prohibiting a law enforcement agency from operating an unmanned aerial vehicle without first obtaining a warrant under certain circumstances; authorizing a public agency to operate an unmanned aerial vehicle only under certain circumstances; requiring the Department of Public Safety, to the extent that money is available, to establish and maintain a registry of unmanned aerial vehicles that are operated by public agencies in this State; requiring the Department to report certain information to the Legislature with respect to the operation of unmanned aerial vehicles by public agencies in this State; requiring the Department to adopt regulations prescribing the public purposes for which a public agency may operate an unmanned aerial vehicle in this State; providing certain criminal and civil penalties for the unlawful operation or use of an unmanned aerial vehicle in this State; and providing other matters properly relating thereto.

Legislative Counsel’s Digest:

Existing law provides for the regulation of aeronautics, including the operation of aircraft, in this State. (Title 44 of NRS) This bill revises the definition of “aircraft” to include unmanned aerial vehicles for the purpose of regulating unmanned aerial vehicles. This bill generally regulates the operators of unmanned aerial vehicles in this State in a manner similar to that of traditional aircraft by: (1) establishing the right to operate an unmanned aerial vehicle in this State, with certain exceptions; (2) clarifying that the provisions of this bill are not to be interpreted in a manner inconsistent with federal law or apply to unmanned aerial vehicles owned or operated by the Federal Government; (3) clarifying the applicability of state law to torts and crimes resulting from the operation of unmanned aerial vehicles; and (4) prohibiting a person from operating or using an unmanned aerial vehicle under certain circumstances or for certain purposes.

Section 18 of this bill prohibits a person from weaponizing an unmanned aerial vehicle. **Section 18.5** of this bill prohibits a person from operating an unmanned



aerial vehicle within a certain distance from critical facilities or an airport except under certain circumstances in which the person obtains the consent of the owner of a critical facility or the airport authority of an airport or authorization from the Federal Aviation Administration. **Section 19** of this bill authorizes a person who owns or lawfully occupies real property to bring an action for trespass against the owner or operator of an unmanned aerial vehicle under certain circumstances and provides certain exceptions to bringing such an action. **Sections 20-22** of this bill prescribe certain restrictions on the operation and use of unmanned aerial vehicles by law enforcement agencies and public agencies. **Section 20** specifically prohibits, with limited exceptions, a law enforcement agency from operating an unmanned aerial vehicle for the purpose of gathering evidence or other information at any location or upon any property in this State at which a person has a reasonable expectation of privacy without first obtaining a warrant. **Section 20** authorizes a law enforcement agency to operate an unmanned aerial vehicle without a warrant: (1) if exigent circumstances exist and there is probable cause to believe that a person has committed, is committing or is about to commit a crime; (2) if a person consents in writing to the activity; (3) for the purpose of conducting search and rescue operations; (4) if the law enforcement agency believes that an imminent threat exists to the life and safety of an individual person or to the public at large, including the threat of an act of terrorism; and (5) upon the declaration of a state of emergency or disaster by the Governor. **Section 21** authorizes a public agency, other than a law enforcement agency, to operate an unmanned aerial vehicle for certain public purposes as prescribed by regulations adopted by the Department of Public Safety if the public agency registers the unmanned aerial vehicle with the Department. **Sections 20 and 21** provide that any photograph, image, recording or other information acquired unlawfully by a law enforcement agency or public agency, or otherwise acquired in a manner inconsistent with **section 20**, and any evidence that is derived therefrom, is inadmissible in any judicial, administrative or other adjudicatory proceeding and may not be used to establish reasonable suspicion or probable cause as the basis for investigating or prosecuting a crime or offense. **Section 22** requires the Department, to the extent that money is available for this purpose, to establish and maintain a registry of unmanned aerial vehicles that are operated by public agencies in this State and requires the Department to adopt regulations prescribing the public purposes for which an agency may operate an unmanned aerial vehicle. **Section 22** further requires the Department to prepare and submit an annual report to the Legislature outlining the activities of public agencies with respect to the operation of unmanned aerial vehicles in this State. **Section 24.4** of this bill revises provisions relating to the liability of the operator of an aircraft, including an unmanned aerial vehicle, with respect to the operation of the aircraft over heavily populated areas or public gatherings. **Section 24.8** of this bill prohibits a person from operating an unmanned aerial vehicle while intoxicated or in a careless or reckless manner so as to endanger the life or property of another person.



