



# AKDRONE, LLC

**Presenter:** Thomas Tapp, co-Founder, CEO

Our Mission

# Building Alaska's Drone Future, One Pilot & Drone at a Time.

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Alaska Department of  
Environmental  
Conservation

**AKDRONE**

# Creating Alaska's Drone Task Force To Support Oil Spill Response





Overview

# **PWS Shippers Exercise / Andeavor October 15-17, 2024**

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# Primary Objectives



## Safety

Conduct all drone operations safely and without incident following all state and federal regulations..



## Situational Awareness

To successfully provide ongoing situational awareness of the drill via live stream from the drones to the IMT.



## Testing and Practice

For the field teams to practice equipment solutions...

# Drone Task Force



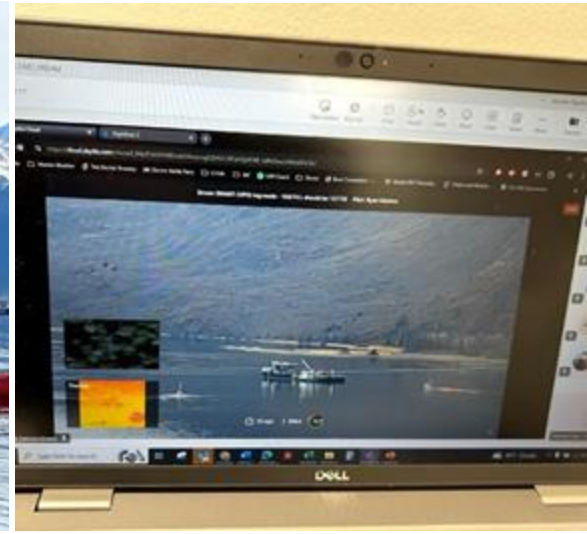
# Planning for Andeavor PWS exercise Oct. 2024

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- Demonstrate a response to large scale spill event in PWS, 3-day exercise with concurrent field deployments for Nearshore response tactics.
- Andeavor planned to include 200+ participants mostly in the Command Post.
- Live stream of field deployments with drone to display in Command Post (VEOC)
- Drone Ops:
  - APSC (Air operations)
  - Cook Inlet Spill Prevention & Response, Inc. (CISPRI)
  - AK Drone
  - City of Valdez







## Accomplishments

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Successful deployment of drone ops and live stream of Nearshore response tactics



Knowledge sharing between response organizations and community of Valdez



Opportunity to improve capability

# AKDRONE™

## Field Drone Ops



 DANGER  
STAY CLEAR OF  
MOORING LINES

 LO

# sUAS Flight Area



Lowe River

Port Valdez

Valdez Airport

Valdez

# Drone Ops Location - Kelsey Dock



nd Park

Valdez Museum Annex  
Temporarily closed



Observation  
Area

Take-Off &  
Landing  
Area

Pilot Area

Observation  
Area







Drone Ops

# Participating Entities & Contributions

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# Drone Ops & Integration With ICS

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# Field Operations

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- Safety briefing followed by operations briefing.
- Maintaining live video feed of the entire field deployment.
- Single point of contact for communications between the field and the IMT





## ICS Integration

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- Overall, the integration of drone operations in ICS went very well
- Incorporating new technology
- Supporting the needs of different sections in the IMT
- Portability of equipment & drone teams



## Real-Time Data Sharing Lessons Learned

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- ✓ **Suitable Internet**
- ✓ **Streaming Equipment**
- ✓ **Stream Management**



## PWS Shippers Exercise / Andeavor

October 15-17, 2024 Drone Ops  
Highlight Video





Q & A



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# Future Operations & Use Cases

# Challenges in Deploying Drones

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- **Airspace & Event Coordination**

Managing airspace during large-scale events and ensuring coordination with other aerial assets.

- **Pilot Proficiency & Training**

Scaling up Part 107-certified pilots and ensuring readiness for specialized oil spill response operations.

- **Technical & Regulatory Barriers**

Overcoming challenges with battery life, weather limitations, range, and securing FAA waivers / authorizations for expanded operations.



# Innovative Approaches To Address Challenges

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## Airspace & Event Coordination

Train air bosses and pilots, develop SOPs for coordination, and collaborate with FAA to streamline approvals.



