



### Pipeline Right-Of-Way Surveillance

The pipeline infrastructure we build and maintain have gained attention over the past decade. So how do you address pipeline integrity, constructability, security and safety for pipeline infrastructure in 2024? Let us provide some industry practices that are gaining more and more attention. We can help you identify your compliance and integrity in a system currently in operation. We can also help you identify risk associated with project resistance and provide safe approach methods to maintain a healthy social license to operate. This is a service quickly growing in demand that helps address and sustain our pipeline infrastructure providing a safe and more secure industry. Drones are also a very environmentally friendly tool to use on any right-of-way. In 2024, drones simply save to much money not to use.

The use of drones is highly expected to increase in the oil and gas industry by the end of 2024 as more pipeline professionals become compliant with FAA Part 107 and client requirements. Patriot Pipeline Safety, Corp. was one of the first out of the gate with implementing this popular method of patrol and inspection to help pipeline contractors and operators enhance their Damage Prevention and Right-of-Way inspection since 2015. The use of this technology is endless when discussing pipeline security, right-of-way surveillance, tank inspection, excavation encroachments, storage field inspection and well pad / rig integrity inspections.

Using a combination of ground and aerial surveillance practices allows a pipeline operator or contractor to meet and, in many cases, EXCEED federal safety regulations pertaining to pipeline right-of-way surveillance. Patriot Pipeline Safety, Corp. has assisted in identifying abnormal operating conditions (AOCs) on pipeline systems very quickly. Our surveillance team are industry trained professionals that are educated in identifying risks and assessing those risks to help our



client(s) develop solutions. The information gathered from our right-of-way inspection data can help meet the following requirements in a very safe, cost effective, and reliable way.

- **49 CFR 192.613 - Continuing Surveillance.**
- **49 CFR 193 - Subpart J – Security**
- **49 CFR 193.271 - Training : Security**
- **49 CFR 195.436 - Security of Facilities**
- **49 CFR 195.412 - Inspection of rights-of-way and crossings under navigable waters**
- **49 CFR 192.705 - Patrolling Transmission Lines**
- **49 CFR 192.901 - Subpart O - Pipeline Integrity Management**
- **49 CFR 195.452 - Pipeline Integrity Management in HCA's.**

**Why choose Patriot Pipeline Safety, Corp.?**

We are not just FAA certified Pilots; we are also experienced Pipeliners. There are other companies sweeping the industry offering unmanned aircraft services. Patriot Pipeline Safety, Corp. offers industry specific EXPERIENCE. We provide a professional who has worked on right-of-ways in both pipeline operations and construction. We can help identify hazards and vulnerability on your right-of-way and work WITH YOU on industry specific practices and experiences in order to find realistic solutions to real challenges.

**Unmanned Aircraft System Project Application**

Simply put, endless! An Unmanned Aircraft System (UAS) can be applied to many different projects. A UAS can assist in clearing of the right-of-way by following behind operations and gathering data to represent the aerial portion of a right-of-way inspection. The implementation of an unmanned aircraft on a right-of-way requires one or sometimes two trained pipeline professionals to operate safely. One team member being the pilot and the other maintaining line of sight, hazard assessment, and designated spotting requirements. The two person team also aids in the buddy system for working in remote areas as right-of-ways change conditions frequently.

One two person crew in a side by side ATV or on foot can cover 7 – 20 miles a day depending on right –of-way conditions regarding growth, wetlands, terrain, and weather. The UAS can record real time information as the team progresses down the right-of-way. Current battery time allows unmanned aircraft to fly between 30 – 45 minutes safely before landing where a new battery is installed and operations continue. This practice allows for a leap frog pattern of data accumulation which is then recorded and shared with the client the same day or immediately if desired. Our team has or can attain the proper company specific operator qualifications to gather information related to both pipeline operations and construction rather natural gas or liquids. We are also a MBE and DBE certified ISN Grade “A” contractor.

**Operations** capabilities include leak detection, public awareness training and relationship building, local emergency responder teaching tools, damage prevention, environmental conditions and practices, exposed pipe, depth of cover, fence conditions, securement of equipment, vandalism, natural disaster damage assessment, critical infrastructure assessment, suspicious activities, current HCA information, protestor activity, disgruntled landowners, R.O.W. access, and much more to meet our client’s needs.



**Construction** applications include project hazard assessments pre-construction, monitoring of spread and crew progress, HDD set up assist, road crossing surveys, assess to right-of-way, emergency response planning, hazardous environment assessment, D.O.T. travel routes, ground disturbance awareness, one call / 811 assistance, environmental control maintenance, safety control monitoring, protestor activity, and effective means of communication shared by client and contractor hourly or daily.

Compared to fixed wing, implementation of UAS into the pipeline industry has proven to save cost by reducing the amount of flyovers needed by thousands of dollars while reducing the potential for mechanical failure, public disturbance, and human error. UAS technology can also increase operation and construction crew efficiency by reducing drive time and work load. We welcome company representation as an opportunity to share knowledge, resources, and experiences to better our R.O.W. inspection program and overall company. We aim to meet and exceed our client's expectations and operate knowing the importance of valued working relationships. Let us help you improve the safety and quality of your right-of-ways and stations. Let us bring you a safe project on time and under budget while achieving annual optimum results of your current right-of-way condition.



## Patriot R.O.W. Inspection - Pipeline Industry Application

### General Application

Homeland Security  
Public Safety  
TSA-Pipeline Security Branch  
Cost Effective for Detailed Inspection  
Emergency Response Practices  
Higher Resolution vs Conventional  
Immediate Information  
Natural Disaster Impact Assessment  
Operational Under Cloud Cover  
Local Emergency Responder Awareness  
Public Relations Tool  
Exceed R.O.W. Maintenance CFR's

### Operations Application

City Gate Condition  
Pipeline Marker Integrity  
MLV Condition  
Suspicious Behavior / Activity  
Damage Prevention Monitoring  
Leak Detection – Thermal  
R.O.W. Surveillance  
Corrosion  
Natural Disasters  
Assist with Limited Manpower  
Potential Threat Identification  
Hazardous Area Accessibility  
HCA Surveys

### Construction Application

Pre-Project Constructability  
Road Crossing Assessment  
Construction Progress Tracking  
Suspicious Behavior / Activities  
Damage Prevention Monitoring  
Leak Detection  
Hydro Test Monitoring  
Acts of Aggression – Product

### Environmental Application

Restoration Tracking  
Flood Washout  
Seed Washout / Runoff  
Wetland Integrity  
Maintenance Controls  
Natural Disaster  
Wildlife Surveys  
Animal Migration Patterns  
Crop Count Assessment  
Water Logged Soils



**Most common UAS applications:**

Material Inspection	Wetland Inspection
Ditch Inspection	Project Physical Security Extension
Land Lock R.O.W Easements	Post Weather Impact
Encroachments	Pre / Post Project Inspection
Wildlife / Endangered Species Surveys	PHMSA MEGA Rule Applications
Project Progress Inspection	Project Record Keeping
Disgruntled Landowners	Media & Marketing Promotions

Additional Resources: [www.knowbeforeyoufly.org](http://www.knowbeforeyoufly.org) [www.faa.gov/uas](http://www.faa.gov/uas) [www.patriotpipelinesafety.com](http://www.patriotpipelinesafety.com)