THE PEOPLE OF THE STATE OF NEVADA, REPRESENTED IN
SENATE AND ASSEMBLY, DO ENACT AS FOLLOWS:

Section 1. Chapter 493 of NRS is hereby amended by adding thereto the provisions set forth as sections 2 to 22, inclusive, of this act.

Secs. 2-17. (Deleted by amendment.)

Sec. 18. 1. *A person shall not weaponize an unmanned aerial vehicle or operate a weaponized unmanned aerial vehicle. A person who violates this section is guilty of a category D felony and shall be punished as provided in NRS 193.130.*

2. A person who weaponizes an unmanned aerial vehicle in violation of subsection 1 and who discharges the weapon is guilty of a category C felony and shall be punished as provided in NRS 193.130.

Sec. 18.5. 1. *A person shall not operate an unmanned aerial vehicle within:*

(a) A horizontal distance of 500 feet or a vertical distance of 250 feet from a critical facility without the written consent of the owner of the critical facility.

(b) Except as otherwise provided in subsection 2, 5 miles of an airport.

2. A person may operate an unmanned aerial vehicle within 5 miles of an airport only if the person obtains the consent of the airport authority or the operator of the airport, or if the person has otherwise obtained a waiver, exemption or other authorization for such operation pursuant to any rule or regulation of the Federal Aviation Administration. A person who is authorized to operate an unmanned aerial vehicle within 5 miles of an airport pursuant to this subsection shall, at all times during such operation, maintain on his or her person documentation of any waiver, exemption, authorization or consent permitting such operation.

3. A person who violates this section is guilty of a misdemeanor.

4. As used in this section, "airport" means any area of land or water owned, operated or maintained by or on behalf of a city, county, town, municipal corporation or airport authority that is designed and set aside for the landing and taking off of aircraft and that is utilized in the interest of the public for such purposes.

Sec. 19. 1. *Except as otherwise provided in subsection 2, a person who owns or lawfully occupies real property in this State*



may bring an action for trespass against the owner or operator of an unmanned aerial vehicle that is flown at a height of less than 250 feet over the property if:

(a) The owner or operator of the unmanned aerial vehicle has flown the unmanned aerial vehicle over the property at a height of less than 250 feet on at least one previous occasion; and

(b) The person who owns or occupies the real property notified the owner or operator of the unmanned aerial vehicle that the person did not authorize the flight of the unmanned aerial vehicle over the property at a height of less than 250 feet. For the purposes of this paragraph, a person may place the owner or operator of an unmanned aerial vehicle on notice in the manner prescribed in subsection 2 of NRS 207.200.

2. A person may not bring an action pursuant to subsection 1 if:

(a) The unmanned aerial vehicle is lawfully in the flight path for landing at an airport, airfield or runway.

(b) The unmanned aerial vehicle is in the process of taking off or landing.

(c) The unmanned aerial vehicle was under the lawful operation of:

(1) A law enforcement agency in accordance with section 20 of this act.

(2) A public agency in accordance with section 21 of this act.

(d) The unmanned aerial vehicle was under the lawful operation of a business licensed in this State or a land surveyor if:

(1) The operator is licensed or otherwise approved to operate the unmanned aerial vehicle by the Federal Aviation Administration;

(2) The unmanned aerial vehicle is being operated within the scope of the lawful activities of the business or surveyor; and

(3) The operation of the unmanned aerial vehicle does not unreasonably interfere with the existing use of the real property.

