



**THE CITY COUNCIL OF WATERLOO, IOWA  
WORK SESSION TO BE HELD AT  
Harold E. Getty Council Chambers  
Monday, April 6, 2026  
4:00 PM**

**RULES FOR WORK SESSION PUBLIC COMMENT**

Iowa Code Chapter 21 gives the public the right to attend council meetings, but it does not require cities to allow public participation except during public hearings. The city council shall not receive any public comment during a work session.

**Roll Call.**

**Agenda, as proposed or amended.**

**Approval of Minutes of the March 16, 2026, Council Work Session as proposed or amended.**

**4:00 p.m. Discussion of the FY2027 budget.**

Submitted by: Bridgett Wood, Finance Director

**Approx. 4:20 Discussion of adding a park to Walnut Neighborhood.**

**p.m.** Submitted by: Todd Derifield, Leisure Services Director

**Approx. 4:50 Discussion of adding a drone for firefighting services.**

**p.m.** Submitted by: Bill Beck, Fire Chief

**ADJOURNMENT**

Kelley Felchle  
City Clerk

March 16, 2026

COUNCIL WORK SESSION  
Harold E. Getty Council Chambers  
4:40 p.m.

Pre-Meeting Items

Roll Call.

Members present: Mayor Dave Boesen in the Chair. Roll Call: Mr. Morrow, Ms. Creighton-Smith, Ms. Berry, Mr. Martin and Mr. Simon. Mr. Schmitt arrived at 4:42 p.m. Mr. Salamanca was absent.

Agenda, as proposed or amended.

that the agenda as proposed be approved. Voice vote-Ayes: Five. Motion carried.

Approval of minutes of the March 2, 2026 Work Session, as proposed or amended.

that the minutes of the March 2, 2026, Work Session, be approved. Voice vote-Ayes: Five. Motion carried.

Work Session Items

Discussion of a Riverfront Stadium Feasibility Study.

Dillon Gillman, AECOM, provided an overview of the feasibility study conducted for Riverfront Stadium.

Michelle Sweeney, AECOM, commented on the current location and potential development sites and the benefits and opportunities for each.

Mayor Boesen commented that it is important to consider site selection in the future, with amenities so that people stay around after the game.

Michelle Sweeney added that visibility is another factor.

Mr. Schmitt questioned if Ms. Sweeney had a preference for any sites.

Michelle Sweeney commented that though she would not want to recommend one over the other, she does see greater potential for benefits with the crossroads and downtown areas.

Mr. Morrow questioned if levies or other forms of flood protection were considered for the current location.

Michelle Sweeney commented that it did not include any flood protection and that would

substantially increase the cost.

Mr. Morrow questioned what the cost would be to build a levy at the current site.

Michelle Sweeney shared that the estimated cost would be \$11 million for a levy.

Ms. Creighton-Smith questioned what the seating capacity would be.

Michelle Sweeney commented that it would be negotiated.

Dillon Gillman shared that with the benchmarking analysis and the historical performance of the Buck's franchise here in Waterloo, keeping a similar seating capacity would be appropriate. It is also the hope that, with the improvements, it will be highly utilized.

Ms. Creighton-Smith commented that next largest stadium is approximately three-hundred miles away and, with Waterloo being a regional hub for education, commerce, etc., we should be able to capitalize on that to draw in more people.

Mr. Simon asked if there is an opportunity for a private public partnership, for example, including a Top-Golf type situation.

Michelle Sweeney confirmed that they have looked at the various other opportunities and those would be reflected in the design process.

Todd Derifield, Leisure Services Director, asked council to reach out with feedback as well.

#### ADJOURNMENT

Martin/Schmitt

that the council adjourn at 5:15 p.m. Voice vote-Ayes: Six. Motion carried.

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Kelley Felchle  
City Clerk

# Waterloo Fire Rescue Drone Rescue Team

Enhancing Public Safety and Resource Efficiency

# Waterloo Fire Rescue: Mission Statement

To protect the lives and properties of the citizens of Waterloo by being an innovative and progressive emergency services organization.

