

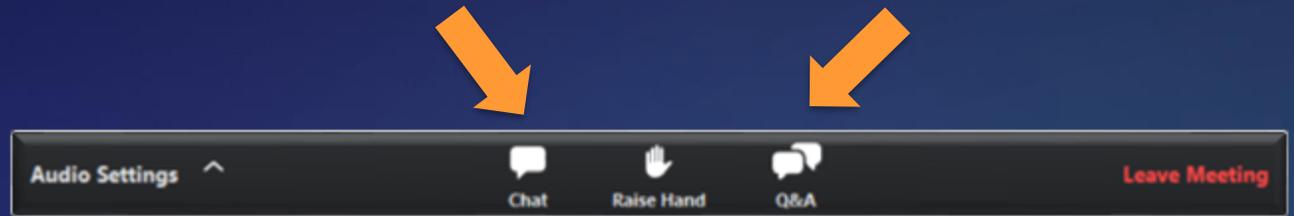
GIS Applications for Fire, Rescue and EMS

Hosted by David Hamilton, Public Safety Industry Manager @ Esri Canada

May 11, 2023

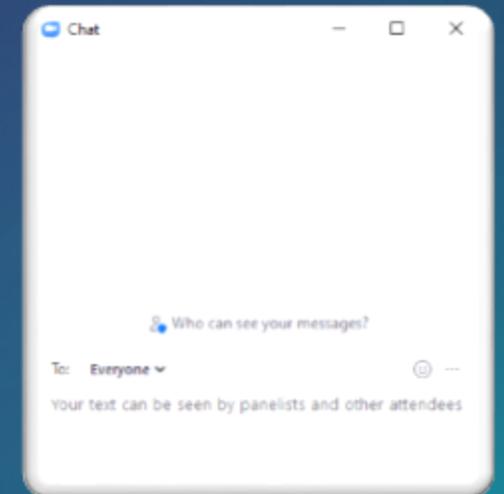
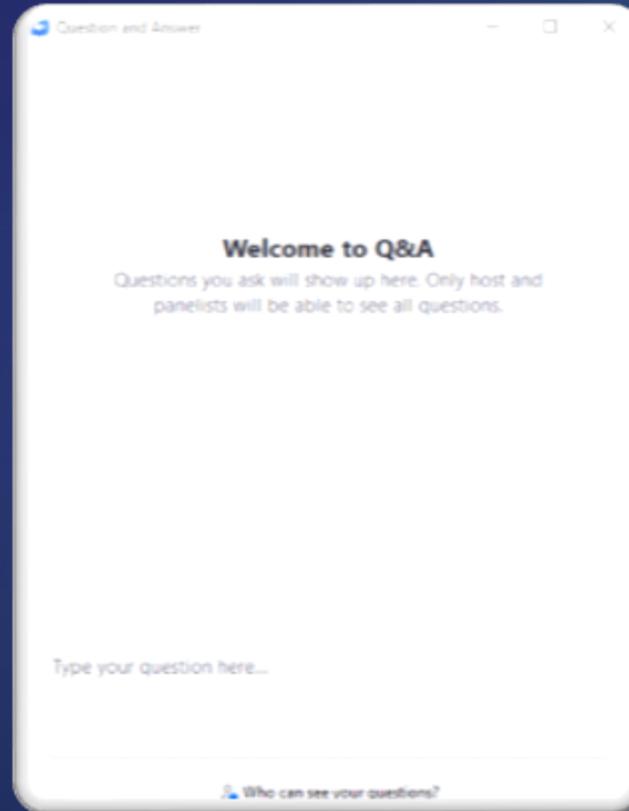


Questions & Chat



- **Use the Q&A for questions:**
 - Select *Q&A* from the control bar

- **Use Chat to connect to the host and panelists**
 - Select *Chat* from the control bar





Surveys and Recordings

- We are recording today
- Expect an email from us with link
- Please share your thoughts on the exit survey

Today's Speakers



David Hamilton

Industry Manager, Public Safety
@Esri Canada



Renee Bernstein

Solution Engineer @ Esri

Special Guest



Ken Stuebing

Executive Director & Fire Chief
Halifax Regional Fire & Emergency

Today's Agenda

**Using GIS to Improve Emergency
Planning and Response**

Chief Stuebing

**Demonstrations - GIS Applications for
Fire, Rescue & EMS**

Renee Bernstein

Summary & Resources

David Hamilton

Q & A

All

Poll Question 1

Does your fire agency leverage GIS for Emergency Planning & Response?