3. A plaintiff who prevails in an action for trespass brought pursuant to subsection 1 is entitled to recover treble damages for any injury to the person or the real property as the result of the trespass. In addition to the recovery of damages pursuant to this subsection, a plaintiff may be awarded reasonable attorney's fees and costs and injunctive relief.

Sec. 20. *1. Except as otherwise provided in this section, nothing in this section shall be deemed to otherwise prohibit the*



operation of an unmanned aerial vehicle by a law enforcement agency for any lawful purpose in this State.

2. Except as otherwise provided in subsection 3, a law enforcement agency shall not operate an unmanned aerial vehicle for the purpose of gathering evidence or other information within the curtilage of a residence or at any other location or upon any property in this State at which a person has a reasonable expectation of privacy, unless the law enforcement agency first obtains a warrant from a court of competent jurisdiction authorizing the use of the unmanned aerial vehicle for that purpose. A warrant authorizing the use of an unmanned aerial vehicle must specify the period for which operation of the unmanned aerial vehicle is authorized. A warrant must not authorize the use of an unmanned aerial vehicle for a period of more than 10 days. Upon motion and a showing of probable cause, a court may renew a warrant after the expiration of the period for which the warrant was initially issued.

3. A law enforcement agency may operate an unmanned aerial vehicle without obtaining a warrant issued pursuant to subsection 2:

(a) If the law enforcement agency has probable cause to believe that a person has committed a crime, is committing a crime or is about to commit a crime, and exigent circumstances exist that make it unreasonable for the law enforcement agency to obtain a warrant authorizing the use of the unmanned aerial vehicle.

(b) If a person provides written consent to the law enforcement agency authorizing the law enforcement agency to acquire information about the person or the real or personal property of the person. The written consent must specify the information to be gathered and the time, place and manner in which the information is to be gathered by the law enforcement agency.

(c) For the purpose of conducting search and rescue operations for persons and property in distress.

(d) Under circumstances in which the law enforcement agency believes that an imminent threat exists to the life and safety of an individual person or to the public at large, including, without limitation, the threat of an act of terrorism. A law enforcement agency that operates an unmanned aerial vehicle pursuant to this paragraph shall document the factual basis for its belief that such an imminent threat exists and shall, not later than 2 business days after initiating operation, file a sworn statement with a court of competent jurisdiction describing the nature of the imminent



threat and the need for the operation of the unmanned aerial vehicle.

(e) Upon the declaration of a state of emergency or disaster by the Governor. A law enforcement agency that operates an unmanned aerial vehicle pursuant to this paragraph shall not use the unmanned aerial vehicle outside of the geographic area specified in the declaration or for any purpose other than the preservation of public safety, the protection of property, or the assessment and evaluation of environmental or weather-related damage, erosion or contamination.

4. Any photograph, image, recording or other information that is acquired by a law enforcement agency through the operation of an unmanned aerial vehicle in violation of this section, or that is acquired from any other person or governmental entity, including, without limitation, a public agency and any department or agency of the Federal Government, that obtained the photograph, image, recording or other information in a manner inconsistent with the requirements of this section, and any evidence that is derived therefrom:

(a) Is not admissible in and must not be disclosed in a judicial, administrative or other adjudicatory proceeding; and

(b) May not be used to establish reasonable suspicion or probable cause as the basis for investigating or prosecuting a crime or offense.

Sec. 21. 1. A public agency:

(a) May operate an unmanned aerial vehicle only if:

(1) Before the operation of the unmanned aerial vehicle, the public agency registers the unmanned aerial vehicle with the Department pursuant to subsection 2 of section 22 of this act.

(2) The public agency operates the unmanned aerial vehicle in accordance with the regulations adopted by the Department pursuant to subsection 4 of section 22 of this act.

(b) Must not operate an unmanned aerial vehicle for the purposes of assisting a law enforcement agency with law enforcement or conducting a criminal prosecution.

