### 2024

### DRONE PROGRAM



# SONS OF THE

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#### RESOLUTION NO. 24-001 SUBJECT: DRONE/UAV PILOT TRAINING PROGRAM

WHEREAS, Aerospace programs by federal and state entities, encompassing both governmental and private sectors, have been in existence since 1941;

WHEREAS, Since the 9/11 attack on America, Aerospace programs have made limited strides in offering veterans opportunities to engage with advancements in Drone Technology; and

WHEREAS, There is a pressing need for qualified individuals to join our military, with a demonstrated high Armed Services Vocational Aptitude Battery (ASVAB) score—a test measuring knowledge and acquired skills, uniquely suited for entry into the advanced aerospace fields of our Armed Services;

WHEREAS, There is a need to attract younger veterans with families into the American Legion within local communities by establishing a Drone/UAV Pilot Training program; and

WHEREAS, An opportunity exists to provide training and harness new technologies for the youth of America; and

WHEREAS, Currently, there is no active Drone Technology Program at any level of the American Legion, including Posts, Districts, or Veteran Training Centers, to facilitate rehabilitation or technical training in Unmanned Autonomous Vehicles (UAVs) for diverse agency applications, both private and governmental; and

WHEREAS, American Legion Posts can offer locations and facilities for an Aerospace Drone/UAV Pilot program; and

WHEREAS, The American Legion can support Drone or Drone Flight Schools for veterans and youth by providing facilities or site locations; and

WHEREAS, The American Legion and its family members are well-positioned to lead in establishing UAV Drone Technology training facilities nationwide; and

WHEREAS, Initial youth and community engagement can be enhanced through mentorship by veterans, ensuring optimal resource utilization and skill development in the Drone/UAV Pilot Program; and

WHEREAS, Private Drone/UAV Pilot programs are accessible and can be implemented at the Post level with reasonable investment, leveraging funding available through various STEM programs or self-funded initiatives at no cost to the American Legion. Now, therefore, be it.

### **Mission Statement**

Empowering youth with the knowledge and skills of drone technology, fostering STEM education, promoting community service, and instilling patriotic values to build the leaders of tomorrow.

By focusing on these key areas, a youth drone program can provide meaningful educational experiences, promote community engagement, and inspire the next generation of innovators and leaders.

### Vision Statement

Advancing technological skills and community engagement through a dedicated drone program that upholds the values of patriotism, service, and support for our veterans and their families.

### **Define Objectives and Goals**

- Educational Goals: Focus on teaching the principles of aerodynamics, robotics, coding, and electronics.
- Skill Development: Aim to develop problem-solving, teamwork, and leadership skills.
- Community Service: Encourage projects that benefit the community, such as environmental monitoring or disaster response support.
- Patriotic Values: Integrate lessons on the importance of community service and patriotism, in line with the values of the Sons of the American Legion.

### Curriculum Design

- Beginner to Advanced Levels: Create a structured curriculum that progresses from basic to advanced drone operations and programming.
- Hands-on Learning: Incorporate practical, hands-on projects where students can build, program, and fly drones.
- Integration with STEM: Align the program with school STEM curricula to reinforce and complement students' academic learning.

### Partnerships and Resources

- Collaborate with Schools and Universities: Partner with educational institutions for resources, expertise, and to align the program with academic standards.
- Leverage Technology Companies: Seek support from technology companies for equipment, sponsorships, and expert mentorship.
- Engage with the Community: Work with local businesses, veteran organizations, and community groups to provide real-world applications and service opportunities.

### Training and Safety

- Instructor Training: Ensure instructors are well-trained in drone technology, safety protocols, and youth education.
- Safety Protocols: Develop comprehensive safety guidelines and ensure all participants are trained in safe drone operation.
- Regulatory Compliance: Ensure the program complies with local and federal regulations regarding drone use.

### **Events and Competitions**

- Drone Races and Challenges: Organize drone races and technical challenges to motivate and engage students.
- Community Demonstrations: Host events where students can demonstrate their skills and projects to the community.
- National Competitions: Encourage participation in national and international drone competitions.

### Mentorship and Career Guidance

- Connect with Professionals: Arrange for mentorship opportunities with professionals in the drone industry.
- Career Pathways: Provide information on career opportunities in drone technology, engineering, and related fields.

### Sustainability and Growth

- Fundraising and Grants: Seek funding through grants, sponsorships, and community fundraising to ensure the program's sustainability.
- Feedback and Improvement: Regularly gather feedback from participants and stakeholders to continuously improve the program.
- Expand Outreach: Aim to expand the program to reach more youth, including those in underserved communities.

### **Code of Conduct**

Implementing a youth drone program requires specific guidelines to ensure the safety, respect, and responsible behavior of all participants.

#### Safety and Supervision

- 1. **Adult Supervision**: Ensure that all drone activities are supervised by responsible adults who are knowledgeable about drone operations and safety protocols.
- 2. **Safety Briefings**: Conduct regular safety briefings before any drone activity, emphasizing the importance of following safety guidelines.
- 3. **Protective Gear**: Provide necessary protective gear and ensure it is worn at all times during drone operations.