# Purpose of Today's Presentation

- ▶ We are here to request approval to begin forming a Drone Rescue Team (DRT)
  - ▶ This is NOT a request to “Buy a Drone”
  - ▶ This is NOT a request for city funding.
  - ▶ We are asking for permission to pursue external grant funding to build a sustainable, compliant, mission-ready drone program.
  - ▶ The Drone Rescue Team will enhance firefighter safety, improve incident command decision-making, and expand our operational Capabilities.

# Drone Use in the Modern Fire Service

- ▶ Aerial Intelligence has Become a Standard Tool
  - ▶ Core Components of incident Response.
  - ▶ Provides real-time overhead imagery that firefighters cannot safely obtain from the ground.
  - ▶ Enhances decision-making for the IC.
- ▶ Key Operational Uses
  - ▶ Structure Fires:
    - ▶ Roof integrity, fire spread, hotspots
  - ▶ Search and Rescue:
    - ▶ Rapid victim locations
    - ▶ Thermal imaging
  - ▶ Disaster Response:
    - ▶ Storm damage
    - ▶ Flooding
    - ▶ Infrastructure Assessment
  - ▶ Pre-Incident Planning:
    - ▶ Mapping
    - ▶ Target Hazard Documentation

# How This Improves Customer Service

- ▶ **Faster Rescues**
  - ▶ Reduces victim location time.
- ▶ **Safer Operations**
  - ▶ Reducing firefighter injuries and service disruptions.
- ▶ **More accurate damage assessments**
  - ▶ Storm damage
  - ▶ Disasters
  - ▶ Large Scale Operations

# Why A Drone Team--Not Just a Drone

A Drone Is a Piece of Equipment. A Drone Team Is a Capability.

- ▶ A drone does NOT provide:
  - ▶ FAA compliance or legal authorization
  - ▶ Certified pilots trained in fire ground hazards
  - ▶ Night Operations Capability
  - ▶ Standard Operating Guidelines
  - ▶ Safety oversight and risk management
  - ▶ Maintenance, battery care, or airworthiness checks
  - ▶ Mission readiness or deployment procedures
  - ▶ Data management, retention or privacy compliance
  - ▶ Documentation required for grants or a COA
- ▶ A Drone Team DOES provide:
  - ▶ FAA Part 107-certified pilots
  - ▶ Fire-specific training
    - ▶ Thermal interpretation
    - ▶ Collapse indicators
  - ▶ SOGs and Protocols
  - ▶ Reliable, immediate deployment on arrival
  - ▶ Proper maintenance and lifecycle management
  - ▶ ICS-integrated aerial intelligence for the IC
  - ▶ Compliance with FAA, State and departmental requirements
  - ▶ A sustainable, grant-eligible program

# Why the WFR Needs Its Own Drone Team

- ▶ Fire incidents Require Fire Expertise
  - ▶ Structure Fires, HazMat, rescues, and wildland fires involve unique hazards
  - ▶ Firefighters must interpret thermal images, collapse indicators, ventilation profiles, and fire behavior
    - ▶ These decisions cannot be outsourced to another agency or untrained operator.
- ▶ Immediate Deployment Saves Lives
  - ▶ Fire incidents evolve in minutes, not hours
  - ▶ A drone must launch on arrival, not after waiting for another department
  - ▶ Rapid aerial intelligence improves victim survivability and reduces property loss.

# Why the WFR Needs Its Own Drone Team Cont.

- ▶ Specialized Fireground Missions
  - ▶ Roof integrity assessment
  - ▶ Hotspot identification
  - ▶ HazMat plume tracking
  - ▶ Wildland fire spread monitoring
  - ▶ Water/ice rescue overwatch
  - ▶ Disaster damage assessment
  - ▶ Rapid equipment deployment to victims
    - ▶ Radio, lifejacket, rope, etc.
- ▶ Integrated Command Support
  - ▶ Drone feeds must integrate directly into Incident Command
  - ▶ Fireground decisions depend on real-time overhead views
  - ▶ A dedicated team ensures consistent, reliable support for IC