2. Any photograph, image, recording or other information that is acquired by a public agency through the operation of an unmanned aerial vehicle in violation of this section, and any evidence that is derived therefrom:

(a) Is not admissible in, and must not be disclosed in, a judicial, administrative or other adjudicatory proceeding; and



(b) May not be used to establish reasonable suspicion or probable cause as the basis for investigating or prosecuting a crime or offense.

Sec. 22. *1. The Department shall, to the extent that money is available for this purpose, establish and maintain a registry of unmanned aerial vehicles that are operated by public agencies in this State. The Department shall include on its Internet website the information that is maintained in the registry.*

2. A public agency shall, for each unmanned aerial vehicle the public agency intends to operate, submit to the Department, on a form provided by the Department, for inclusion in the registry:

(a) The name of the public agency;

(b) The name and contact information of each operator of the unmanned aerial vehicle;

(c) Sufficient information to identify the unmanned aerial vehicle; and

(d) A statement describing the use of the unmanned aerial vehicle by the public agency.

3. The Department shall, on or before February 1 of each year, prepare and submit to the Director of the Legislative Counsel Bureau for submission to the Legislature, or to the Legislative Commission when the Legislature is not in regular session, a report outlining the activities of public agencies with respect to the operation of unmanned aerial vehicles in this State.

4. The Department shall adopt regulations prescribing the public purposes for which a public agency may operate an unmanned aerial vehicle that is registered with the Department pursuant to this section, including, without limitation:

(a) The provision of fire services.

(b) The provision of emergency medical services.

(c) The protection of a critical facility that is public property.

(d) Search and rescue operations conducted for persons and property in distress.

Sec. 22.5. NRS 493.010 is hereby amended to read as follows:
493.010 NRS 493.010 to 493.120, inclusive, *and sections 18 to 22, inclusive, of this act* may be cited as the Uniform State Law for Aeronautics.

Sec. 23. NRS 493.020 is hereby amended to read as follows:
493.020 As used in NRS 493.010 to 493.120, inclusive, *and sections 18 to 22, inclusive, of this act*, unless the context otherwise requires:

1. "Aircraft" includes *a* balloon, airplane, hydroplane , *unmanned aerial vehicle* and any other vehicle used for navigation



through the air. A hydroplane, while at rest on water and while being operated on or immediately above water, is governed by the rules regarding water navigation. A hydroplane while being operated through the air other than immediately above water, is an aircraft.

2. ***“Critical facility” means a petroleum refinery, a petroleum or chemical production, transportation, storage or processing facility, a chemical manufacturing facility, a pipeline and any appurtenance thereto, a wastewater treatment facility, a water treatment facility, a mine as that term is defined in NRS 512.006, a power generating station, plant or substation and any appurtenances thereto, any transmission line that is owned in whole or in part by an electric utility as that term is defined in subsection 5 of NRS 704.187, a county, city or town jail or detention facility and any prison, facility or institution under the control of the Department of Corrections. The term does not include any facility or infrastructure of a utility that is located underground.***

3. ***“Department” means the Department of Public Safety.***

4. ***“Law enforcement agency” means an agency, office, bureau, board, commission, department or division of this State or a political subdivision of this State, the primary duty of which is to enforce the law.***

5. “Operator” includes aviator, pilot, balloonist and any other person having any part in the operation of aircraft while in flight.

~~13-1~~ 6. “Passenger” includes any person riding in an aircraft, but having no part in its operation.

7. ***“Public agency” means an agency, office, bureau, board, commission, department or division of this State or a political subdivision of this State other than a law enforcement agency.***

8. ***“Unmanned aerial vehicle” means a powered aircraft of any size without a human operator aboard the vehicle and that is operated remotely or autonomously.***

Sec. 24. (Deleted by amendment.)