#### **Respectful Behavior**

- 1. **Respect for Instructors and Peers**: Encourage youth participants to listen to and respect the instructions given by supervisors and to treat their peers with kindness and respect.
- 2. **Inclusivity**: Foster an inclusive environment where all participants feel welcome and valued, regardless of their skill level or background.
- 3. **Teamwork and Cooperation**: Promote teamwork and cooperation. Encourage participants to help each other and work together towards common goals.

#### **Responsible Conduct**

- 1. **Drone Handling**: Teach and enforce responsible handling of drones, including proper takeoff, landing, and in-flight maneuvering techniques.
- 2. **Respect for Privacy**: Instruct participants to avoid flying drones over private property or capturing images or videos of individuals without their consent.
- 3. Environmental Stewardship: Emphasize the importance of respecting the environment. Avoid flying drones in sensitive natural areas or disturbing wildlife.

#### Learning and Development

- 1. **Skill Building**: Provide opportunities for participants to learn and develop their drone piloting skills in a supportive environment.
- 2. **Constructive Feedback**: Offer constructive feedback to help participants improve their skills and understand the importance of continuous learning.
- 3. Encouragement and Support: Encourage participants to take on new challenges and support them in their efforts to learn and grow.

#### **Ethical Behavior**

- 1. **Honesty and Integrity**: Promote honesty and integrity in all activities. Ensure that participants understand the importance of being truthful and responsible.
- 2. Ethical Use of Drones: Teach participants about the ethical considerations of drone use, including respecting privacy and avoiding misuse of drone technology.
- 3. **Community Respect**: Encourage respect for the local community by informing them about drone activities and addressing any concerns they may have.

#### **Communication and Reporting**

1. **Clear Communication**: Maintain clear and open communication between supervisors and participants. Ensure that instructions are understood and questions are encouraged.

- 2. **Reporting Incidents**: Establish a clear process for reporting any incidents or safety concerns. Ensure that participants know how to report issues and feel comfortable doing so.
- 3. **Feedback Loop**: Create a feedback loop where participants can share their experiences and suggestions for improving the program.

#### **Personal Conduct**

- 1. **Attentiveness**: Encourage participants to remain attentive and focused during drone activities. Discourage distractions that could lead to accidents or unsafe behavior.
- 2. **Respect for Equipment**: Teach participants to respect and properly care for the drone equipment. Emphasize the importance of handling drones and related gear responsibly.
- 3. **Behavioral Standards**: Set clear behavioral standards and enforce them consistently. Address any breaches of conduct promptly and fairly.

#### **Community Engagement**

- 1. **Educational Outreach**: Engage with the community by offering educational sessions and demonstrations about drones. Promote understanding and positive relationships.
- 2. **Community Service**: Integrate community service activities into the program, such as using drones for environmental monitoring or local events.
- 3. **Transparency**: Maintain transparency about program activities with the community. Clearly communicate the purpose and schedule of drone activities.

By following these guidelines, the youth drone program can operate in a safe, respectful, and responsible manner, fostering a positive learning environment for all participants.

### **Disciplinary Actions**

Establishing clear disciplinary actions for violations is crucial to maintaining a safe and respectful environment in the youth drone program.

#### **Minor Infractions**

- 1. Examples:
  - Minor safety breaches (e.g., not wearing protective gear)
  - Disrespectful language or behavior
  - Minor disruptions during activities

#### 2. Consequences:

- Verbal Warning: The first step is a verbal warning to inform the participant of the inappropriate behavior and explain why it is unacceptable.
- **Temporary Time-Out**: A brief time-out from the activity to reflect on their behavior and understand the importance of following rules.
- Additional Training: The participant may be required to undergo additional training or review the safety protocols.

#### **Moderate Infractions**

- 1. Examples:
  - Repeated minor safety breaches
  - Disrespect towards supervisors or peers
  - Unauthorized use of drone equipment
  - Neglecting to report incidents
- 2. Consequences:
  - Written Warning: A formal written warning detailing the violation and the expectations for future behavior.
  - **Temporary Suspension**: Suspension from drone activities for a defined period (e.g., one week) to underscore the seriousness of the violation.

• **Parental/Guardian Notification**: Informing parents or guardians about the incident and the actions taken.

#### **Serious Infractions**

- 1. Examples:
  - Major safety violations (e.g., endangering self or others)
  - Bullying or harassment
  - Intentional damage to drone equipment
  - Repeated unauthorized use of drones
  - Violations of privacy or ethical standards

#### 2. Consequences:

- Long-term Suspension: Suspension from the program for an extended period (e.g., one month or more).
- **Behavioral Contract**: The participant may be required to sign a behavioral contract outlining specific expectations and consequences for further violations.
- **Mandatory Meetings**: Regular meetings with supervisors, parents/guardians, and the participant to monitor behavior and progress.

#### **Severe Infractions**

- 1. Examples:
  - Dangerous behavior that results in harm or significant risk to others
  - Severe bullying or harassment
  - Major ethical violations, such as invasion of privacy
  - Repeated serious infractions despite previous disciplinary actions

#### 2. Consequences:

- **Expulsion**: Permanent removal from the youth drone program.
- **Report to Authorities**: If the behavior violates laws or regulations, it may be necessary to report the incident to local authorities or relevant organizations.

