

FACER Fall Meeting

**ADMS Technology in Hurricane
Clean-up/Reimbursements**

November 30, 2022



Katie Taylor, Regional Project Manager

- Over 20 years of field project management experience
- Project Manager on all recent large storms, including Hurricanes Irma, Michael, Florence, Laura, Delta, Sally, Zeta, and most recently Hurricane Ida



Tetra Tech Overview



RANKED

#2 in SOLID WASTE

by the Engineering
News Record (ENR)

WORKS IN
100+
COUNTRIES

Publicly traded
on NASDAQ as

TTEK
Nasdaq

\$3.2 billion

ANNUAL REVENUE

WORKS ON
70,000
PROJECTS
ANNUALLY

450
OFFICES
WORLDWIDE

21,000

ASSOCIATES



1,200+ DEBRIS
PROJECTS MANAGED

2.3 MILLION
HAZARDOUS
TREES & LIMBS REMOVED

30,000+ PPDR
PARCELS SERVED

10K PROJECT
WORKSHEETS

99.8% FUNDS RETAINED

55

YEARS IN
BUSINESS

25

YEARS IN
DISASTER
RECOVERY

160M

CUBIC YARDS
OF DEBRIS
MONITORED

\$10B

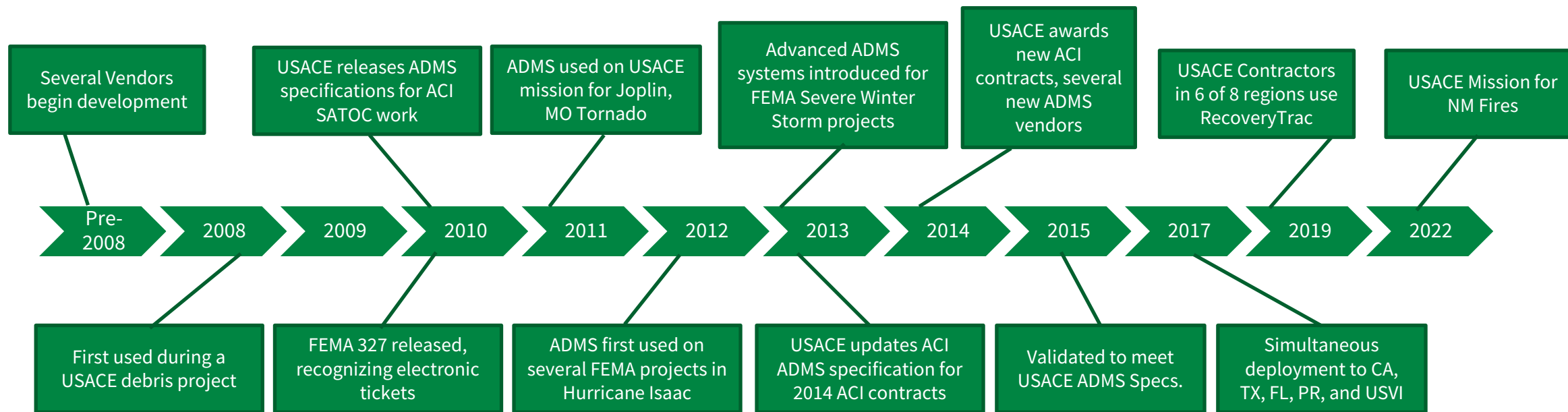
REIMBURSED
TO CLIENTS

500

DEBRIS
CLIENTS
NATIONWIDE

#1 MOST PREFERRED ADMS TECHNOLOGY

Technology Impact – ADMS History



Initial Technical Challenges

- System Performance
- Reliability
- Complexity
- Device integrated features

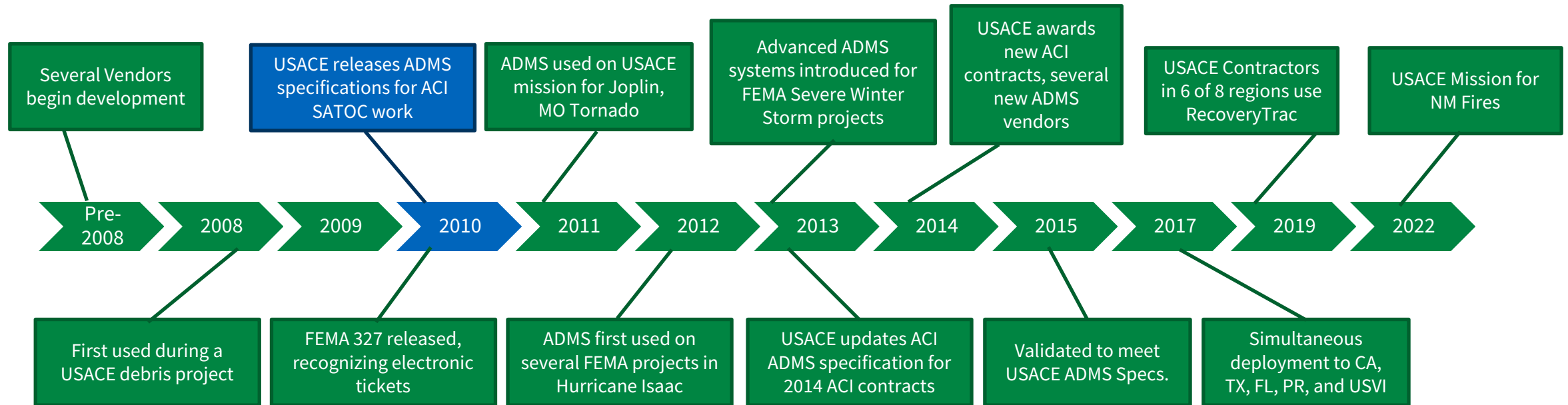
Field Design Requirements

- USACE ACI ADMS Compliant
- Performs as fast as paper-based
- Minimal user input
- Reliable and resilient
- Device integrated features
- Reasonable cost (FEMA 327)