Sec. 24.2. NRS 493.050 is hereby amended to read as follows:

493.050 1. Flight ~~13-1~~ ***of an*** aircraft over the lands and waters of this state is lawful:

(a) Unless at such a low altitude as to interfere with the then existing use to which the land or water, or the space over the land or water, is put by the owner.

(b) Unless so conducted as to be imminently dangerous to persons or property lawfully on the land or water beneath.



(c) Unless specifically prohibited by the provisions of NRS 493.010 to 493.120, inclusive, and sections 18 to 22, inclusive, of this act, or any regulations adopted pursuant thereto.

2. The landing of an aircraft on the lands or waters of another, without his or her consent, is unlawful, except in the case of a forced landing. For damages caused by a forced landing, the owner, lessee or operator of the aircraft is liable as provided in NRS 493.060.

Sec. 24.4. NRS 493.100 is hereby amended to read as follows:

493.100 **1.** Any operator or passenger, while *an aircraft is* in flight over a heavily populated area or over a public gathering within this state, who:

~~1. Engages~~

(a) Except as otherwise provided in subsection 2, engages in trick or acrobatic flying, or in any acrobatic feat;

~~2.~~ *(b) Except while in landing or taking off, flies at such a low level as to endanger the persons on the surface beneath; or*

~~3.~~ *(c) Drops any object ~~except loose water or loose sand ballast.~~ with reckless disregard for the safety of other persons and willful indifference to injuries that could reasonably result from dropping the object,*

↳ is guilty of a misdemeanor.

2. The provisions of paragraph (a) of subsection 1 do not apply to the operator of an unmanned aerial vehicle in a park unless the operator is operating the unmanned aerial vehicle with reckless disregard for the safety of other persons and with willful indifference to injuries that could reasonably result from such operation.

Sec. 24.6. NRS 493.120 is hereby amended to read as follows:

493.120 NRS 493.010 to 493.120, inclusive, *and sections 18 to 22, inclusive, of this act* shall be so interpreted and construed as to effectuate their general purpose to make uniform the law of those states which enact them, and to harmonize, as far as possible, with federal laws and regulations on the subject of aeronautics. They shall not be interpreted or construed to apply in any manner to aircraft owned and operated by the Federal Government.

Sec. 24.8. NRS 493.130 is hereby amended to read as follows:

493.130 **1.** Any person operating an aircraft in the air, or on the ground or water:

~~1.~~ *(a) While under the influence of intoxicating liquor or a controlled substance, unless in accordance with a lawfully issued prescription; or*



~~12.1~~ (b) In a careless or reckless manner so as to endanger the life or property of another,

↳ is guilty of a gross misdemeanor.

2. As used in this section:

(a) "Aircraft" includes an unmanned aerial vehicle as that term is defined in subsection 8 of NRS 493.020.

(b) "Controlled substance" has the meaning ascribed to it in 21 U.S.C. § 802(6).

(c) "Prescription" has the meaning ascribed to it in NRS 453.128.

Sec. 25. The provisions of subsection 1 of NRS 218D.380 do not apply to any provision of this act which adds or revises a requirement to submit a report to the Legislature.

Sec. 26. This act becomes effective:

1. Upon passage and approval for the purpose of adopting regulations and performing any other preparatory administrative tasks necessary to carry out the provisions of this act; and

2. On October 1, 2015, for all other purposes.



Drone use near Carson City Airport approved

October 21, 2015

<http://www.nevadaappeal.com/news/18722512-113/drone-use-near-carson-city-airport-approved#>

Regarding the drone survey work at gravel pits within two miles north of the airport, the vote was unanimous to authorize Robison Engineering to do it, but with stringent conditions geared toward safety and communications.

Unlawful Unmanned Aircraft System Flights Threaten Firefighter Safety and Efficiency of Wildfire Suppression Operations

BLM

09/17/14

http://www.blm.gov/nv/st/en/info/newsroom/2014/september/unlawful_unmanned.html

Carson City, Nev. – The Bureau of Land Management (BLM), Carson City District wildfire managers are cautioning individuals and organizations that unauthorized operation of Unmanned Aircraft Systems (UAS), often referred to as “drones,” within or near wildfires threatens the safety of both aerial and ground firefighters and hampers their ability to protect lives, property, and valuable natural and cultural resources.