# What Is a Certificate of Authorization (COA)?

- ▶ A COA allows the fire department - **NOT INDIVIDUAL PILOTS** - to legally conduct mission that support life safety and emergency operations.
- ▶ What a COA Provides:
  - ▶ Public Aircraft Operator (POA) Status for Waterloo Fire Rescue
  - ▶ Emergency flexibility to deviate from certain FAA rules during life-saving missions
  - ▶ Streamlined access to controlled airspace
  - ▶ Night operations authority under department procedures
  - ▶ Faster deployment without waiting for waivers or authorizations

# Part 107 vs. COA: Operational Restrictions and Capabilities

## Part 107

(What Individual Pilots Can Do)

- ▶ Designed for commercial drone operators, not public safety
- ▶ Must follow all FAA rules with no emergency exceptions
- ▶ Cannot fly in controlled airspace without separate authorization
- ▶ Cannot deviate from rules during life-safety emergencies
- ▶ No jurisdiction-wide approval - each mission must meet Part 107 rules
- ▶ No authority for rapid deployment in time-critical incidents

## Certificate of Authorization

(What a Fire Department Can Do)

- ▶ Designed specifically for governmental public safety agencies
- ▶ Allows emergency deviations from certain FAA rules during life-saving missions
- ▶ Provides pre-approved operating areas across the jurisdiction
- ▶ Streamlined access to controlled airspace
- ▶ Enables night operations, HazMat recon, and SAR missions under agency authority
- ▶ Allows the department to self-authorize missions under defined procedures
- ▶ Supports faster, safer, more flexible deployment during emergencies.

# Why It Matters

- ▶ Part 107 alone is not enough for emergency fire operations
- ▶ A COA gives the department the legal authority to operate drones during critical incidents
- ▶ Ensures compliance, safety and operational readiness
- ▶ Required for many public safety grants
- ▶ A COA cannot be obtained by an individual, it can only be issued to a governmental agency.

# Grant Opportunities & Timelines

## Homeland Security Grant Program

- ▶ Opens: Spring
- ▶ Closes: Early Summer
- ▶ Awards: Fall
- ▶ No City Match Required
- ▶ Relevance:
  - ▶ All-hazards response, HazMat, Critical Infrastructure, Drone Teams
- ▶ NDAA Note: Must use U.S.-approved, non-Chinese aircraft

## Byrne Justice Assistance Grant

- ▶ Opens: Spring
- ▶ Closes: Early Summer
- ▶ Awards: Fall
- ▶ No City Match Required
- ▶ Relevance:
  - ▶ Technology modernization, shared public safety equipment
- ▶ NDAA Note: Must use U.S.-approved, non-Chinese aircraft

# Grant Opportunities & Timelines Cont.

## State Homeland Security/Emergency Management Grants

- ▶ Opens: Spring
- ▶ Closes: Early Summer
- ▶ Awards: Fall
- ▶ No City Match Required
- ▶ Relevance:
  - ▶ Disaster Response, situational awareness, drone teams
- ▶ NDAA Note: State programs follow federal procurement rules.

# Program Timeline

- ▶ Council Approval (Now)
  - ▶ Permission to pursue external grant funding
  - ▶ Authorization to begin formal program development
  - ▶ No city funding requested (at this time)
- ▶ Grant Application Phase (Spring-Fal)
  - ▶ Apply for no-match grants
  - ▶ Prepare required documentation (policy, SOG, training plan)
  - ▶ Align applications with grant cycles
- ▶ Grant Award & Procurement (Fall-Winter)
  - ▶ Receiving grant notifications
  - ▶ Purchase NDAA-compliant drone platforms

# Program Timeline Cont.

- ▶ Training & Certification (Immediately After Procurement)
  - ▶ FAA Part 107 Certification for pilots
  - ▶ Aircraft-specific training
  - ▶ Scenario-based fireground training
  - ▶ Night operations training
- ▶ COA Development & Submission (Parallel Track)
  - ▶ Draft UAS Policy, SOGs, training documentation
  - ▶ Submit COA through FAA DroneZone
  - ▶ Typical approval window: 30-90 days