Resilient/Off the Shelf Technology

- IOS (iPhone)
- Window Mobile
- Android
- Thermal Printers
- ESRI GIS based

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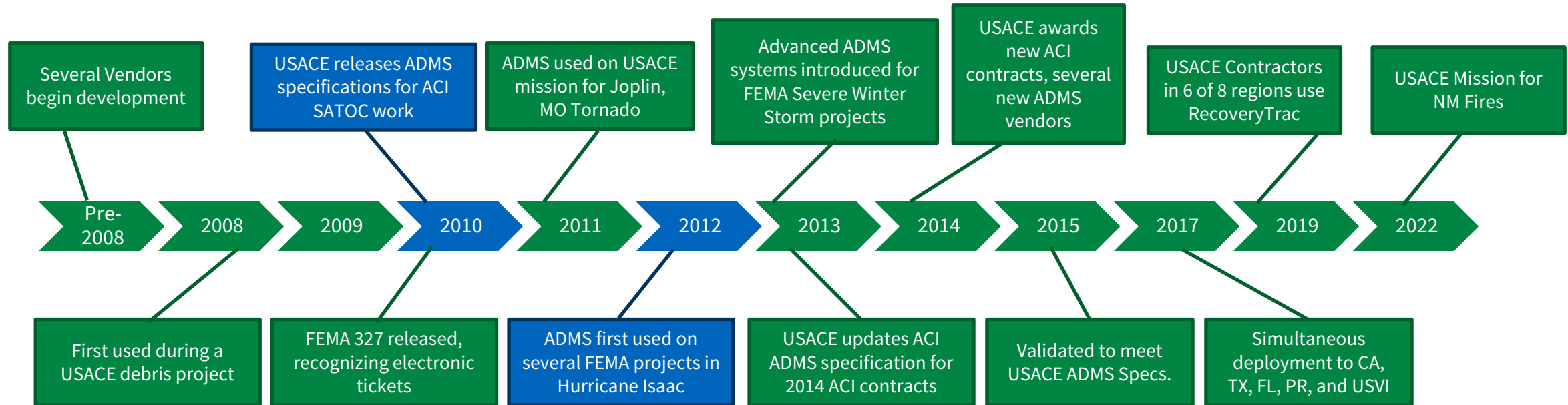