Temporary Flight Restrictions (TFRs) are typically put in place during wildfires that require most aircraft, manned or unmanned, other than those engaged in wildfire suppression operations to obtain permission from fire managers to enter specified airspace. The Federal Aviation Administration (FAA), U.S. Forest Service, U.S. Department of the Interior and other wildland fire management agencies consider UAS, including those used by hobbyists and recreationists, to be aircraft and therefore subject to TFRs. This year, there have been at least four instances of a UAS being flown within or near a wildfire TFR without appropriate authorization, one recently in northern California.

UNR symposium designed to teach emergency responders how to use drones

03/16/2016

<http://carsonnow.org/story/03/16/2016/unr-symposium-designed-teach-emergency-responders-how-use-drones>

The first-ever symposium on the uses of aerial robotics systems and autonomous vehicles for emergency first responders is being hosted by the University of Nevada, Reno April 6-8. “The potential for uses of unmanned autonomous systems in search and rescue operations is enormous,” Warren Rapp, business director of the University’s robotics and intelligent machines center – the Nevada Advanced Autonomous Systems Innovation Center, said. “This symposium will explore opportunities, present case studies and include panel discussions to foster dialogue on how first responders use, or would like to use, autonomous systems.”

A line-up of experts will present the latest information on new technologies; federal, state and local laws; air traffic management for drones; advanced drone search techniques; sensor technology for aerial systems; reconnaissance systems and more.

The State of Arizona is introducing a Bill on this but I have not looked at it yet. Paradise Valley, AZ has an adopted ordinance now that we are looking at and may adapt for our Town. Pima County, AZ does not allow them in parks.

We are in the "wait and see" stage but check out Connecticut Audubon Society's recent action to ban drones in their sanctuaries to protect wildlife and the visitors experience: [Connecticut Audubon bans drones | Connecticut Audubon Society](#)
Waterford CT

City of Boca Raton, FL Code of Ordinances
Sec. 11-67. - Aircraft.

- (1) No person operating, directing or responsible for any airplane, helicopter, glider, balloon, dirigible, parachute or other aerial apparatus, shall take off or land on any park area, recreational land or waterway, except when human life is endangered or an emergency situation exists, except upon written permission of the director in conjunction with some special event or program for the public benefit.
 - (2) No person operating any aircraft shall do any stunt flying over or fly lower than 1,000 feet above the highest obstruction located in any park or recreation area, which are considered to be populated areas, requiring compliance with Civil Aeronautics Administration regulations regarding same.
-

One recommendation is that any ordinance should be tailored to cover "remote control vehicles" not "drones" or "quadcopters". I've had issues with remote controlled planes, helicopters, cars and boats in lakes. "Drones" are nothing more than remote controlled helicopters taken to the next level and much more readily available. I personally wonder if there would be as much concern if there were still called "remote controlled helicopters."
Henderson KY

If you've already got rules in place governing Radio Controlled vehicles (cars, airplanes etc) then those rules should cover "drones" as well.
Houston TX

Boulder considers whether drones should be allowed to fly in open spaces

Posted August 27, 2015

<http://www.uasusa.com/news.html>

BOULDER, Colo. — Boulder County officials are trying to decide whether to allow drones to fly in open spaces.

The proposal is very limiting. Only researchers and officials would be allowed to fly the unmanned aircraft in the county's open spaces. Visitors and commercial operators would be prohibited.

Boulder County Parks and Open Space is considering a limited use of drones as a cost effective way to research and manage the land.

“It will do exactly what we tell it to do, nothing more and nothing less. It's quite amazing technology,” said Skip Miller, CEO and founder of UASUSA, a Boulder-based drone manufacturer.