# Program Timeline Cont.

- ▶ Initial Operational Capability (IOC)
  - ▶ Drone Rescue Team ready for:
    - ▶ Structure fire overwatch
    - ▶ SAR missions
    - ▶ HazMat recon
    - ▶ Disaster assessment
    - ▶ Wildland/grass fire monitoring
- ▶ Full Operational Capability (FOC)
  - ▶ COA approved
  - ▶ Pilots fully trained and proficient
  - ▶ Program integrated into Incident Command
  - ▶ Ready for sustained, long-term operations

# What NDAA-Compliant Means (and why it matters)

- ▶ What does NDAA-Compliant mean?
  - ▶ NDAA-compliant drones are approved by the U.S. government for public safety use
    - ▶ They meet federal security, data protection, and procurement requirements.

# Why We Must Use NDAA-Compliant Drones

- ▶ Federal and state grants cannot fund drones made by restricted manufacturers
- ▶ NDAA compliance ensures:
  - ▶ Secure data handling
  - ▶ U.S.-approved components
  - ▶ Eligibility for Homeland Security and Justice grants
  - ▶ Long-term procurement stability

# Restrictions on Chinese-Manufactured Drones

- ▶ Federal agencies are prohibited from purchasing or operating drones from certain foreign manufacturers
- ▶ Many states have adopted similar restrictions for public safety agencies
- ▶ These restrictions apply to:
  - ▶ Grant funding
  - ▶ Procurement rules
  - ▶ Operational use in public safety
- ▶ Most notably, DJI drones cannot be purchased with federal grant funds.

# Impact on Our Drone Program

- ▶ We must select NDAA-compliant platforms to qualify for no-match grants
- ▶ Ensures our program is secure, sustainable, and legally compliant
- ▶ Protects the city from procurement issues or future restrictions.

NDAA compliance isn't optional - its required for grant eligibility and public safety operations.

# NDAA-Compliant Drone Platforms Under Consideration

## Small to Mid-Size Platforms

- ▶ Parrot Anafi USA
  - ▶ Lightweight
  - ▶ Rapid Deployment
  - ▶ Thermal Imaging
  - ▶ Lower maintenance footprint
- ▶ Teal 2
  - ▶ Exceptional low-light performance
  - ▶ Secure data architecture
  - ▶ Compact and cost-efficient to maintain

**\$300-\$600 Estimated Annual Maintenance Cost**

## Mid-Size Platforms

- ▶ Skydio X10
  - ▶ Advanced autonomy
  - ▶ Strong thermal capability
  - ▶ Moderate maintenance needs
- ▶ Inspired Flight IF800
  - ▶ U.S.-Built
  - ▶ Modular payloads
  - ▶ Strong lift capacity
  - ▶ Higher maintenance range due to payload flexibility

**\$600-\$1,200 Estimated Annual Maintenance Cost**

# NDAA-Compliant Drone Platforms Under Consideration Cont.

- ▶ Heavy-Lift/Growth-Capable Platform
  - ▶ Inspired Flight IF1200A
    - ▶ Long flight times
    - ▶ Heavy payload capability
    - ▶ Mission flexibility
    - ▶ Meets all current operational needs *with room to grow*
    - ▶ Ideal for future payloads
      - ▶ Mapping
      - ▶ Loudspeaker
      - ▶ Spotlight
      - ▶ Advanced sensors

**\$1,500-\$4,000 Estimated Annual Maintenance Cost**

# What Council Approval Enables

- ▶ **Permission to Pursue No-Match Grants**
  - ▶ No city Funding for drone purchase requested
  - ▶ All platforms under consideration are NDAA-compliant and grant-eligible
- ▶ **Development of a Safe, Compliant Drone Rescue team**
  - ▶ FAA Part 107 - certified pilots
  - ▶ COA development and submission
  - ▶ Standardized training, SOGs, and safety protocols
- ▶ **A Modern, Life-Safety Capability for Waterloo**
  - ▶ Faster Resources
  - ▶ Better Situational Awareness
  - ▶ Reduced Firefighter Risk
  - ▶ Improved Service to the Community

# Waterloo Fire Rescue Drone Response Team (DRT)

## 1. The Core Proposal

Waterloo Fire Rescue is seeking formal authorization to establish a professional Unmanned Aircraft Systems (UAS) Response Team. This initiative is designed as a budget-neutral project, with the intent to cover all initial startup costs—including aircraft procurement, specialized sensors, and support equipment—entirely through "no-match" state and federal grants (such as Homeland Security or Byrne JAG funds) and private community partnerships.