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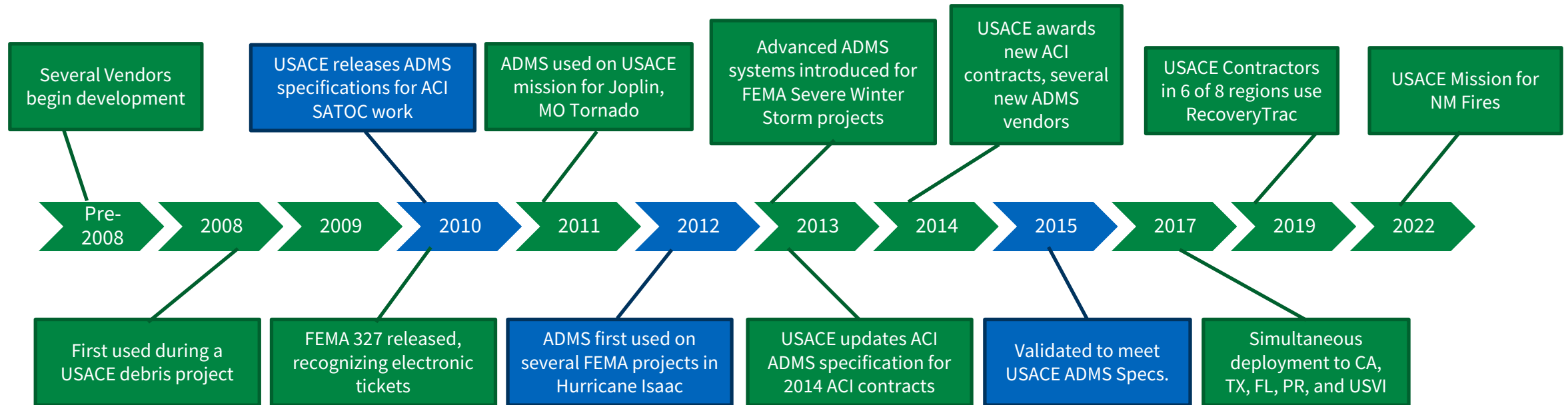
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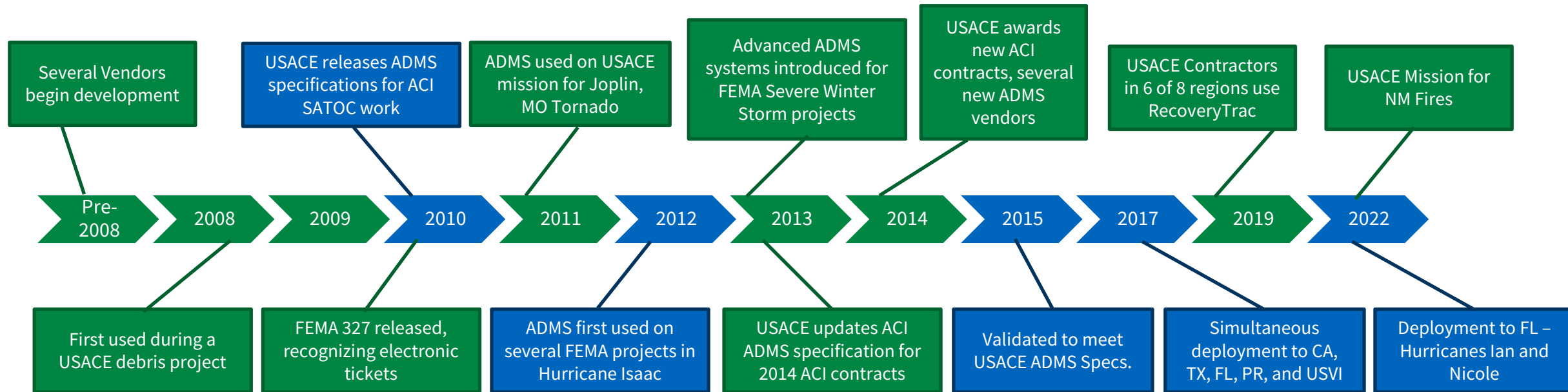
