National Council on Public Safety Unmanned Aircraft Systems (UAS)
presents:
The Latest Information on Public Safety Drones

April 19, 2018 1-2 pm ET
Agenda

• Introduction

• Overview of the NISC

• National Council on Public Safety UAS: The Latest Information on Public Safety Drones

• Q&A

• Quiz for those seeking Continuing Education Units (CEUs)
Today’s Speakers

- **Sean McSpaden**, NISC Executive Director
- **Chief Charles Werner (ret.)** Chair, National Council on Public Safety UAS
- **Chris Sadler**, Assistant Chief for Technical Services and Special Operations, York County Fire and Life Safety, VA
Continuing Education Units (CEUs)

- CEUs will be awarded to participants that watch the webinar and complete the quiz following the webinar
- 0.1 CEUs for this hour-long event
Learning Objectives

1. Understand the mission and goals of the National Council on Public Safety Unmanned Aircraft Systems (UAS).

2. Understand how UAS are currently being used by public safety professionals.

3. Understand potential new applications of UAS in public safety.

If you have questions during the webinar, please submit using the question feature in GoToWebinar.
NISC Mission-Focused Job Aids Webinar Series

• In-depth discussion of tools, techniques, and standard operating procedures used for information sharing

• Webinar content applicable to multiple fields, including:
  • Homeland security,
  • Emergency management,
  • Public safety,
  • First responder, and
  • Healthcare preparedness.
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Register at: [https://www.nisconsortium.org/nisc-activities/niscwebinars/](https://www.nisconsortium.org/nisc-activities/niscwebinars/)
The NISC is a non-profit organization devoted to improving information sharing at all levels of government and for all homeland security, emergency management, first responder, healthcare, and public safety stakeholders.
### NISC Members Span Multiple Domains & Disciplines

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*Public Sector – Private Sector – Non-profits*
Member Benefits & Application

• Guidance and technical assistance
• Knowledge exchange and networking opportunities
• Access to the NISC Member Portal


Or click ‘Join’ at the top of any webpage on [www.nisconsortium.org](http://www.nisconsortium.org)
National Council on Public Safety UAS

publicsafetyUAS.org
• To advance the use of unmanned aircraft systems (UAS) by Public Safety
  • Best Practices
  • Lessons Learned
  • Sharing Policies & Procedures
  • Working with national organizations and federal agencies
  • Working directly with the FAA
  • Remote ID
  • Unmanned Traffic Management (UTM)

• To stay updated on threats, legality, use and deployment of Counter UAS (C-UAS)
  • UAS threats
  • Legislation enabling use of UAS
  • C-UAS Technology
  • Deployment strategies
How UAS is being used by Public Safety
How UAS is being used by Public Safety
How UAS is being used by Public Safety
The Future of UAS

- **Near-term Goal** – Enable initial low-altitude airspace and unmanned aerial system (UAS) operations with demonstrated safety as early as possible, within 5 years.
- **Long-term Goal** – Accommodate increased UAS operations with highest safety, efficiency, and capacity as much autonomously as possible (10-15 years).
The Future of UAS

PIX4D
THE USER JOURNEY
- CAPTURE
- PROCESS
- ANALYZE
- SHARE

AIRMAP
Unmanned Aircraft Operations Near Airports

Drone2Map for ArcGIS
What Will Your Drone Do For You?

DroneDeploy
New Developments in UAS

- Unmanned Traffic Management – NASA/AMES - Aggregator
- FAA’s LAANC – Low Altitude Authorization and Notification Capability
- Remote ID Rulemaking expected later this year
- FAA Integration Pilot Project (IPP) – expected announcement of first 5 (of 10) in April
- Commercial Drone Alliance (CDA) proposes 336 Exemption for hobbyist/recreation pilots be eliminated
- AUVSI Trusted Operator Program (TOP) for training program & remote pilot certification
For Immediate Release: Aug. 23, 2017

Contact: Tom McMahon, tmcmahon@auvsi.org, (571) 255-7786

AUVSI and National Council on Public Safety UAS Announce Partnership

Organizations will jointly promote use of unmanned aircraft systems by public safety agencies

ARLINGTON, Va. – The Association for Unmanned Vehicle Systems International (AUVSI) and the National Council on Public Safety UAS (NCPSU) have entered a partnership to encourage and promote the use of unmanned aircraft systems (UAS) by public safety agencies.