## 2. Operational "Force Multipliers"

The DRT provides the City of Waterloo with advanced capabilities that traditional ground-based units cannot achieve:

- **Search & Rescue (SAR):** Rapidly clearing large areas of dense terrain or riverbanks using high-resolution thermal sensors to locate missing children or "at-risk" adults in a fraction of the time.
- **Structural Fire Intelligence:** Providing Incident Commanders with "360-degree" overhead views to identify roof stability, hidden hotspots, and fire spread, directly reducing the risk of firefighter injuries.
- **Hazardous Materials (HazMat):** Utilizing zoom optics to identify leaking chemicals or placards from a safe distance, keeping personnel out of the "Hot Zone" during initial assessments.

## 3. Professional Standards & Security Compliance

To protect the City's interests and maintain public trust, the program adheres to strict federal standards:

- **Certified Personnel:** The program leverages existing internal expertise; members are already **FAA Part 107 certified**, ensuring immediate regulatory compliance.
- **National Security Compliance:** The department will prioritize NDAA-compliant (U.S.-manufactured or approved) hardware. This ensures that sensitive city data remains secure and the program remains eligible for federal grant cycles.
- **Privacy Protections:** Deployment is governed by formal Standard Operating Guidelines (SOGs), strictly limiting drone use to emergency response, disaster assessment, and training—never for warrantless surveillance.

## 4. Strategic Implementation Timeline

- **Phase I (Immediate):** Obtain Council approval to begin the formal grant application process and establish the department's FAA Certificate of Authorization (COA).
- **Phase II (Mid-Term):** Secure grant awards and procure an approved, mission-ready aircraft.
- **Phase III (Operational):** Finalize advanced scenario-based training (Night ops, Water rescue, Post-storm damage) and reach Full Operational Capability (FOC).

# Waterloo Fire Rescue Drone Response Team (DRT)

## 5. Conclusion for Council

This proposal offers a low-risk, high-impact advancement for Waterloo’s public safety infrastructure. By authorizing the team to pursue external funding now, the Council enables the Fire Department to modernize its life-saving capabilities without placing any additional burden on the local taxpayer or the municipal general fund.

### Grant Opportunities

Federal Grant Opportunities			
Grant Name	Agency	Application Timeframe	Potential Funding
Assistance to Firefighters Grant (AFG)	FEMA	Dec – Jan (Annual)	\$100k - \$1M+ (Based on population)
Byrne Justice Assistance Grant (JAG)	Dept. of Justice	March – May	\$10k - \$100k+ (Formula & Competitive)
Counter-UAS/Drone Detection Grant	FEMA	Nov – Dec	\$50k - \$250k (New for FY2026/27)
Fire Prevention & Safety (FP&S)	FEMA	Jan – Feb	Up to \$1.5M

Iowa Grant Opportunities			
Grant Name	Agency	Application Timeframe	Potential Funding
State Homeland Security Program (SHSP)	Iowa HSEMD	Jan – March	\$20k - \$150k
Emergency Management Performance Grant (EMPG)	Iowa HSEMD	Ongoing/Annual	Varies by Project
Governor’s Traffic Safety Bureau (GTSB) Grant	Iowa DPS	Feb – March	\$5k - \$50k
Iowa Community Assurance Pool (ICAP) Grants	ICAP (Insurer)	Aug – Sept	\$1k - \$5k (Safety/Tech specific)

# Waterloo Fire Rescue Drone Response Team (DRT)

## Inspired Flight Flight Environmental Capabilities

The **Inspired Flight IF1200A** is a rugged, industrial-grade hexacopter specifically designed for the high-demand environments your department will face. Since it is **Blue UAS and NDAA compliant**, it's a strong candidate for the grant-funded approach you've presented to the Council.