• **Restitution**: The participant may be required to compensate for any damage caused by their actions.

## Implement Background Checks for Adults

- Background Check Process: Partner with a reputable background check service to screen all adult volunteers and staff members.
- Required Checks: Include criminal history, sex offender registry, and any other relevant checks as required by local laws and organizational policies.

### **Develop Youth Protection Policies**

- Code of Conduct: Create a code of conduct for both adults and youth participants outlining acceptable behavior and disciplinary measures.
- Training for Adults: Provide training sessions for adults on youth protection, recognizing signs of abuse, and appropriate interaction with youth.
- Reporting Mechanisms: Establish clear procedures for reporting and responding to any incidents of abuse or misconduct.

### **Parental/Guardian Involvement**

- Consent Forms: Ensure all participants have signed consent forms from their parents or guardians.
- Information Sessions: Regular updates and information sessions for parents/guardians to keep them informed about the program's progress and any upcoming events.

### **Operational Guidelines**

- Drone Handling and Storage: Instructions for proper handling, transportation, and storage of drones to prevent damage and ensure longevity.
- Flight Operation Procedures: Step-by-step instructions for launching, controlling, and landing drones. Include guidance on maintaining visual line-of-sight and avoiding restricted airspace.
- Post-Flight Procedures: Steps for safely powering down, inspecting for damage, and recording flight data.

### **Documentation and Record-Keeping**

- Attendance Records: Maintain accurate records of participant attendance.
- Flight Logs: Detailed logs of each flight session, including any incidents or anomalies.
- Progress Reports: Periodic reports on participant progress and skill development.

### **Review and Continuous Improvement**

- Feedback Mechanism: Implement a system for collecting feedback from participants, parents, and instructors to improve the program.
- Regular Review: Schedule periodic reviews of the SOP to ensure it remains relevant and effective. Update procedures as necessary based on new regulations, technology advancements, or feedback.

### **Veterans Mentorship**

Having veterans with aviation backgrounds involved in the SAL Drone program is incredibly valuable. Their expertise and experience can greatly enhance the program's effectiveness and provide mentorship and

guidance to the youth participants. Here's how their involvement can contribute to the success of the program:

- Expertise in Aviation: Veterans with aviation backgrounds bring a wealth of knowledge and experience in piloting aircraft, understanding airspace regulations, and maintaining safety protocols. Their expertise can ensure that drone operations are conducted safely and responsibly, minimizing risks and maximizing learning opportunities for participants.
- Mentorship and Guidance: Veterans can serve as mentors and role models for young participants, sharing their experiences, wisdom, and lessons learned from their military service and aviation careers. Their mentorship can inspire and motivate youth to pursue their interests in aviation and STEM fields while instilling values of discipline, teamwork, and professionalism.
- Training and Instruction: Veterans can take on leadership roles within the program, providing training and instruction to participants on drone operation, flight techniques, and safety procedures. Their ability to effectively communicate complex concepts and demonstrate practical skills can facilitate a hands-on learning environment and accelerate participants' proficiency in drone technology.

4. Career Pathway Exploration: Veterans can offer insights into various career pathways in the drone industry and related fields, drawing from their own experiences transitioning from military service to civilian careers. They can provide guidance and support to participants interested in pursuing careers as drone pilots, aerospace engineers, aviation technicians, or other roles in the aviation sector.

• Community Engagement: Veterans' involvement in the program can also strengthen ties between the SAL Drone program and the broader veteran community. Their participation can help raise awareness of the program's mission and activities, foster collaboration with other veteran

organizations, and create opportunities for intergenerational dialogue and camaraderie.

Overall, having veterans with aviation backgrounds involved in the SAL Drone program not only enhances the program's technical capabilities but also enriches the learning experience for participants and strengthens community connections. Their contributions play a vital role in empowering young people through drone technology and honoring the legacy of service and sacrifice exemplified by veterans.

### **Recreational UAS Safety Test (TRUST)**

The Recreational UAS Safety Test (TRUST) is a required safety course for all recreational drone operators in the United States. The test is mandated by the Federal Aviation Administration (FAA) and aims to ensure that drone enthusiasts are aware of safety guidelines and regulations. Here's a summary of key points about TRUST and how to take it:

#### What is TRUST?

TRUST stands for The Recreational UAS Safety Test. It is a free, online test developed in collaboration with the FAA. Completion of the test is mandatory for all recreational drone flyers.

#### Purpose of TRUST

To educate recreational drone operators on safety and regulatory requirements. To promote safe and responsible flying practices.

To enhance the safety of the National Airspace System (NAS).

#### Who Needs to Take TRUST?

Any individual flying a drone recreationally in the United States must take the test, regardless of age.

The requirement applies to drones weighing more than 0.55 pounds (250 grams) and less than 55 pounds (25 kilograms).

#### How to Take the Test

Find an Approved Test Administrator: TRUST can be taken through various FAA-approved organizations, such as the Academy of Model Aeronautics (AMA) or other educational institutions and community-based organizations.