AUVSI and NCPSU will collaborate to create education and information programs and materials to facilitate the widespread adoption of UAS, also known as drones, among first responders. The partnership will also provide a forum for industry and the public safety community to review and evaluate the latest research and development in unmanned systems technology, as well as the products and services it enables to support mission-critical operations.

“The public safety community was an early adopter of drone technology and understands the many benefits it provides to our nation’s first responders,” said Brian Wynne, president and CEO of AUVSI. “Together, AUVSI and the National Council on Public Safety UAS will provide opportunities for the public safety community and the UAS industry to share ideas on creating tools and applications for police, firefighters, and other professionals who help ensure our safety and protection.”

There are many uses of UAS by public safety agencies. UAS provide firefighters with real-time aerial views of fires that enhance situational awareness. They can quickly survey wide areas of land and water for search-and-rescue missions. Unmanned systems are also making routine law enforcement duties more efficient, cost-effective and safer, such as conducting accident investigations and assessing traffic flow.

“The National Council on Public Safety UAS is excited about this new partnership with AUVSI to further advance the use of drones by public safety organizations,” said Charles Werner, chair of NCPSU. “AUVSI will help amplify efforts to share UAS information, best practices and training to public safety agencies through its outreach channels and conferences, and its membership.”
Benefits to Public Safety

• AUVSI Membership Discount
• AUVSI Conference/Program Discounts
• Free Day Exhibit Pass
  – AND
• New Public Safety UAS Forum May 1 & 2 in Denver
PUBLIC SAFETY UAS FORUM
Tuesday, May 1 | 11:00 AM – 4:15 PM and
Wednesday, May 2 | 11:00 AM – 4:15 PM
Room: 304

Produced by: Sponsored by:
This two-day forum offers public safety practitioners the opportunity to engage with each other and experts in the field while discussing key issues of interest to the community. A combination of panel sessions and stand-alone presentations will focus on UAS response and recovery operations following natural disasters, UAS integration into fire service operations, search and rescue missions, training considerations and real-world insights on integrating UAS technologies into public safety operations across applications and departments.

Featured topics include:
• UAS in the Fire Service: From Concept to Reality and How We Got Here
• SUAS Operations in Hurricanes Harvey, Irma and Maria
• Public Safety use of SUAS in an Urban Setting
• Critical Elements of a Successful Rural Search and Rescue Mission
• Traffic Reconstruction: The How, When and Why
• Working with the National Media and Their Local News Outlets
• Public Safety Integration into the NAS at Airports (MOUs, Pre-Planning and COAs)

Featured speakers include:
• Tom Madigan, Commander, Alameda County Sheriff's Office
• Christopher Sadler, Assistant Chief, York County Fire and Life Safety
• Anthony DeMolina, Master Instructor/Course Developer for the Los Angeles Regional Training Center, Los Angeles County Regional Training Center
• Rick Young, Fire Prevention Officer / Investigator / UAS Program Coordinator, Castle Rock Fire and Rescue Department
• Michael Leo, Lieutenant, New York City Fire Department

Click here to view the full agenda

Register for the NEW Public Safety UAS Forum through:
• A Full Conference pass or VIP Pass starting at $799*—get access to all of the AUVSI sessions + a BONUS 2-day Public Safety UAS Forum; OR
• A standalone Public Safety UAS Forum pass for just $375

Get additional $25 off enter code PSAXPO18 during registration

To Register, click here: https://www.xponential.org/xponential2018/public/Content.aspx?ID=2755
Ongoing Efforts