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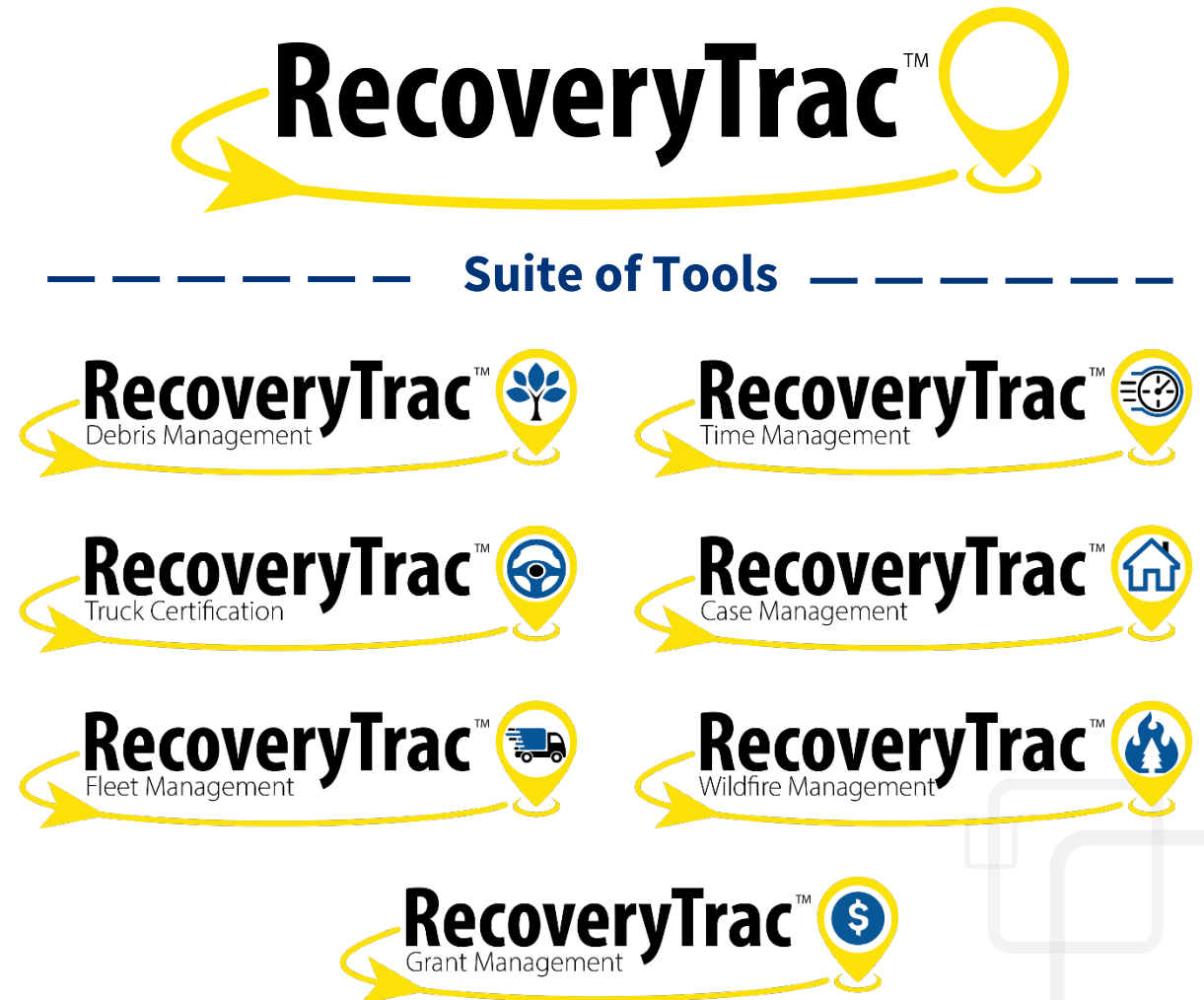
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RecoveryTrac™ – Tetra Tech ADMS Experience Resume