Here is a breakdown of its weather and environmental flight capabilities:

### 1. Wind Resistance

- **Sustained Winds:** Up to **12 m/s (approx. 23 knots / 27 mph)**.
- **Gust Resistance:** Up to **15 m/s (approx. 29 knots / 34 mph)**.
- **Significance:** This is excellent for "post-storm" imagery or fireground operations where localized thermal updrafts can create turbulent air.

### 2. Temperature Range

- **Operational Range:** **-20°C to 45°C (-4°F to 113°F)**.
- **Significance:** This covers nearly all Iowa weather conditions, from mid-winter SAR missions to peak-summer structural fire overwatch. (Note: Battery performance typically degrades at the extreme low end, so keeping spare batteries in a warm vehicle is standard protocol).

### 3. Ingress Protection (IP Rating)

- **Rating:** **IP55**.
- **Significance:** An IP55 rating means the aircraft is protected against dust and **low-pressure water jets from any direction**. In plain English: it can safely fly in **moderate rain and snow**. This is a major step up from consumer drones (like the Mavic series), which are generally not rated for moisture and must be grounded at the first sign of rain.

### 4. Flight Safety & Redundancy

- **Motor Failure Protection:** As a hexacopter (6 motors), the IF1200A features a **"SAFE" mode**. If one motor fails, the flight controller can compensate and allow the pilot to perform a controlled emergency landing rather than the drone falling out of the sky.
- **Triple Redundant IMUs:** It uses the Cube Blue H7 flight controller, which has three sets of sensors (IMUs). If one fails or gives bad data due to interference, the others take over.

### 5. Humidity & Altitude

- **Operating Humidity:** 10% to 95% (Non-condensing).
- **Service Ceiling:** Up to **12,800 feet** (with a 4kg payload), which is far beyond anything you'll encounter in Waterloo, ensuring plenty of "power overhead" even with heavy thermal payloads.

# Waterloo Fire Rescue Drone Response Team (DRT)

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## 6. IP55 Rating (The "Rain Proof" Standard)

The "55" in its IP rating means the aircraft is protected against dust and **low-pressure water jets from any direction**.

- **Light to Moderate Rain:** It can maintain flight during a steady rain without the water short-circuiting the internal electronics.
- **Snow:** It handles light to moderate snowfall well. Because the motors are powerful and the aircraft generates its own heat, it typically prevents light ice from forming on critical components during shorter missions.

## 7. Thermal Stability (-4°F to 113°F)

In Waterloo, winter SAR missions often happen in sub-freezing temperatures. The IF1200A is rated down to **-20°C (-4°F)**.

- **Pro-Tip:** While the drone can fly in the cold, batteries hate it. For snow ops, you must keep your spare batteries in a heated case or the cab of the truck until the moment of takeoff to ensure full flight time.

## 8. Why it handles "Weather" better than others:

- **Encapsulated Electronics:** Unlike cheaper drones that have open vents for cooling, the IF1200A's sensitive flight controllers are shielded.
- **Hexacopter Power:** In wind-driven rain or heavy "wet" snow, the six motors provide significantly more torque and stability than a four-motor (quadcopter) drone, preventing the wind from "tossing" the aircraft.

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*Proposal: Implementation of the Inspired Flight IF200A UAS Program*

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The **Inspired Flight IF1200A** as a "Heavy-Lift Option" is a smart move. It provides a benchmark for what a **military-grade, 6-motor redundant system** looks like.

The IF1200A isn't just a drone; it's a specialized tool for scenarios where a crash is not an option (e.g., flying over a toxic chemical spill or a crowded search area). Because it is a hexacopter, it can lose a motor and still stay airborne.

**Part 1: Initial Acquisition Budget (IF1200A)**

This breakdown uses the 2026 MSRP for a "full-capability" industrial kit.