Miller said drones provide a set of eyes we have never had before.

“We could have a fire in an open space. We could have cattle that are running around. We could have fences broken. I can cover that efficiently and silently,” Miller said.

Some residents are worried about safety and privacy though.

“It's not clear what they want to use them for and I think the whole reason we pay taxes for open space and parks is to have places free of motorized vehicles,” homeowner Andrew Schelling said.

Boulder County officials said they are sympathetic to the public's concerns. All permits would go through a review process and they would have to let the public know before they could fly.

Discussions Over Drone Applications Must Include Security, Privacy

February 26, 2016

<https://threatpost.com/discussions-over-drone-applications-must-include-security-privacy/116485/>

Boulder, Colorado's Open Space and Mountain Parks [winter photo gallery](#) displays parts of the beautiful and productive 45,000-plus "open space" acres that buffer the city from sprawling development. At the same time, more than 30 percent of this acreage is leased out to industrial agriculture operations, and it's on this land-air space that drone owners and customers want to push the boundaries of drone applications.

Recently, around 30 people gathered to discuss local regulation of drone use in this space. It seems that Boulder is one of the first cities in the nation pushing commercial- and research-purposed unmanned aerial system use in semi-public space. There are many benefits that Boulder speakers pointed out at the meeting. Speakers included Skip Miller, a man with decades of experience flying these systems and a pile of world championships under his belt, along with Colorado University professor Eric Frew of its UAS research center, and Dr Tom McKinnon of Agribotix, a drone-enabled agricultural company. Clearly, there was no lack of engineering and flying talent and experience in the room, and in the past, their drones have flown throughout the world providing:

- vaccine drops in remote locations
- precision agriculture like soil and water condition monitoring
- fire search and rescue
- severe weather data collection
- power line and pipeline inspections
- crop production forecasting and health monitoring
- weed mapping
- bridge and transportation inspections

At the same time, two near and dear topics received very disappointing attention: security and privacy.

They were swept aside by one speaker, who acknowledged that there may be significant issues before moving on to present photos from the open space website that include hikers and people and dogs enjoying the parks. Therefore, he concluded that privacy is something that has already been given up and the discussion doesn't merit time and attention, like the discussion of drone benefits and how they are going to be used in open space.

But, this is how many of these discussions are going on around the globe. While security and privacy can consume an otherwise productive discussion of beneficial drone applications, dismissing the discussion is not an appropriate approach.

Security and privacy must be a part of any design stage from the start. Public hearings like this one must allocate for these concerns, and any mature design and implementation process involving public security and privacy issues must include an adversarial role that points out some

of the potential risks that can arise from a hacker remotely compromising and controlling a drone.

Some of the scenarios include the impact of new drone traffic near the power lines and other infrastructure that cross open space property. Opening up drone flights may generate new risk for both unintentional and potential malicious damage to structure.

Tractors and heavy agricultural equipment may be guided or rely on drone communications. If that drone or those communications were to be disrupted, what impact would that have on heavy machinery running in parkland?

Drone paths may conflict with flying craft such as gliders, and there isn't a simple way to provide recourse or resolution.

Drone takeovers are documented and feasible. And in many cases, the motivations have run from: "because I can," to "because I am curious," to "because I hate you."

No doubt, personal privacy is at stake here as well.

Important questions need to be asked, and answered, such as:

- Who may consume and handle drone data with potential monitoring of citizens, their whereabouts and their activities?
- Can government-contracted identity and activity recorders consume this data?
- And finally, who will enforce regulations regarding inappropriate drone operators who aren't fully licensed or inappropriate drone flying activity?

Other scenarios to consider are whether drones are used to transport contraband material in and out of these parks, how are the drones identified and handled, and what happens if a drone is remotely hijacked to perform such activity and captured?

There are many more security and privacy issues that need to be addressed, and maintaining a reasonable, adversarial role in these discussions is a must moving forward.
