Underground Utility Damage Prevention Is All About Communications

Ricardo Ceballos, PE – Greater New Haven WPCA
Nick Holly – PelicanCorp
Agenda

Underground Utility Damage Prevention Is All About Communication

• Greater New Haven Water Pollution Control
• Damage Prevention?
• Call Before You Dig – Connecticut
• Our problem
• Our approach
• The solution
• The technology
• How the change impacted the Utility
Greater New Haven Water Pollution Control Authority
WWW.GNHWPCA.COM

- Four Member Communities
  - Hamden
  - East Haven
  - Woodbridge
  - New Haven
- 555 Miles of Sewer Pipes
- 30 Pump Stations
- East Shore Treatment Plant
  - 29 MGD – Average Daily Flow
  - 40 MGD – Design Flow - Secondary Treatment
  - 100 MGD – Wet Weather Flow Primary Treatment
We are not a manufacturing facility!

Rather, we convey and clean whatever you put down the pipes of your home!
Damage Prevention is ALL about communication
Utilities talking to contractors...
Call Before You Dig Connecticut – Where it all starts...

A Call Before You Dig service puts Contractors in touch with Utilities to exchange information about the location of underground facilities.

In Connecticut, Utilities are required to mark the entire area outlined by the contractor, except when it has a standard and repeating layout and which is connected by facilities visible on the surface (such as certain storm sewers) need not mark those standard and repeating facilities, provided that maps indicating the approximate location are supplied to the excavator within the specified time limit (R.C.S.A. § 16-345-3)
The Challenge for GNHWPCA

Allocating enough resources to comply with regulations
- CBYD ticket volumes increasing
- Field resources already stretched for time
- Age of existing field resources

Risk of Facility Damage Increasing
- Contractors not waiting for locates and taking chances

Utility was being reactive and not pro-active in protecting its facility
- Damage to gravity sewer pipes takes time to be noticed
- GNHWPCA repairs sewer mains and sewer laterals to ensure service continuity to its customers
The Opportunity for Greater New Haven WPCA

• High Quality and Accuracy of GIS information

• Customer Service Lines Maintained

• Needed a better way to identify which CBYD tickets “required a physical locate”

• Call Before You Dig require email addresses from contractors to use the service
Our Approach to the Solution

- Automate where appropriate and as much as possible
- Share more information with contractors
- Focus our field teams on the high risk tickets
- Protect the integrity of the services
The Solution

Always

Sometimes
What we communicate to contractors working near our sewers
The Technology – How it uses ArcGIS Map Services

The TicketAccess service resides in the cloud, receives tickets from Call Before You Dig and orchestrates requests to our ArcGIS via Web Mapping Service (WMS) and Web Feature Service (WFS).
How the change affected the Utility (Summary)

- **50%** Reduction in the number of field techs required for locates
- **30%** Reduction in the number of locates
- **50%** Reduction in the number of office staff for ticket distribution