Register: Register on the chosen test administrator's website.

Complete the Test: The test includes a series of multiple-choice questions covering topics like airspace classifications, airport operations, weather, drone maintenance, and regulations.

Receive Your Certificate: Upon successful completion, you will receive a certificate. Print or save a digital copy of this certificate, as you are required to present it to authorities upon request while flying your drone.

#### Important Topics Covered in TRUST

Basic Safety Guidelines: Safe flying practices, respecting privacy, and flying within visual line of sight.

Regulations and Compliance: Understanding FAA regulations, flying within Class G airspace, and obtaining necessary authorizations for other airspaces. Emergency Procedures: What to do in case of a lost link or flyaway.

Airspace Awareness: Understanding the different classes of airspace and restrictions.

#### Tips for Passing the Test

Review FAA Guidelines: Familiarize yourself with the FAA's recreational drone flying guidelines.

Study Relevant Materials: Utilize study guides and practice tests available from the test administrators.

Understand Key Concepts: Make sure you understand basic concepts like airspace classification, NOTAMs (Notices to Airmen), and temporary flight restrictions (TFRs).

#### **Post-Test Requirements**

Carry Proof: Always carry proof of test completion when flying your drone. Stay Informed: Keep up to date with any changes in regulations or safety guidelines from the FAA.

Taking the TRUST is an essential step to ensuring safe and enjoyable recreational drone flying. It helps promote responsible use of drones and compliance with national aviation safety standards.

### **Entry Level Drone Training**

Incorporating the DJI Tello drone, or equitant, into drone education and training can be a fantastic way to introduce students or participants to various aspects of drone technology, flight principles, programming, and applications. Here's how you can use the DJI Tello effectively in such educational settings:

- Introduction to Drone Technology: Start with an overview of drone technology, including the components of the DJI Tello drone. Cover topics such as aerodynamics, propulsion systems, sensors, and flight controllers.
- Flight Principles: Teach the basics of flight principles, including lift, thrust, drag, and weight. Demonstrate how these principles apply to the flight of the DJI Tello and how different maneuvers are executed.
- Safety Procedures: Emphasize the importance of safety procedures when operating drones. Cover topics such as pre-flight checks, flight regulations, emergency procedures, and safe flying practices.
- Flight Training: Provide hands-on flight training with the DJI Tello. Start with basic maneuvers such as takeoff, landing, hovering, and simple movements in different directions. Progress to more advanced maneuvers as participants gain confidence and proficiency.
- Programming and Coding: Introduce participants to programming and coding using the Tello SDK or Tello EDU app. Teach them how to write scripts to control the drone's movements, automate tasks, and perform

autonomous flights. Encourage creativity and experimentation with coding projects.

- Applications and Use Cases: Explore various applications and use cases of drones in different industries, such as aerial photography, agriculture, search and rescue, environmental monitoring, and more. Discuss the potential benefits and challenges of using drones in these fields.
- Projects and Challenges: Assign projects or challenges that require participants to apply their knowledge and skills with the DJI Tello. For example, they could design obstacle courses, create aerial maps, conduct simulated search and rescue missions, or develop innovative applications using the drone.
- Collaborative Learning: Foster a collaborative learning environment where participants can share their experiences, insights, and ideas related to drone technology and applications. Encourage teamwork and peer learning through group projects and discussions.
- Continuous Learning and Exploration: Encourage participants to continue learning and exploring drone technology beyond the classroom or training sessions. Provide resources such as online tutorials, forums, and communities where they can further develop their skills and stay updated on the latest advancements in the field.

By integrating the DJI Tello drone into drone education and training programs, you can provide participants with a hands-on learning experience that is engaging, interactive, and relevant to real-world applications of drone technology.

### Personnel

The UAS Coordinator or Remote Pilot-in-command (RPIC) is responsible for the overall safety during UAS operations.

#### UAS Coordinator:

• The UAS Coordinator shall maintain a file for each operator and airframe. The file shall include copies of training records, flight incidents, maintenance records, etc.

• It is the responsibility of the UAS Coordinator to be current and to update the RPIC and observer with all federal and state regulations as they change;

• The UAS Coordinator shall ensure that the RPIC has all documents required as per FAA, state and department guidelines.

• The UAS Coordinator should ensure that the RPIC is current with the training and knowledge.

• It is the responsibility of the UAS Coordinator to ensure all UAS are registered and in airworthy condition.

#### Remote Pilot in Command (RPIC):

• To be considered for selection as an operator, applicants must meet the requirements for and successfully pass the FAA Remote Pilot Certification Part 107.

• Operators interacting with Air Traffic Control (ATC) or Terminal Radar Approach Control Facilities (TRACON) shall have sufficient expertise to perform that task readily. Operators must have an understanding of, and comply with FAA Regulations applicable to the airspace where the UAS operates.

• An operator's primary duty is the safe and effective operation of the UAS in accordance with the manufacturers' approved flight manual, and FAA regulations, policies and procedures. Operators must remain knowledgeable of all FAA regulations; UAS manufacturer's flight manual and bulletins and department policy and procedures.