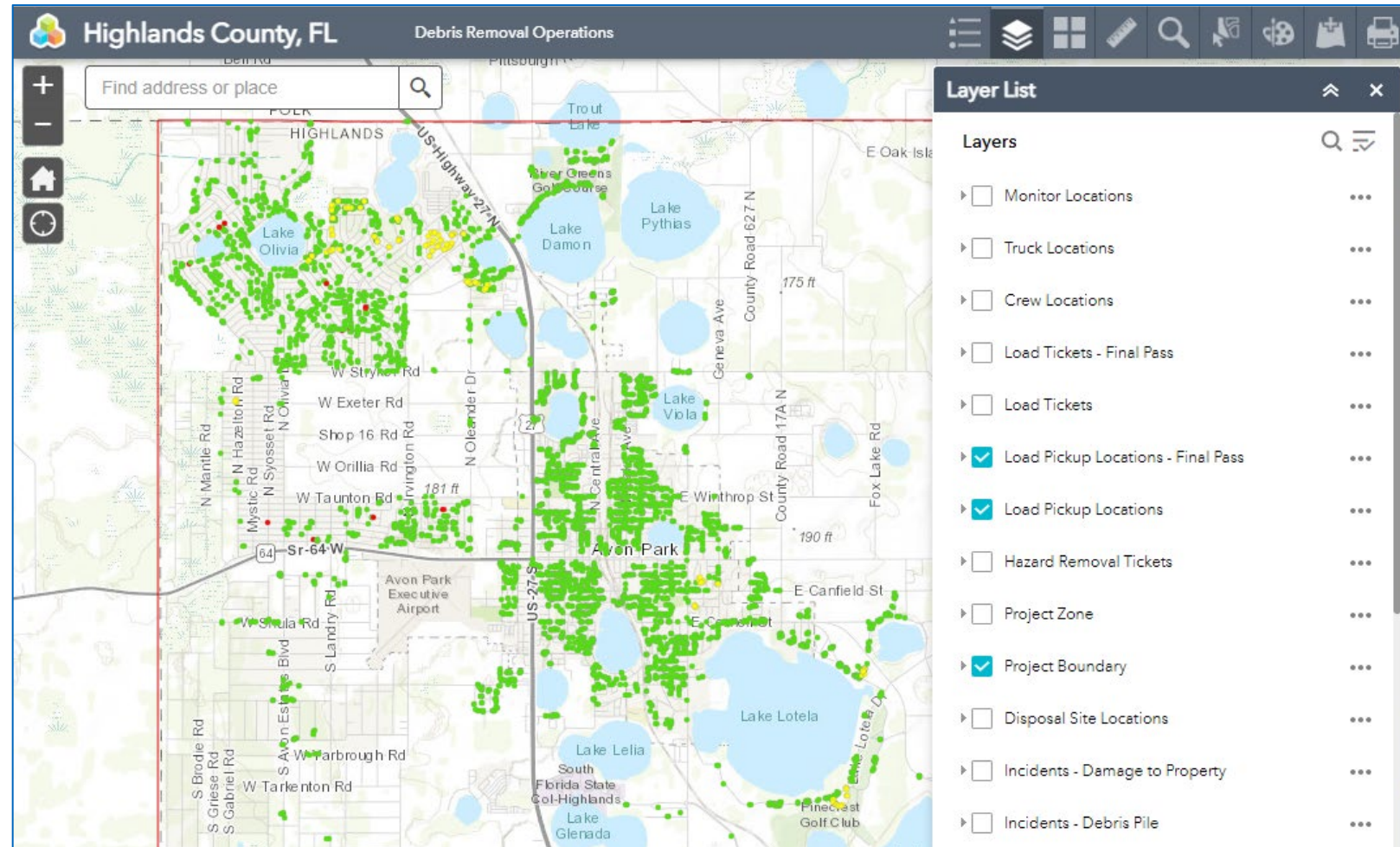


- First developed in 2012
- Utilized on over **1250** debris monitoring projects (ROW/Parks/PPDR/Waterways)
- **Over 121 MM total cubic yards**
- **3.7 MM total leaners/hangers & hazardous trees and other hazards**
- 7 out of 8 USACE regions use RecoveryTrac ADMS



ADMS Enhancements to Clean-up and Reimbursements

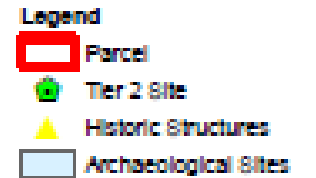
- Real-time situational awareness of field resources
- Real-time GIS web services
- Capable of collecting data regardless of cellular service
- Automated photograph and GPS capture
- Minimizes fraud and data entry errors
- Fully reconciled debris and labor data each day
- Expedites invoice reconciliation



