



## NYSEARCH/Senstar 3<sup>rd</sup> Party Damage Prevention

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Securing the Pipeline Infrastructure



## Project Plan

- GOAL:
  - TO DEVELOP A PIPELINE MONITORING CAPABILITY THAT WILL WARN LDC OPERATIONS, AND THIRD PARTY PERSONNEL OF IMPENDING DAMAGE TO PIPELINE FACILITIES.
  - THIS CAPABILITY WILL BE USEABLE ON NEW AND EXISTING PIPELINES WITH MINIMAL IMPACT ON INFRASTRUCTURE (TRENCHING REQUIREMENTS AND POWER), AND
  - WILL BE TAILORED TO OPERATE UNIFORMLY IN URBAN AND RURAL ENVIRONMENTS.

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## Third Party Damage Prevention

- Challenges;
  - Real time alert identification and geo-location
  - Ease of installation in all environments
  - False alarm reduction
  - No single point of failure
  - Cost effective
  - Useable in urban, semi-urban, rural environments
- “One size fits all” solution?

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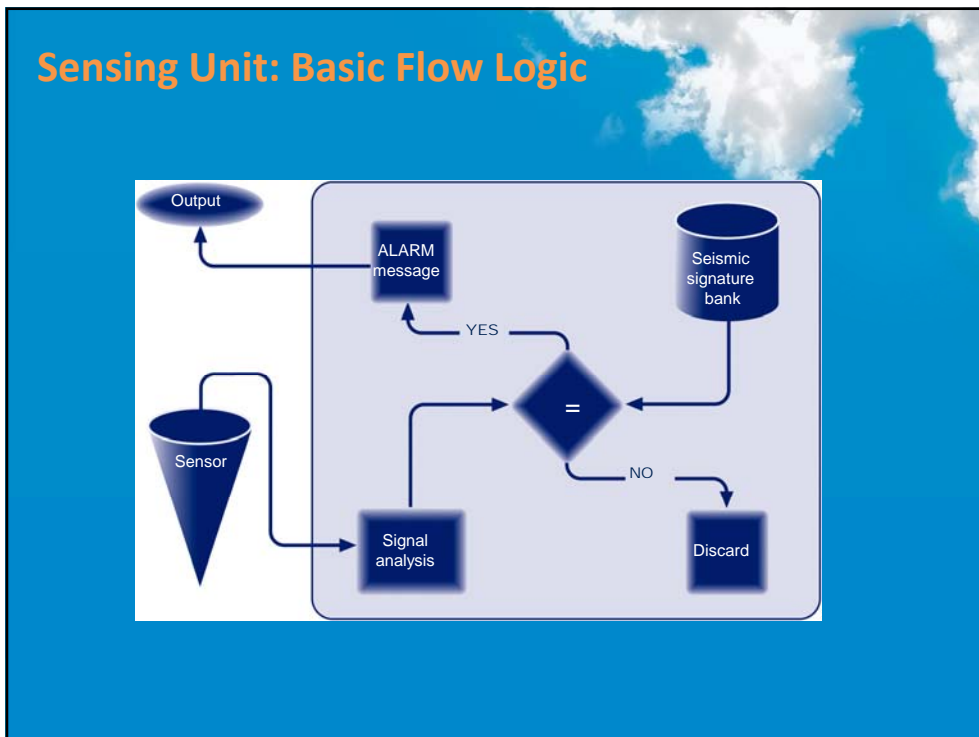


## Sensor Definitions

- Taut Wire:  
Barrier/deterrent  
combined
- Guided Radar:  
Buried, covert sensor
- Fence Sensors
- Intelligent Video  
Analytics (IVA)
- Low Power, high PD, low  
FAR, overt
- Terrain following  
“trip-wire”, high PD,  
low FAR
- Cost-effective, high  
PD, adaptive
- Wide Area, higher  
false positives, detect  
and assess

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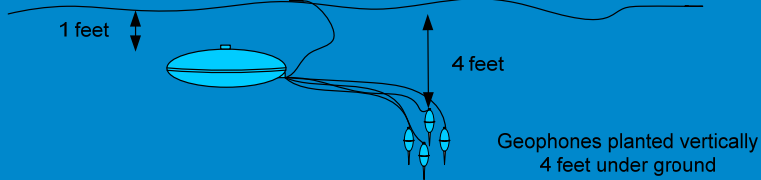
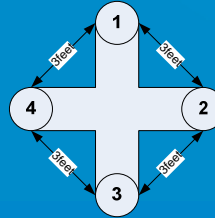


# PipeGuard™ Overview



Geophone – 4 to 6 per unit

Sensor unit  
w/ antenna



Geophones planted vertically  
4 feet under ground

## Third Party Protection Design Considerations: Right-of-Way Intrusions

- Add CCD/IR cameras with intelligent video support



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## Security Management System (Fortis)

- Command and Control
  - Ties all Sensor Alarm Telemetry into Actionable Data
  - Integrates Existing Security Products
  - Provides Open, Expandable Architecture
  - Gets the Right Information to the Right Individuals, Right Now



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## Candidate Sensor Systems PipeGuard

- Pros
  - Covert
  - Autonomous, self-contained, wireless communications, non-tactile
  - No single point of failure
  - Classifier provides location and threat type
  - New and existing pipelines – simplified installation
  - Each unit can be individually programmed
  - No need to trench under roadways and other crossings
  - Not influenced by weather or other environmental conditions

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## Summary

- Too many opportunities for third party damage
- There is no “One Size Fits All” for Security Sensors
  - Intelligent Video can provide enhanced surveillance without imposing staff overhead
  - Fence Sensors can provide low cost, highly effective detection of intrusion attempts
  - Buried, unattended sensors can provide real-time assessment of an attempt to break into a pipeline BEFORE damage results

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THE TRUSTED CHOICE  
FOR PERIMETER INTRUSION DETECTION AND SECURITY SOLUTIONS

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