<b>Item</b>	<b>Detailed Description</b>	<b>MSRP (2026)</b>
<b>IF1200A Airframe Bundle</b>	Hexacopter + GS-ONE Ground Station (2000-nit screen)	\$36,000
<b>Workswell WIRIS Enterprise</b>	1280 Thermal + 30x Zoom + Gimbal + LRF	\$19,750
<b>Battery Charging Kit</b>	(4) Tattu 16Ah Batteries + TA3000 Smart Charger	\$5,900
<b>CZI MP130 Loudspeaker</b>	114dB Long-Range Audio (Public Safety Integrated)	\$1,295
<b><u><a href="#">Payload Drop Hook</a></u></b>	Heavy-Duty 20kg-Rated Mechanical Release	\$850
<b>TOTAL STARTUP COST</b>		<b>\$63,795</b>

## **Part 2: Maintenance Schedule & Operations**

The IF1200A requires more upkeep because it has 50% more moving parts (6 motors) than the Tomcat. This ensures its **SAFE Drone™** motor-out recovery system is always functional.

- **Quarterly (Every 3 Months) — \$150:**
  - *Task:* Deep-clean motor internals; inspect carbon fiber folding joints for stress fractures.
- **Bi-Annual (Every 6 Months) — \$450:**
  - *Task:* **Mandatory Propeller Replacement.** Full set of 6 carbon-fiber blades.
- **Annual Factory Recertification — \$3,800:**
  - *Task:* Structural integrity test and motor recalibration at the California factory.
- **Annual Battery Rotation — \$2,250:**
  - *Task:* Replacing one set of flight batteries to ensure 40+ minute endurance.
- **Estimated Annual O&M: \$6,650**

### **Part 3: Performance Sheet (The "Why" for the Chief)**

This is where the IF1200A separates itself from every other option on the table.

<b>Specification</b>	<b>Detail</b>	<b>SAR / HAZMAT Benefit</b>
<b>Max Payload Capacity</b>	<b>19.1 lbs (8,663g)</b>	<b>Carries your 31 oz meter at only ~10% of total lift.</b>
<b>Safety Redundancy</b>	<b>6-Motor "SAFE" System</b>	<b>Can lose a motor and still return home safely.</b>
<b>Max Flight Time</b>	43 Minutes	Significant endurance even with multiple sensors.
<b>Max Speed</b>	56 mph	Rapidly arrives at the "Hot Zone" coordinates.
<b>Compliance</b>	<b>Blue UAS / NDAA</b>	<b>100% Eligible for Federal Grant funding.</b>
<b>Thermal Sensor</b>	1280 x 1024	Forensic-level heat detection for victim search.

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## *Side-By-Side Comparison*

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The critical factor here is **Compliance vs. Cost**. As of 2026, the **DJI Matrice 350 RTK** is technically flyable but is **ineligible for Federal Grant (FEMA/AFG) funding**. The Inspired Flight models, while more expensive up-front, are 100% grant-eligible, potentially costing the department \$0 in local budget.

### *Executive Side-by-Side Comparison*

<b>Feature</b>	<b>IF800 Tomcat (Modular)</b>	<b>IF1200A (Heavy Lift)</b>	<b>DJI Matrice 350 RTK</b>
<b>Configuration</b>	Quadcopter (4 Motors)	<b>Hexacopter (6 Motors)</b>	Quadcopter (4 Motors)
<b>Max Payload</b>	6.6 lbs (3,000g)	<b>19.1 lbs (8,663g)</b>	6.0 lbs (2,700g)
<b>Max Flight Time</b>	<b>54 Minutes</b>	43 Minutes	55 Minutes
<b>Motor Redundancy</b>	No	<b>Yes (SAFE™ System)</b>	No
<b>Compliance</b>	<b>Blue UAS / NDAA</b>	<b>Blue UAS / NDAA</b>	Non-Compliant
<b>Grant Eligible</b>	<b>Yes (100%)</b>	<b>Yes (100%)</b>	<b>No</b>
<b>Security</b>	AES-256 (USA Made)	AES-256 (USA Made)	AES-256 (Proprietary)
<b>Startup Cost</b>	<b>~\$36,800</b>	~\$64,945	~\$28,500