Solution Based GIS for the Fire Service

Friday, November 9th, 2018
MEGUG Annual Meeting, Bates College

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Maine Fire Services Instructor
Maine Fire Protection Services Commission
Firefighter / Training Officer, Buckfield FD

Within the fire service, mapping and location centric values have become valuable elements for preplanning and response. As fire related data collection improves, not only can we assist with emergency incidents; **we now have increased capacity for answers regarding, education, situational analysis, loss prevention, mitigating risk, and improving overall fire service efficiencies.**

**How can I / we Help?**

**Ask why?**

**Ask us why?**
Simple Metrics Known to Crews:
response times, arrival times, back-in-service

Records Management Systems:
automatic reports, KPI’s (key performance indicators)
transparency with taxpayers/stakeholders

Maine Fire Incident Reporting (MEFIR’s) & National Fire Incident Reporting (NFIR’s)

Service and Staff Administration
Staff Demographics
Standard/Ad hoc Report Writer
Use Security and Permissions
Training Tracking
Run History
NFIRS Quality Assurance Report
NFIRS-compliant Reporting (online & offline)
Occupants
Locations
Hydrants
Fire Shift Setup
Equipment
Inspections (web-based)
Inventory
JFSI module

<table>
<thead>
<tr>
<th>SERIES</th>
<th>HEADING</th>
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</thead>
<tbody>
<tr>
<td>100</td>
<td>Fire</td>
</tr>
<tr>
<td>200</td>
<td>Overpressure Rupture, Explosion, Overheat (No Fire)</td>
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<tr>
<td>300</td>
<td>Rescue and Emergency Medical Service (EMS) Incidents</td>
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<tr>
<td>400</td>
<td>Hazardous Condition (No Fire)</td>
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<tr>
<td>500</td>
<td>Service Call</td>
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<tr>
<td>600</td>
<td>Good Intent Call</td>
</tr>
<tr>
<td>700</td>
<td>False Alarm and False Call</td>
</tr>
<tr>
<td>800</td>
<td>Severe Weather and Natural Disaster</td>
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<tr>
<td>900</td>
<td>Special Incident Type</td>
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Maine Fire & EMS Incident Reporting System (MEFIRS)

Webinar: Submitting Accurate and Quality Data to NFIRS

SECTIONS & PANELS

- When you inactivate a section, you are inactivating all the panels and fields that fall under that section
- When you inactivate a panel, you are inactivating all the fields that fall in that panel

http://www.arcgis.com/home/webmapviewer.html?webmap=b0bb5d52b1014f10be354ed354a63065
Three injured in fireworks accidents across Maine

Maine Man Dies in Fourth of July Fireworks Accident

Town Fireworks Ordinance Status as of June 6, 2018

Ordinance Type
- NI: None
- RPSU: Prohibited Sale and Use
- RPU: Prohibited Use
- RUS: Restricted Sale or Use

Training Maine’s Firefighters

Across all firefighter types - volunteer, on-call, part-time, and full-time, every Maine firefighter trains an average of over 100 hours each year. This training includes a variety of core, enhanced, and specialty skill-based programs.

Total Firefighters Represented by Firefighter Employment Type

- Volunteer
- On-call
- Part-time
- Full-time
Goal: “To have 90% of Maine’s Firefighters within a one hour travel time of a Live-Fire-Training Facility”.
Maine Fire Protection Services Commission
Fire Training Facilities Improvement Program
Fire Training Facility Gap Analysis Summary Maps
January 2018

Wth strategically placed
Live Fire and Firefighting Training Facilities, 94% of Maine firefighters will have substantially improved training opportunities within a one-hour travel time (HTT) of their Departments.

- FDs Outside HTT from any current MBF2 Affiliated Live Fire/ Fire Training Facility
- FDs Outside HTT from any current or probable Live Fire Fire Training Facility

- Maine Fire Stations
  Municipal or Locally owned fire training facilities that have been identified by the Maine Fire Services Institute, are suitable/acceptable for the fire training and skills testing sites.

