



ASSOCIATION  

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OF OLD CROWS



JOIN THE LEGACY,  
SHAPE THE FUTURE



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AOC Muddy Watters  
EMS STEM Program

- Mark Schallheim
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# AEF STEM Subcommittee

- Lauren Schoener-Gaynor, AOC/AEF E&T (Professional Development) Committee
- Ken Dworkin, E&T (Professional Development) Program
- Lisa Fruge, Chapter STEM Expertise
- Mark Schallheim, **Chair**

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# STEM Committee Members

- Ian Agard
- Michael Brock, AOC
- Raul C Blanche
- Ken Dworkin
- Keith Everly
- Lisa Frugi
- Leslie Gruis
- Samatha Kim, AOC
- Vijay Kowtha
- Col Gary Lyke
- Myles Murphy
- Chuck Quintero
- Mick Riley
- Mark Schallheim, Chair
- Wayne Shaw
- Sully Sullivan, ISEF Advisor
- Need “Young Crow(s)”

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## AEF 5-Year Strategy (2025-2029)

**AEF Strategy Goal 3: *Support and enhance Electromagnetic Spectrum (EMS) STEM Activities for Youth Engagement across Chapters' programs involving them in exciting possibilities within the EMSO domain***

***Build a Spectrum-Oriented Science, Technology, Engineering, and Mathematics (STEM) program***

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## ***Support and Enhance EMS STEM Activities- Objectives***

- Encourage chapters to implement a diverse range of STEM programs, including science fairs, workshops, and interactive demonstrations that highlight the electromagnetic spectrum. Create age-appropriate activities that engage students in meaningful and relevant ways.
- Establish relationships with existing international STEM programs that have proven successful (e.g., International Science & Engineering Fair (ISEF), USA Science & Engineering Festival, and Griffiss Institute) and determine how we can integrate electromagnetic activities into their existing programs.
- Launch targeted outreach campaigns to raise awareness about our STEM programs among students, parents, and educators, emphasizing the value and impact of pursuing STEM careers, specifically in the electromagnetic sciences including online content.

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## **2025 AMW EMS STEM Focus Goals**

- 1) Chapters to increase EMS awareness and influence in existing and new STEM Programs**
- 2) AEF STEM to enhance EMS awareness to youth by prompting AOC and supporting projects in “**Society of Science**” and other Events [**AOC name recognition with EMS STEM technology and defense**]**
- 3) Investigate** Universities in STEM interaction and activities (via Chapters or group of AOC volunteers)
- 4) Research** creating new relationships between AOC STEM and Government, Corporate, DoD, Academia in order to expand EMS education, clubs, laboratories, and R&D in Universities as well as access to Internships.



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## **2025-2029 AMW EMS STEM Goals**

### ***All Years:***

- 1) Further expand AOC Chapters to share and interact with each other, as well as cooperate and collaborate to participate in Science Fairs, STEM Events and/or Programs with Government, Defense, Corporate, Associations and Educational Organizations. **10% or more increase from previous year.**
- 2) Increase Society for Science and **ISEF involvement with an increase in number of student EMS projects** by **10% or more from previous year.** Interact with High School educators that support these Fairs to encourage student participation in EMS studies/projects
- 3) **Review and refine STEM Objectives on an bi-annual basis** to ensure growth and reduction of conflict or redundancy with other Professional development (for example, Museums, Scholarships, Internships, Education, Websites, Webinars, Support Staff, ...)

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## **2025-2029 AMW EMS STEM Goals**

### ***All Years:***

- 4) **Investigate/experiment** in pursuing **University or Outstanding HS Students** to participate in **Convention & Symposium, Conference, or other AOC events**. Goal is to demonstrate the capability and excitement of a career in AOC related activities such as EMSO or other activity.
  
- 5) 2025-9: [**Reinvent past STEM?**] Examine if **NOW(?)** is the time to possibly create virtual events for student competition. Should we have a repository of EMS/EW/EMSO/CYBER Information for students? Should we host blogs? Should we have videos? Should we have chat rooms? Should we manage mentorship between students and Experts? Should we have a large STEM event?

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## ***“Possibly Starting after 2025” AMW EMS STEM Goals***

- 1) 2026-9: Congressional Advocacy, Industry & Academia outreach concerning deficiency of EMS & EMS Defense in Education & STEM programs
- 2) 2027-9: Develop EMS educational opportunities with Educators.
- 3) 2028-9: Expand EMS STEM Awareness in the General Public



# AMW EMS STEM 5-YEAR DRAFT BUDGET

| AEF EMS STEM           |   |             |             |             |             |             |
|------------------------|---|-------------|-------------|-------------|-------------|-------------|
| 2025-2029 Draft Budget |   |             |             |             |             |             |
|                        |   | 2025 BUDGET | 2026 BUDGET | 2027 BUDGET | 2028 BUDGET | 2029 BUDGET |
| <b>Income</b>          |   |             |             |             |             |             |
|                        | EMS STEM Sponsorships, Donations,<br>and Grants | \$ -        | \$ 5,000    | \$ 10,000   | \$ 20,000   | \$ 25,000   |
| <b>Expenses</b>        |   |             |             |             |             |             |
|                        | EMS STEM Judging Science Fairs (ISEF)           | \$ 10,000   | \$ 10,000   | \$ 10,000   | \$ 10,000   | \$ 13,000   |
|                        | EMS STEM Chapter Support                        | \$ 10,000   | \$ 10,000   | \$ 10,000   | \$ 10,000   | \$ 10,000   |
|                        | EMS STEM Miscellaneous                          | \$ 2,000    | \$ 2,000    | \$ 2,000    | \$ 2,000    | \$ 2,000    |
| <b>Total</b>           |   | \$ 22,000   | \$ 22,000   | \$ 22,000   | \$ 22,000   | \$ 25,000   |
| <b>Profit/Loss</b>     |   | \$ (22,000) | \$ (17,000) | \$ (12,000) | \$ (2,000)  | \$ -        |

# Actions/Questions?