• Operators may be temporarily removed from flight status at any time by the UAS Coordinator, for reasons including performance, proficiency, physical condition, etc. Should this become necessary, the operator will be notified verbally and in writing of the reason, further action to be taken and expected duration of such removal.

• It is the responsibility of the RPIC to ensure all UAS are registered and in airworthy condition prior to UAS operations.

#### Observers

• Observers must have been provided with sufficient training to communicate clearly to the operator any turning instructions required to stay clear of conflicting traffic and obstacles.

• An observer's primary duty is to operate the UAS's equipment including cameras, radio communications with RPIC, as well as be an observer for anything that may affect the RPICs primary duty (see and avoid).

### Funding

Funding a drone program can be achieved through various avenues, depending on the scope of the program, its objectives, and the resources available. Here are several potential ways to fund a drone program:

- Grants: Seek grants from government agencies, non-profit organizations, educational foundations, or private companies that support STEM education, technology innovation, or research initiatives. Many grant opportunities exist specifically for educational programs focused on emerging technologies like drones.
- Educational Institutions: Approach your school, college, or university administration to allocate funds from the institution's budget for establishing a drone program. Highlight the educational benefits and potential impact of the program on student learning and skill development.
- Corporate Sponsorship: Partner with companies in the drone industry or related sectors to secure sponsorship for the program. Companies may be interested in supporting educational initiatives as part of their corporate social responsibility efforts or to develop a pipeline of skilled talent for the industry.

- Community Partnerships: Forge partnerships with local businesses, community organizations, or government agencies that have an interest in promoting STEM education or leveraging drone technology for various applications. Collaborate on joint initiatives or seek funding support from these partners.
- Donations and Fundraising Events: Organize fundraising events, such as charity auctions, benefit concerts, or community workshops, to raise funds for the drone program. Encourage donations from individuals, businesses, and organizations that attend or participate in these events.
- Government Funding Programs: Explore government funding programs or initiatives that support educational technology projects, workforce development, or research in STEM fields. Research available grants, subsidies, or tax incentives at the local, state, or federal level that could provide financial support for the drone program.
- Fee-Based Services: Offer fee-based services or training programs using drones to generate revenue that can be reinvested into the drone program. This could include aerial photography and videography services, drone pilot training courses, or workshops for industry professionals.
- In-Kind Contributions: Seek in-kind contributions of equipment, software, or services from companies or organizations in the drone industry. These contributions can help offset the costs of establishing and operating the drone program, freeing up funds for other essential expenses.
- Endowments and Foundations: Research opportunities for endowments or grants from philanthropic foundations or trusts that support education, technology, or innovation. Apply for funding or establish partnerships with these organizations to secure long-term financial support for the drone program.

Combining multiple funding sources and strategies can increase the likelihood of success in establishing and sustaining a drone program over the long term.

Additionally, demonstrating the educational value, potential impact, and sustainability of the program can help attract funding from various stakeholders and supporters.

#### How the Funds will be Utilized

Funding for a range of specific activities within the San Tan Valley Youth Drone Initiative. Here are some examples of how the funds will be utilized to support program activities:

1. Drone Procurement: The grant will enable the purchase of drones and associated equipment, including quadcopters, controllers, batteries, chargers, and safety gear, to facilitate hands-on flying experience for participants.

2. Educational Materials: Funding will be allocated for the development and procurement of educational materials, including textbooks, manuals, and online resources, to support drone education and training sessions.

3. Instructor Training: Grant funds will be used to train and certify instructors in drone operation, safety protocols, and instructional techniques to ensure high-quality educational experiences for program participants.

4. Workshops and Workshops: The grant will support the organization of workshops, seminars, and guest speaker sessions featuring experts in drone technology, STEM education, and related fields to enhance participants' knowledge and skills.

5. Field Trips and Excursions: Funding will be allocated for field trips and excursions to local drone facilities, research centers, and industry events to expose participants to real-world applications of drone technology and career opportunities in the field.

6. Community Service Projects: Grant funds will be used to support the implementation of community service projects utilizing drone technology, including materials, equipment rental, and logistical expenses associated with project planning and execution.

7. Safety and Ethics Training: The grant will enable the development and delivery of safety and ethics training sessions for participants, covering topics such as airspace regulations, privacy concerns, emergency procedures, and ethical considerations in drone operation.

8. Career Exploration and Mentorship: Funding will be allocated for mentorship programs, career counseling sessions, and networking opportunities to help participants explore career pathways in the drone industry and receive guidance and support from experienced professionals.

9. Youth Leadership Development: Grant funds will support leadership development activities, including workshops, retreats, and team-building exercises designed to empower participants to take on leadership roles within the program and their community.

Overall, the drone grant will play a crucial role in providing financial support for a wide range of activities within the San Tan Valley Youth Drone Initiative, ensuring that young people have access to high-quality educational experiences, skill development resources, and community engagement opportunities related to drone technology.

