

Agenda

Overview of Drones - Unmanned Aircraft Systems (UAS) for Utilities

Specific types of UAS/sensors/software and applications that benefit utilities

Analyzing return on investment for UAS vs. manned aircraft

UAS for survey-grade mapping, 3D modeling, digital twin, building information modeling, virtual design and construction, as-built, point clouds, digital elevation, modeling, digital terrain modeling

UAS for recon: using UAS to document existing site conditions and to monitor progress

UAS for compliance: improve safety with UAS as part of robust safety programs

Legal Ramifications of Drone Use for Utilities

Federal and state regulation of UAS and airspace

FAA Part 107: Remote Pilot Certification

Pilot sources and resources, hiring and training

Evaluating contractor certifications and experience

Liability and risk mitigation

Commercial aviation insurance, auto policies and operational policies

Standard operating procedures

UAS for Survey Grade Mapping/3D Modeling/Digital Twin

Software, applications and dashboard

Data collection process, post flight workflow, and curation

for data centric and creative centric data-sets

Data deliverables, analysis, and worldwide, real-time, stakeholder collaboration and use

UAS for Recon

Pre-bid site analytics

Monitoring construction progress and documenting any special processes

Quality analysis and quality control

UAS for Compliance

High-risk inspections

Gas leak investigation

Thermal/infrared surveys

Right-of-way: pole/line/vegetation patrols

Erosion/sedimentation detection, monitoring, and analysis

UAS case studies

Future applications for UAS: next-generation equipment, machine learning, artificial intelligence and other technological advancements

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Drone Applications for Utilities

Live, Interactive Webinar - Monday, November 23, 2020

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Learning Objectives

You'll be able to:

Review specific types of unmanned aircraft systems (UAS) that benefit utilities.

Analyze return on investment, and explore in-house programs as well contract services.

Discuss Federal Aviation Administration regulations, and explore liability and risk mitigation for drone operations.

Learn about using UAS to monitor existing site conditions.

Use UAS for survey grade mapping, 3D modeling and creating digital twins.

Explore UAS use for monitoring construction progress, conducting high-risk inspections and conducting thermal/infrared surveys.



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HalfMoon Education Online Learning

Drone Applications for Utilities

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Learn about the many benefits of drone use for utilities

Examine UAS for compliance and improve safety with UAS

Understand the legal ramifications of drone use for utilities.

Explore data collection process

Discuss high risk inspections and discuss actual UAS for utility case studies

Continuing Education Credits

Professional Engineers

6.0 PDHs



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Faculty

Chuck Adams CEO *1UP Aerial Drone Services, headquartered in Golden, CO*
Mr. Adams is CEO of 1UP Aerial Drone Service, which sells drones and sensors, and provides expert consultation & aerial services to a range of industries, including engineering, commercial real estate, land development, construction, insurance, forensic science, surveying. Mr. Adams is an FAA Part 107 certified pilot, and a tenured information technology and cloud industry veteran who has spent 25 years in the high-tech industry.

Michael Raymond
Having his roots firmly in Kansas City Construction, Mr. Raymond has been an apprentice and a journeyman in multiple trades. He is also an experienced estimator and project manager. Mr. Raymond now uses drone technology to help architects, engineers and contractors (AEC) clients achieve a safe and productive worksite throughout the entire project life-cycle, including the creation of digital twins for handover. A veteran of the US Army, he served 11 years as an enlisted combat medic and a commissioned aviation officer flying three types of rotary winged aircraft. He has also owned and operated a hot air balloon ride business for eight years. As “Chief Remote Pilot” for Skycam - Kansas City’s advanced drone services, Mr. Raymond offers drones as a service for architects, engineers and constructors. With high precision and survey grade sensors he offers thermal/infrared inspections, transmission and distribution infrastructure mapping as well as project documentation and full scope land surveys. He helps train other remote pilot and chief drone program managers on how to safely and effectively use unmanned aerial vehicles in the AEC industry. With hundreds of hours of safe manned and unmanned aircraft operation, Mr. Raymond is certain to satisfy the most demanding clients with his “on-demand” drone services.

Webinar Information

Log into Webinar 9:30 - 10:00 am CST	Break 12:55 - 1:25 pm CST
Morning Session 10:00 am - 12:55 pm CST	Afternoon Session 1:25 - 4:50 pm CST

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- Thurs., Nov. 12, 2020 | 11:00 am - 2:45 pm CST
- Fri., Nov. 13, 2020 | 11:00 am - 2:45 pm CST

Threats to Trees
- Thurs., Nov. 12, 2020 | 11:00 am - 3:00 pm CST
- Fri., Nov. 13, 2020 | 11:00 am - 2:30 pm CST

Living with Wildlife
- Fri., Nov. 13, 2020 | 11:00 am - 2:30 pm CST

**Wastewater Collection
and Treatment System Design**
- Mon., Nov. 16, 2020 | 8:30 am - 4:30 pm CST

**Geothermal Heating and Cooling:
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- Tues., Nov. 17, 2020, 8:30 am – 4:30 pm CST

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