Highlands County - Hurricane Ian Debris Removal Operations Geoportal

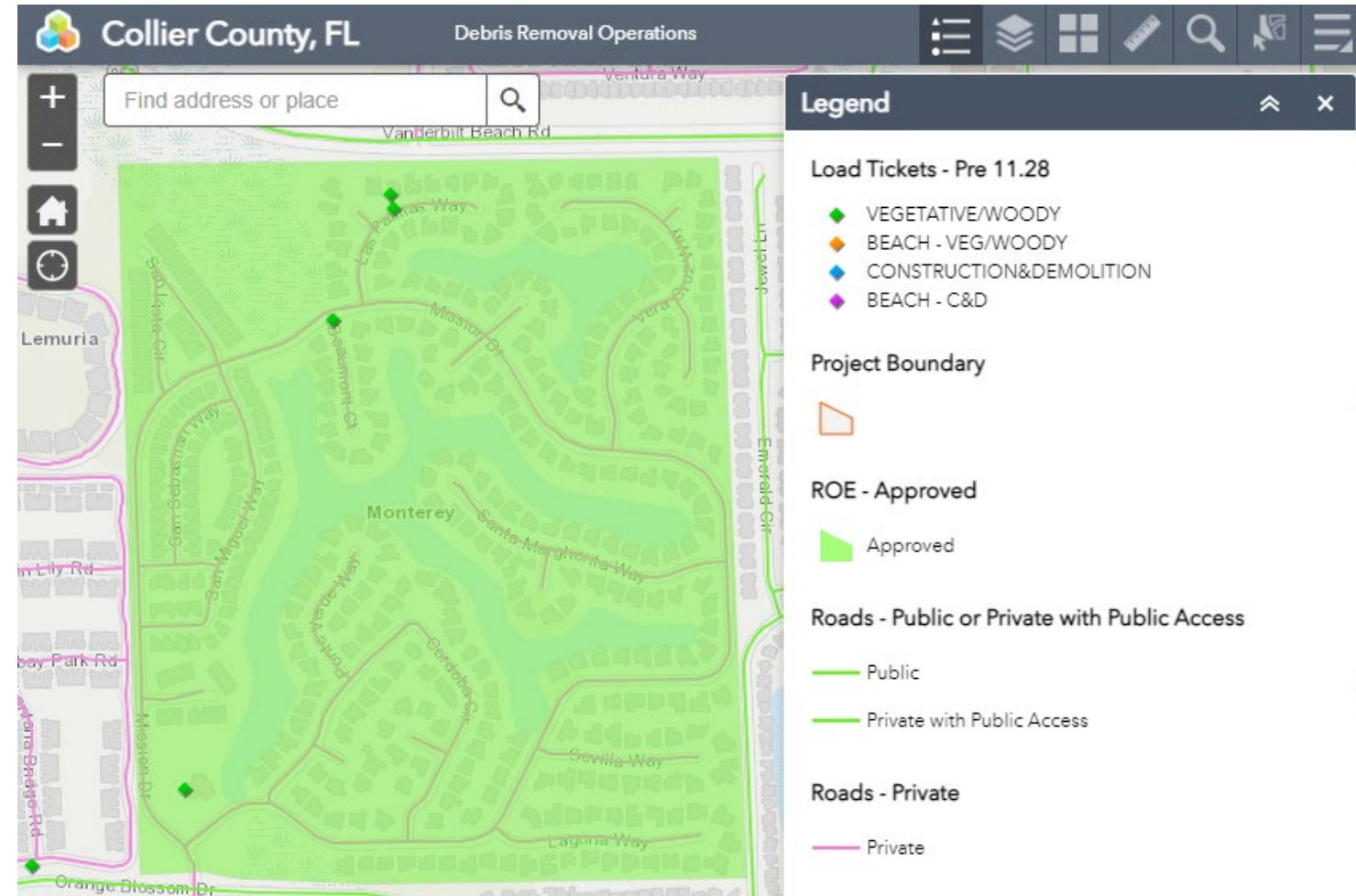
DMS Environmental Concerns (Section 106)