Drone	QTY	AMOUNT	TOTAL
DJI Tello Drone Boost Combo	5	\$150.00	\$750.00
Remote Controller Joystick for DJI Tello Drone	5	\$39.00	\$195.00
DJI Mini 2 se	1	\$279.00	\$279.00
DJI Mini 3	1	\$579.00	\$579.00
Total		\$1,047.00	\$1,803.00

#### **Equipment and Supplies**

Support Item	QTY	AMOUNT	TOTAL
Screwdrivers Set Drone Repair Tools Kit	1	\$11.99	\$11.99
Drone Landing Pad Launch	1	\$29.99	\$29.99

Anemometer Handheld Wind Speed Meter	1	\$15.99	\$15.99
Propellers (28)	2	\$10.00	\$20.00
Total		\$67.97	\$77.97
Safety Equipment	OTY	AMOUNT	TOTAL
Safety Glasses (Pk of 24)	1	\$22.99	\$22.99
First Aid Kits	2	\$50.00	\$100.00
FAA Drone Pilot Vest High Visibility Vest	2	\$11.29	\$22.58
Battery Safe Bag	2	\$13.00	\$26.00
Total		\$97.28	\$171.57
Storage and Transport	QTY	AMOUNT	TOTAL
Hard EVA Carrying Case	5	\$26.99	\$134.95
Metal Storage Cabinet with Digital Lock	1	\$219.00	\$219.00
Total		\$245.99	\$353.95
Educational Resources		AMOUNT	TOTAL
Printed manuals, online course access, and instructional	videos	\$500.00	\$500.00
Total		\$500.00	\$500.00
Training and Staffing		AMOUNT	TOTAL
Printed manuals, online course access, and instructional	videos	\$500.00	\$500.00
Total		\$500.00	\$500.00
OTHER EXPENSES		AMOUNT	TOTAL
		<b>\$450.00</b>	<b>Ф450.00</b>

48-Inch Workbench with Power	\$150.00	\$150.00
Marketing and Outreach	\$150.00	\$150.00
Drone Insurance	\$500.00	\$500.00
Total	\$800.00	\$800.00

Notes:

- Scalability: The budget can be scaled up or down based on the number of participants and the scope of the program.
- Sponsorship and Grants: Seek partnerships with local businesses, educational institutions, and technology companies for potential sponsorships or grants to offset costs.
- In-kind Donations: Consider soliciting in-kind donations such as drones, safety equipment, or venue space to reduce expenses.
- Volunteer Involvement: Utilizing volunteers for certain roles can also help minimize staffing costs.

### **Accident Reporting**

Within **10 calendar days** after an accident (as defined by regulation) and before additional flights, the operator must provide notification to the FAA per Part 107.9.

FAA defines an accident when:

1. any person suffers death or serious injury.

2. damage to any property, other than the small UAS if the cost is greater than
 \$500 to repair or replace the property.

The accident report can be submitted FAA Regional Operations Center (ROC) electronically

(https://www.faa.gov/uas/report\_accident/) or by telephone using the following directory: FAA Regional Operations Center (Az) 425-227-1997

The ROC Reports may also be made to the nearest jurisdictional FSDO (https://www.faa.gov/about/office\_org/field\_offices/fsdo/). The report should include the following information:

- 1. RPIC's name and contact information;
- 2. RPIC's FAA airman certification number;

3. sUAS registration number issued to the aircraft, if required (FAA registration number);

- 4. Location of the accident:
- 5. Date of the accident;
- 6. Time of the accident;
- 7. Person(s) injured and extent of injury, if any or known;
- 8. Property damaged and extent of damage, if any or known; and
- 9. Description of what happened.

SUAS accidents are reported to the FAA ROC. However, in some cases, according to FAA AC 107-2 (4.5.2), a sUAS accident must be reported to the National Transportation Safety Board (NTSB). The AC directs the RPIC reporting an accident to the FAA to consult the NTSB website (www.ntsb.gov) for more information. It is important to understand the regulations so that proper reports and notifications can be prepared following an accident. Enforcement action can be taken against the operator if notification is not made within the prescribed timeframe.

### Appendices

- Checklists: Pre-flight and post-flight checklists.
- Contact Information: Emergency contacts, program coordinators, and technical support.
- Resources: Additional educational materials, relevant regulations, and guidelines from aviation authorities.

### **Pre-Flight Check**

AGENDA	CHECK
<b>WEATHER:</b> Check to ensure there is no rain on the way along with the wind speed.	
<b>NO FLY ZONE:</b> Ensure your flight route does not coincide with a No-Fly Zone.	
<b>INTERFERENCE:</b> Check your surrounding area for mobile/radio towers, electrical wires and metallic objects.	

<b>OBSTACLES:</b> Ensure your take-off and flight path is free from any obstacles.							
<b>PEOPLE:</b> Ensure there are no people within your flight area							
<b>TEMPERATURE:</b> Double check the temperature is within the drone's limits.							
<b>SD CARD:</b> Ensure your SD card is installed in your drone and is correctly formatted.							
<b>CLEAN DRONE SENSORS:</b> Double check all the vision and infrared sensors are cleaned.							
<b>TAKE OFF PAD:</b> Ensure your drone is on a level surface for take-off.							
GIMBAL COVER: Remove the Gimbal Cover.							
<b>INSERT BATTERY:</b> Use a fully charged battery and make sure to hear the audible click.							
<b>TURNING DRONE ON:</b> Ensure there are no obstacles in the way of the aircrafts gimbal.							
<b>TURNING CONTROLLER ON:</b> Make sure there is enough charge on the controller.							
<b>LOADING THE APP:</b> Connect your phone/tablet to the controller and connect the drone.							
<b>CHECK FOR FIRMWARE UPDATES:</b> Download and install the required firmware updates.							

