

# Technology Committee Report

## National Association of Ordnance Contractors

Committee Monthly Update

November 16<sup>th</sup>, 2022



[www.naoc.org](http://www.naoc.org)



# SAGEEP 2023 / 2<sup>nd</sup> Munitions Response Meeting

- April 2 – 6, 2023
- Deadline for Abstract Submissions: Dec. 20, 2022
- If interested in being a Session Chair contact me
- Session Chair Planning Call TBD in December
- Training Courses suggestions
- <https://www.eegs.org/sageep-2023>



# SAGEEP 2023 / 2<sup>nd</sup> Munitions Response Meeting

## Topics/Sessions

- ❑ Perspectives on Munitions Response
- ❑ DAGCAP - Project / Program Lessons Learned
- ❑ Risk Assessment for Explosives Hazards
- ❑ Applications for UAVs in Munitions Projects
- ❑ Site Applications/Case Studies
- ❑ Innovative Applications of Geophysics on MMRP Projects
- ❑ Underwater Methods for MEC Detection and Classification
- ❑ Robotic Applications to MR
- ❑ Emerging Geophysical Sensors
- ❑ Alternative Positioning Systems
- ❑ Munitions Response Operations and Safety-Exclusion zone reduction with AGC
- ❑ Data Usability Assessments
- ❑ Underwater Munitions Response Operations
- ❑ Munition Constituent Investigations
- ❑ Analog Geophysics
- ❑ Disposal Trench / OBOD (i.e. non firing range) Geophysics
- ❑ International Demining and UXO
- ❑ MMRP Cost estimating
- ❑ Feasibility Studies- Building Alternatives
- ❑ Geophysics in Extreme/Difficult Environments
- ❑ Remedial Action Objectives
- ❑ Root Cause Analyses
- ❑ "Then and now" a retrospective look at the MR industry
- ❑ Remedial Design (Case Studies, Data needs)
- ❑ Contracting Lessons Learned



# Guidelines for Drone Geophysics

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Presented by:

**Ron Bell**

Senior geoDRONEologist  
Drone Geoscience, LLC

15 NOV 2022  
NAOC Technology Committee

# REMOTE SENSING

- Color Photographs
- Color Video (4K)
- Near Infrared
- Multi- / hyper- spectral
- Thermal Infrared
- Short Wave Infrared

LiDAR

Gamma Ray Spectrometry

Ground Penetrating Radar

Magnetic

ElectroMagnetic (EM)

Seismic ?

Gravity ?

# Geoscience Data

surface

subsurface

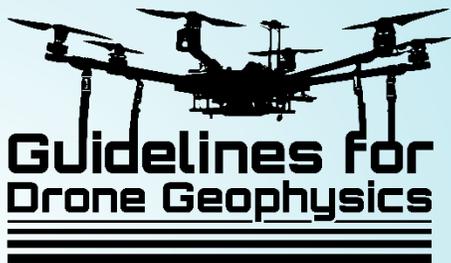
# GEOPHYSICS



# Objective of the Guidelines for Drone Geophysics

*Develop and distribute a guideline document presenting the best practices pertaining to the collection of geophysical data using a unoccupied aerial vehicle.*

- **Magnetics**
- **Electromagnetics (EM)**
- **Radiometrics**
- **Other**



# MAGNETICS



## MagArrow

Geometrics, Inc.  
([www.geometrics.com](http://www.geometrics.com))



# ELECTROMAGNETICS



**GEM2 UAV**  
Geophex, Inc.  
([www.geophex.com](http://www.geophex.com))



# GAMMA RAY SPECTROMETRY



**EM61 Lite**  
Geonics, Ltd  
([www.geonics.com](http://www.geonics.com))

**D230A**  
Gamma Ray Spectrometer  
Terraplus, Inc.  
([www.terraplus.ca](http://www.terraplus.ca))



The purpose of the ***Guidelines for Drone Geophysics*** is ***to educate the practitioners of drone geophysics*** and ***inform the customers of drone geophysical data*** about the best practices for collecting and processing geophysical data acquired using an unoccupied aerial vehicle (UAV) to achieve the best possible quality for the intended purpose.

Formed in 2020, the Committee for the Guidelines for Drone Geophysics consists of geophysicists, scientists, engineers, and UAV specialists from across the globe to spearhead this initiative. The current version of the document focuses largely on conveying the issues, concerns, and best practices pertaining to drone magnetic surveys. Other geophysical methods will be addressed shortly.

You are invited to download the current version of the guidelines. We ask that you provide comments and suggestions for improving the document. We invite you to convey your criticisms and suggestions by editing the DOC file and returning it for review and consideration by the committee. Your assistance is very much appreciated.

To download the document, you must first register as a "member".

Once registered, you will be provided access to the download link

[www.guidelinesfordronegeophysics.com](http://www.guidelinesfordronegeophysics.com)

# The “Ask”

*Will NAOC to support the initiative?*

- ***Provide NAOC Logo for DG Guidelines web site***
- ***Add DG Logo and link to the DG Guidelines web site to the NAOC web site***

# Thank you for your attention.

To learn more, contact

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# M2G2 Geophysics Webex

- ❑ M2G2 Geophysics Quarterly Call with NAOC and USACE – November 9th, 2:00-3:30 PM Eastern
- ❑ Presentation PDFs – Emailed to invitation list
- ❑ YouTube Link <https://youtu.be/vRashIPFjGE>
- ❑ Will be scheduling next M2G2 in about 3 months (January – February, 2023)
- ❑ Please let Jeffrey Leberfinger or Craig Murray know if you have discussion or presentation topics for this or future M2G2 calls

# NAOC General Membership Meeting

- ❑ Two Hour - AGC Project Case Histories/Lessons Learned Session from NAOC and USACE.
- ❑ Moderators – Steve Stacy – USACECX  
Craig Murray - NAOC
- ❑ Projects
  - ❖ Camp Blanding, FL (HGL)
  - ❖ Camp Croft, SC (Weston)
  - ❖ Borrego Springs, CA (TetraTech - GCO)
  - ❖ QA Validation Seeding (USACE)

# Miscellaneous Topics

- ❑ IVS Memo Template – NAOC provided RTCs to USACE – USACE group reviewed and accepted RTCs – Now the IVS memo template will go to the USACE CX for review and comment
- ❑ RA QAPP Template - Next version was expected out by mid November for NAOC review – But no updates on its status this month.
- ❑ EM-200-1-15 – Completed - waiting for USACE HG approval – expected 1<sup>st</sup> quarter of 2023.
- ❑ M2S2 Webinars – NAOC Led
  - ❖ Webinar #1 – Better PWS and Proposal Discussions –Led by Ryan Steigerwalt (Weston) and Amanda Sticker (USACE) February 16th 2023 1300 CST
  - ❖ Webinar #2 – Best of SAGEEP - June 28th 2023 1300 CST
- ❑ SERDP – ESTCP Fall IPR – October 25<sup>th</sup> – Agenda attached

# Technology Committee Contact

## QUESTIONS ?

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