- **Federal Aviation Administration**
  - Public Safety COA Listings
  - Public Safety UAS Operations in the National Capital Region
- **Department of Homeland Security**
  - DHS Science & Technology
  - DHS Office of Emergency Communications
  - Federal Emergency Management Agency – Typing resources
- **FirstNet**
- **ANSI – UAS Standards Collaborative Committee**
- **APSAC/NFPA/ASTM/SAE Standards**
- **National Public Safety Telecommunications Council**
  - Providing Conference Call Capability
  - Providing Listserv
- **National Sheriffs Association - Providing Intern for Survey**
- **AUVSI developing National Public Safety UAS Registry**
Contact Information

National Council on Public Safety UAS

publicsafetyUAS.org

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Mobile: 434.825.5402
York County Fire & Life Safety

and York – Poquoson Sheriff’s Office

R.O.V.E.R. Team

(Remotely Operated Vehicles for Emergency Response)
How Drones are Impacting my Locality
Start Up

- Fire and Sheriff both interested
- PVCC Public Safety UAS Course
- Advantages of Fire Chief and Sheriff
- County Administrator and Elected Officials buy in
- Demonstration to elected officials, judges, prosecutors
- TV and newspaper stories
- Public perception and criticism
Team Make-Up

- Team formed in June 2016
- 14 personnel from Fire / Rescue and Sheriff’s Office (an additional 4 new personnel are in training)
- Blanket FAA Certificate of Authorization (COA) for Class G Airspace
- Jurisdictional COA for all of Virginia Peninsula (to include airspace around LAFB, Norfolk Navy Base, Ft. Eustis, Norfolk International, and Newport News/Williamsburg Int’l airports
- All members are FAA Part 107 Certified Remote Pilots and have many hours of training in UAS operations and management.
- Team trains a minimum of 2x a month (1 is at night). Additional exercises/demonstrations on average of 2-3 a month.
- Team has over 50 emergency missions and over 60 formal demonstrations since June, 2016.
Early Adopter Problems

- No one to copy
  - SOP’s
  - COA’s
  - Applicable Aircraft
  - Best Practices

- Problems without practical solutions
  - IT Issues (tx video)
  - Lessons Learned
  - Airspace restrictions
  - FAA Waiver delays
Initial Capabilities

**Phantom 4**
- 12 mega-pixel 4K camera
- Approximate VLOS distance of 1500’ (depending on background)
- Approximate cost $1,250 each
Current Capabilities

Matrice 600
- FLIR (640x520, 13mm, Fast)
- Z30 (30x optical, 6 digital, 180x total)
- Payload drop (used to deliver a flotation device, ammo magazines, cell phone/radio, medicine, hazmat monitoring devices, etc.)
- Spot/scene lighting and anti-collision lighting
- Approximate VLOS distance of 1 mile
- Approximate cost of $40,000
Current Capabilities (cont.)

**Flight Operations Trailer (“ROVER 1”)**

- 3 Flight control stations and 1 computer work station
- Video recording and streaming
- Hard wire feed to external monitors and command centers
- Verizon MiFi wireless internet (testing FirstNet systems)
- LAN, hard wire extension, tripod display
- Extended range wireless internet antenna
- Weather station
- Mobile and portable aircraft band radios
- Battery charging cabinet
- 2 Computers (AirData, radar, mapping, image processing, etc.)
Current Capabilities (cont.)

Mobile flight stations with live video recording and streaming

12 VDC self contained recording and streaming box

120 VAC recording and streaming box
Air Space Issues

Five Airports just for York County to Coordinate With
Air Space Coordination Map

SkyVector Map

Local Map with Radials and Distances from Newport News/Williamsburg Int’l and Norfolk Int’l Airports
Search for a Wanted Person at 2:30am
(Norfolk Int’l ATC controls the airspace at this time of night)
What have we used sUAS for so far?
Oil in Water
Lessons Learned and Needs

- Early ATC partnerships/coordination and continued communication
- Advocate and Educate the manned aircraft entities/personnel
- Communicate with other public safety agencies in the area regarding UAS operations
- Documentation (training, maintenance, flight info, Digital Media Evidence)
- Stay abreast of changes and technology advancement
Contact Information

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Questions

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Quiz

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- Complete the quiz to receive your continuing education units (CEUs) for this session