- **Recent Issue:** FEMA Region 4 de-obligated collected debris sent to a DMS that was not reviewed by State SHPO office (Alabama)
- FDEP permitting processing includes consultation with FL SHPO
- Higher probability of potential issues when sites have natural wetlands within or adjacent to the site.
- Consider a review of the State's known archaeology sites and wetland areas on new sites



Debris Removal in Public - Private Areas

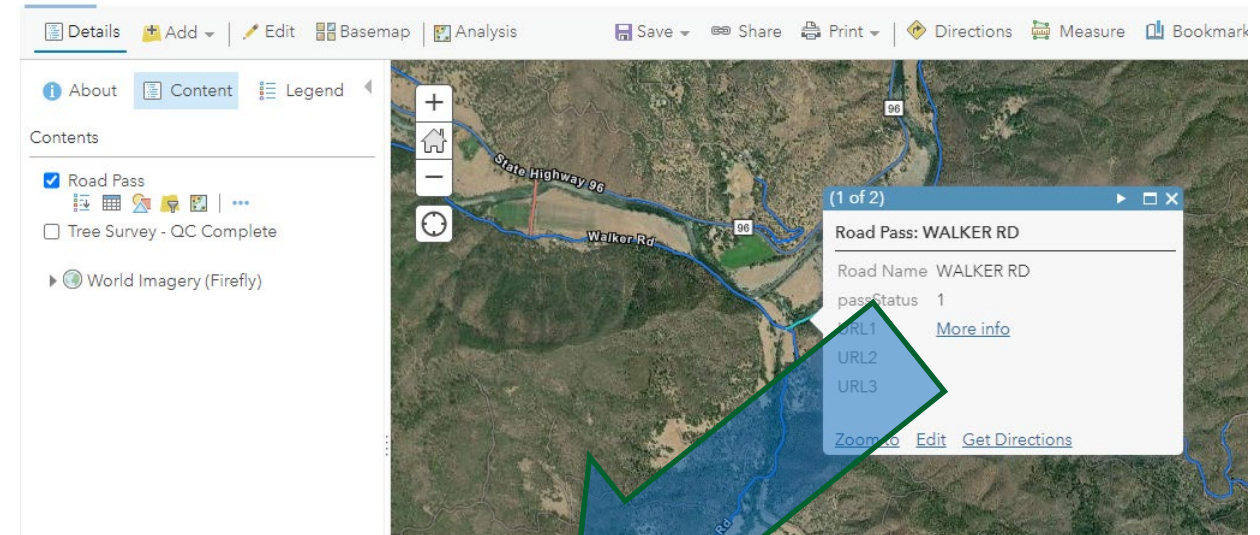
- **Challenge:** Separation of debris and hazards removed, and monitoring labor is need for public/private-non gated and private-gated roads
- Recent FEMA guidance is differentiating the separation based on if the private roads are gated or un-gated
- In some cases, it is necessary to provide a breakdown by HOA or private community
- Need GIS data of private communities that are gated and non-gated along with road centerlines with maintenance responsibility



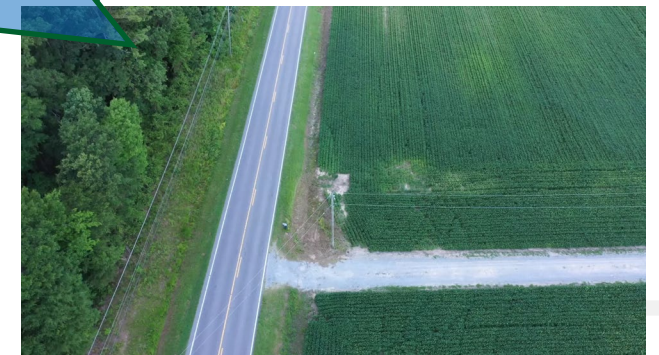
Hurricane Ian – Collier County Private Communities

Documentation of Tree Hazards within Right of Ways

- **Challenge:** FEMA's recent change to remove the size requirements and add requirement to document conditions that make it a hazard
- Strategies being considered include pre-survey, additional photos and increase minimum size requirements
- New mapping technologies include road and aerial surveys to preserve post-storm condition for potential audit inquiries
- Videos linked to GIS database and online Geoportal and can be exported as part of documentation package



Road Condition Survey



Aerial Conditions Survey

Questions ??