CHECK FOR ERROR MESSAGES: Attend to any error messages.	
<b>GPS MODE:</b> Wait for the home point to be recorded and to be in GPS Mode.	
<b>PROPELLERS:</b> Double-check check all the propellers are installed correctly.	
HOVER: Take off and hover a minute to see if there are any abnormalities.	
FLY: After everything is ticked off, go out and fly!	

### **Post Flight Check**

AGENDA	CHECK
<b>LANDING:</b> Ensure it is safe to land the drone, check for obstacles and for people.	
TURNING OFF DRONE: Power down the drone first.	
<b>REMOVE BATTERY:</b> Remove the battery from the drone.	
TURNING OFF THE CONTROLLER: Power down the controller.	
VISUAL INSPECTION: Inspect the drone to ensure no damage was made.	
<b>GIMBAL INSPECTION:</b> Carefully rotate the gimbal and see if it can rotate freely.	
CLEAN: Clean the vision sensors from any dust, sand or debris.	
DRY: If there is any residue, please wipe it dry.	
GIMBAL PROTECTOR: Reinstall the gimbal protector.	

<b>CLEAN DRONE SENSORS:</b> Double check all the vision and infrared sensors are cleaned.	
STORAGE: Place the drone back into the storage bag or safety case	

### **Mission Checklist**

UA	JAS Mission Checklists					Mission #:				
Mission Checklist										
	Airport(s) Notifi	tified: UAV Batterie			tteries	Charge	d 🗆	Gimb	al Prote	actor Installed
	Location is OK	to fly		Battery	attery 1 volts:			Prope	Propellers Packed	
	Weather Forec	ast OK		Battery	2 volts:			Cable	Cables Packed	
	Temperature:			Battery	ttery 3 volts:			Came	Camera Filters Packed	
	Wind:			Battery	tery 4 volts:			Sun S	Sun Shade Packed	
	Precipitation:			Control	er Char	ged		Tools	Tools Packed	
	Firmware up-to	-date		Tablet (	Charged	1		Flight	Plan d	esigned/entered in software
	MicroSD Card F	Formatted		Mobile	Phone (	Chargeo	1 🗆	Log B	look Pa	cked
Laun	ch Site Checklis	t								
	Verify Weather	is OK to Fly				Chec	k for obsta	acles, in	terferer	nce
	Temperature:					Chec	k for neart	by huma	an activ	ity/dangerous situations
	Wind:					Verif	y Launch F	ad is d	own-wi	nd from observers
	Precipitation:					Laun	ch Pad/Ba	rriers P	laced	
	Safety Briefing	1								
Equip	ment Checklist									
	Airframe/Landir	ng gear inspe	cted		SD Car	d Install	ed			Gimbal/Lens Protector Removed
	Propellers Inspected/Attached			Battery	ry Installed 🔲 Camera Filters Install			Camera Filters Installed		
	Controller/Tablet Assembled									
Pre-F	light Checklist									
	Aircraft Placed	on Launch Pa	əd				Check R	C batter	ry level	
	Turn on Remote	e Controller/T	ablet/D	JI Pilot Ap	р		Check A	ircraft B	attery l	evel
	Antennas Prop	erly Positione	d				Check flight mode switch (P-Mode)			
	Turn on Aircraft	t					Check Satellite and Compass status			mpass status
	Check the aircr	aft status LEC	Ds				Set RTH Location and height			height
	Verify the gimb	al is level, car	n move	unobstruc	ted:		Check camera settings			
Take	Off Checklist									
	Check launch s	ite is clear fo	r take of	f 🗆	Make	e sure t	he aircraft i	is stable	while	hovering
	Start the motors	8			Chec	:k flight	controls, n	nake su	re they	respond as expected
	Take off and hover   Start recording video									
Post Flight Checklist										
	Remove Battery from Aircraft									
	Complete the	Flight Log								

### Sons of the American Legion Youth Drone Program Parent/Guardian Consent Form

### 

**Emergency Contact Information:** 

Emergency Contact Name: \_\_\_\_\_

Relationship to Participant:	

Phone Number: \_\_\_\_\_

#### **Medical Information:**

Does the participant have any medical conditions, allergies, or dietary restrictions? Yes 
No 
If yes, 
please explain: \_\_\_\_\_\_

Is the participant currently taking any medication? Yes  $\Box$  No  $\Box$  If yes, please list:

### Consent and Acknowledgement:

1. Program Description:

I understand that the Sons of the American Legion Youth Drone Program involves the use of drones for educational and recreational purposes. The program includes activities such as drone piloting, safety training, and technical skills development.