## Training and Capacity

Implement NIST-certified training, build scalable pilot networks, and partner with manufacturers for surge capacity.



## Technical Limitations

Implement NIST platform evaluations, invest in weather-rated platforms, battery maintenance program, and leverage Starlink / 5G for remote operations.



## Regulatory Hurdles

Actively pursue BVLOS and other waivers, consult regulatory advisors, and form partnerships with authorized entities.



Solutions - Platforms - Training

**AKDRONE**<sup>™</sup>  
unmanned aerial training & sales

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# BEYOND 107



2024

**Certified.  
Proficient.  
Mission-Ready.**

NIST Level III Proficiency for Industry-Standard  
Drone Operations, tailored for professionals  
who already hold an FAA Part 107 certification.

**AKDRONE**  
unmanned aerial training & sales



# DJI Matrice 400 Solution Lidar Plus



Tested in Alaska. Ready for Anywhere.

# DJI M4D - Thermal Solution by AKDRONE

Built for Alaskan Weather. Thermal and Mapping Solutions.



# DJI Matrice 4 Solution by AKDRONE

Tested in Alaska. Thermal and Mapping Solutions



Drone-In-A-Box



## **DJI Dock 2 Solution by AKDRONE**

Tested in Alaska. Deploy and Operate Remotely.



# Built for Alaska's Rugged Conditions

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- **Extreme temperatures**  
Operates in temperatures from -31°F to 113°F.
- **Environmental Proof**  
Rainproof, dustproof, and built to withstand tough environments.
- **Safety & Efficiency**  
Reduces risks to personnel and improves operational efficiency.

# DJI Dock 2 Solution by AKDRONE

The more capable yet noticeably smaller DJI Dock 2 deploys Matrice 3D or 3TD drones with ease and security. Dock 2 is lightweight, offers high-level operation capabilities, and has cloud-based intelligent functions that bring efficiency and quality to automatic operations.



Lightweight and Easy  
to Deploy

IP55

IP55 Ingress Protection <sup>[1]</sup>



10km Max Effective  
Operating Radius <sup>[2]</sup>



Integrated Environmental  
Monitoring System



Cloud-Based Modeling



FlyTo Tasks



Private Deployment



Third-Party Payload  
Support <sup>[3]</sup>



# DJI FlyCart 30 Solution by AKDRONE

Heavy-Lift Drone - Experimental Solution



# DJI FlyCart 30 Solution by AKDRONE

Heavy-Lift Drone - Experimental Solution



**dji** DELIVERY

# Creating Drone Task Forces For Applications in Alaska

To Support Existing Operational Structures

## **NRG**

### *Nearshore Response Group*

Supporting nearshore task forces (NTF) with specialized drone operations.

## **GRS's**

### *Geographic Response Strategies*

Supporting Sensitive Area Protection Task Force's (SAPTF) with specialized drone solutions.

## **WLTF**

### *Wildlife Task Force*

Protecting wildlife with drone operations.

An aerial photograph of a large offshore supply vessel, likely a驳船 (barge) or a specialized tugboat, floating on the water. The vessel is dark-colored with a white superstructure and a yellow boom. It is surrounded by a yellow buoy. The background shows a sunset or sunrise with a warm, orange glow over the water and sky.

# NRG: Enhancing Nearshore Response

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- **Use Cases:**

Real-time live streaming observation, boom deployment monitoring, vessel-boom and skimmer guidance, and small load delivery.

- **Asset Reassignment:**

Reduces reliance on manned vessels and helicopters for nearshore observation and small package delivery.  
*(e.g., absorbents, parts)*

# GRS's: Protecting Critical Areas

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- **Use Cases:**

Continuous monitoring of SAP sites and early detection of spill impacts.

- **Asset Reassignment:**

Replaces helicopters and boats for long-duration monitoring, enabling one RPIC to manage multiple sites.





# WLTF: Protecting Wildlife

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- **Use Cases:**  
AI-enabled detection and counting of affected wildlife, and delivery of supplies for rescue or carcass recovery.
- **Asset Reassignment:**  
Minimizes reliance on helicopters or boats for wildlife monitoring and supply delivery.



# Contact Us

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