One Hour Travel Time from
FDs (5) current MBF2 Affiliated
Live Fire Fire Training Facilities

Created for the Maine Fire Protection Services Commission by Whitridge/Merrill
State of Maine, Department of Transportation
Data derived from base data from the Maine office of GIS for display, reference and public use.

One Hour Travel Time
utilizing 11 strategically located
Live Fire Fire Training Facilities
All Island FDs within HTT after arriving on the mainland.

LD1845 An Act To Provide Incentives To
Attract Trained Firefighters to Maine and To
Retain Trained Firefighters by Expanding
the Provision of Live Fire Service Training

Maine Fire Protection Services Commission  LD1845

Firefighters in Maine are required by the Maine Bureau of Labor Standards to train, maintain, and be proficient in tasks before performing those tasks on the fire ground. No fire training facility in Maine meets standards relevant to all of today’s firefighting needs. Not only are our current training facilities lacking structurally, they are lacking in geographic location with Maine’s rural firefighters severely underserved. Additionally, no facility provides certified training for advanced operations.

LD1845 will enable grant funding to provide and support compliant fire training facilities within an hours travel time for over 90% of Maine’s Firefighters.

Reverse the Decline for your firefighters training—support LD1845

LD 1845  An Act To Provide Incentives To
Attract Trained Firefighters to Maine and
To Retain Trained Firefighters by
Expanding the Provision of Live Fire Service Training

Referred to Committee on Education and Cultural Affairs on Mar 1, 2018.
Latest Committee Report: Not Reported Out

Public Hearings
Wednesday, March 7, 2018 9:00 AM, Cross Building, Room 202

Work Sessions
Thursday, March 8, 2018 1:00 PM, Cross Building, Room 202
Silver City Fire Department
Structure Fire Response Study
Jeffrey Fall, jfall@silvercityfire.org, General Business Major

Abstract

The Silver City Fire Department faced many challenges due to the economic and environmental sensitivity in the region. One of the key challenges was the management of the forested areas, which are prone to wildfires. The department implemented a GIS-based solution to improve their response to structure fires. By integrating historical fire data, they were able to model potential fire spread scenarios and improve response planning. The GIS system included a structural vulnerability assessment, which helped in prioritizing firefighting efforts. The results showed a significant decrease in response time and improved resource allocation, leading to a more effective response to structure fires.

Data

Methods

Results

Conclusions

The GIS system played a crucial role in enhancing the department's ability to manage structure fires effectively. It enabled them to simulate scenarios and make data-driven decisions, which were critical in improving response times and resource utilization. The success of this project highlights the importance of integrating technology in resource management and planning, especially in areas prone to wildfires.
Why this Study?

Identify potential “slow response” areas within Town Limits

Compare & Contrast SCFD response times to NFPA National Standards

**Under the Control of Dispatch**
- Alarm Transfer Time
- Alarm Answering Time
- Alarm Processing Time

**Under the Control of the Fire Department**
- Turnout Time
- Travel Time
- Initiating Action / Intervention Time

**NFPA 1710**
Travel time by the initial arriving company to a fire suppression incident, should be 4 minutes or less, 90% of the time.

(NFPA 1720 ~ 14 minutes 80% of the time)
157 Total Structure Fires
Since 2004

70% 30%

- in Town Limits
- In Extra Territorial Jurisdiction

Identified potential "slow response" areas within Town Limits

20 Responses Over 4 minutes
6 occurred outside of 4 min buffer area
14 occurred within 4 min buffer area
out-of-station duties
training off site
multiple calls

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9 Occurred at night (blue triangles)
11 Occurred during the day (red points)
“Approximately 15% of Structure Fires that occur within Town limits are outside of 4-minute response time buffer”

“Approximately 85% of Structure Fires that occur within Town limits are within a 4-minute response time buffer”

Areas within Town identified as requiring longer response time

**Future planning:**
- New Station Locations
- Improvements to Roadways
- Infrastructure Upgrades
- Development / Fire Sprinklers
Questions? & Discussion

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troika@megalink.net