2. Risk Acknowledgement:

I acknowledge that participating in the youth drone program involves certain risks, including but not limited to the risk of personal injury, property damage, or loss. I understand that the program organizers will take all reasonable precautions to ensure the safety of participants.

#### 3. Medical Consent:

In the event of an emergency, I authorize the program staff to seek medical treatment for my child. I understand that every effort will be made to contact me or the emergency contact provided before any medical treatment is administered.

4. Code of Conduct:

I understand that participants are expected to follow all safety protocols and the code of conduct established by the program. I acknowledge that failure to adhere to these rules may result in disciplinary action, including possible suspension or expulsion from the program.

5. Photo and Video Consent:

I give my consent for my child to be photographed or filmed during program activities. I understand that these images or videos may be used for promotional purposes by the Sons of the American Legion.

6. Release of Liability:

I hereby release the Sons of the American Legion, its officers, employees, and volunteers from any and all liability for any injury, loss, or damage to person or property that may occur during my child's participation in the youth drone program.

Parent/Guardian	Signature:	
	<u> </u>	

Date: \_\_\_\_\_

Consent Confirmation:

I, the undersigned, have read and understood this consent form and agree to the terms and conditions stated above.

Participant's Name (Print):	
Parent/Guardian Name (Print): _	
Parent/Guardian Signature:	

Program Contact Information:

Program Coordinator:	
Phone Number:	
Email Address:	

### Definitions

**Aircraft.** A device that is used or intended to be used for flight in the air. This includes UAS.

**Airworthiness Statement**. The Airworthiness of the UAS is self-certified by the Remote Pilot in Command through a preflight inspection prior to flight.

**Certificate of Authorization (COA).** COA is an authorization issued by the Federal Aviation Administration (FAA) to a public operator for a UAS. After a complete application is submitted, the FAA conducts an operational and technical review. If necessary, provisions or limitations may be imposed as part of the approval to ensure the UAS can operate safely with other airspace users.

Crewmember. A person assigned to perform duty while an aircraft is operating.

**Crew Resource Management (CRM).** The effective use of all available resources including human, hardware, and information resources and coordination in the use of those resources by the RPIC, Remote Pilot and Visual Observer.

**First Person View (FPV).** The Remote Pilot is observing the flight solely through the UAS camera.

**Flight time.** Remote piloting flight time commences when an aircraft moves under its own power for the purpose of flight and ends when the aircraft comes to rest after landing.

**Image.** Means any capturing of sound waves, thermal, infrared, ultraviolet, visible light, or other electromagnetic waves, odor, or other conditions existing on or about real property in this state or an individual located on that property. Imagery may include data about people, organizations, events, incidents, or objects as well as metadata.

**Visual Line of Sight (VLOS).** The Remote Pilot and/or the Visual Observer can see, unaided, the UAS under their control during flight.

**National Airspace System (NAS).** Airspace inside the continental United States. It is further defined through air navigation facilities, equipment and services, airports or landing areas, aeronautical rules, regulations and procedures. There are two types of airspace within the NAS, controlled and uncontrolled.

Operation of a UAS in controlled airspace adds another layer of responsibilities and requirements that must be met to operate the UAS.

**Night Flight.** Flight of a UAS that occurs between the hours of one half hour after sunset and one half hour before sunrise. The time of sunset and sunrise are determined by the National Oceanic and Atmospheric Administration (NOAA), but 14 CFR Part 107 will allow small UAS operations to be conducted during civil twilight if the small unmanned aircraft has lighted anti-collision lighting visible for at least 3 statute miles. The night time-operations prohibition in this rule is waivable through the FAA for Part 107 or as an addendum to approved certificate of waiver to the COA.

**Mission Area of Operations (AOR).** Defined perimeter/parameters to be determined based on the scope and type of the operation and a defined operational ceiling at or below 400 feet above the ground. The altitude of the small unmanned aircraft cannot be higher than 400 feet above the ground, unless the small unmanned aircraft is flown within a 400 foot radius of a structure and does not fly higher than 400 feet above the structure's immediate uppermost limit.

**Unmanned Aircraft System (UAS).** UAS is the unmanned aircraft system and all of the associated support equipment, control station, data links, telemetry, communications, and navigation equipment, etc., necessary to operate the unmanned aircraft. The aircraft's flight is controlled either autonomously by hardware within the UAS or under the remote control of a Remote Pilot on the ground or in another ground vehicle. For

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purposes of this program, the 14 CFR Part 107 compliant UAS shall weigh less than 55 pounds fully loaded. Maximum groundspeed is limited to 100 mph (87 knots). Visual Flight Rules (VFR). All flights with the UAS shall be conducted under VFR conditions and at an altitude below 400' AGL. VFR is established as a 3 mile visibility and a cloud ceiling of 1,000 feet for day operations and 5 mile visibility with a cloud ceiling of 2,000 feet for night operations.

**Aircraft Registration.** All UAS operated by Sheriff's Office personnel must be registered in accordance with current FAA 14 CFR Part 107 regulations. Registration requirements apply to UAS owned and operated by this agency as well as UAS on loan or UAS owned by outside agencies when operated by an agency RPIC.