- A) Yes
- B) No
- C) We need to be doing more
- D) Not sure

Using GIS to Improve Emergency Planning and Response

Chief Stuebing

Demonstrations - GIS Applications for Fire, Rescue & EMS

Renee Bernstein

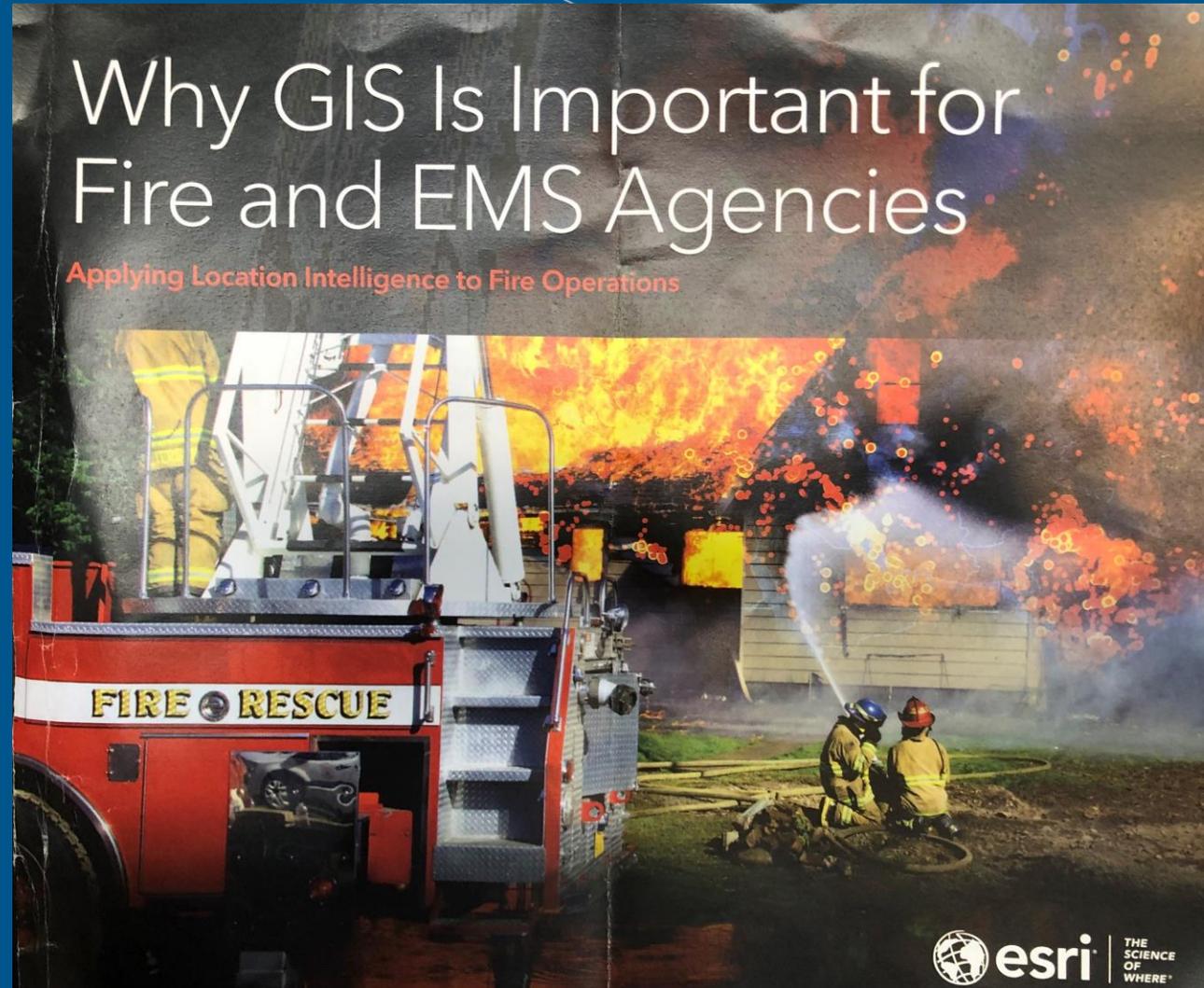
Summary & Resources

David Hamilton

Q & A

All

GIS FOR EMERGENCY PLANNING AND RESPONSE



HALIFAX REGIONAL FIRE & EMERGENCY (HRFE)



HALIFAX REGIONAL FIRE & EMERGENCY

2022 FACT SHEET

MISSION Our members are dedicated to enhancing and preserving quality of life, property and environment through education, leadership, partnerships and effective response to emergencies to ensure the citizens of HRM live in safe, inclusive and welcoming communities.

OUR SERVICE AREA



OUR SERVICES



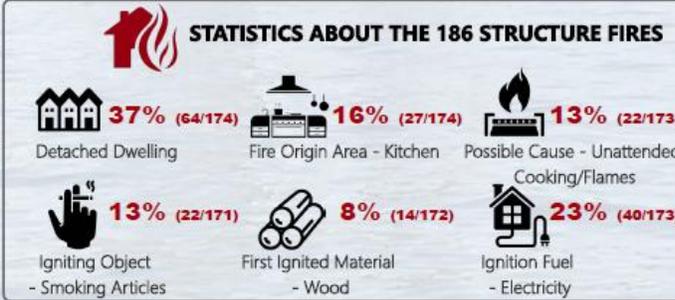
OUR CUSTOMER



OUR LOCATIONS



OUR PEOPLE



OUR OPERATING BUDGET





SERVICE AREAS

Fire Chief/Executive Director's Office

Provides strategic leadership in the advancement of Halifax Regional Fire & Emergency's (HRFE) mission to better serve and protect the residents of the municipality.

Community Risk Reduction, Professional Development, Logistics & Medical

Provides community risk reduction through public safety education, fire code inspections and enforcement, emergency management mitigation and preparedness initiatives, and coordination of emergency response to disasters and recovery efforts. Provides professional development and training of HRFE members for fire, emergency and medical response, and logistical support.

Operations

Provides emergency response to every part of the municipality operating out of 51 fire stations and supports community risk reduction efforts.

People, Performance & Safety

Provides data analytics and performance measurement and manages Occupational Health & Safety, the Volunteer Program, Technology & Innovation as well as Diversity & Inclusion/Workplace Culture for HRFE.

SUCSESSES

TASK FORCE 5 (HURRICANE FIONA)

- HRFE responded to 633 incidents
- Emergency Management
 - Halifax Regional Municipality Emergency Operations Centre was activated
 - Four evacuation centers & eight comfort centers (Joint Emergency Management Teams)
 - Ground Search And Rescue Wellness Community Checks
 - Food trucks to communities with extended power outages
 - Water delivery/pick-up for residents at local fire stations
- HRFE's "Task Force 5" Heavy Urban Search And Rescue (HUSAR) Team
 - Cape Breton Regional Municipality deployment: Nine generators and fuel pods
 - Pictou/New Glasgow Deployment: Incident Command System under Department of Natural Resources
 - Deployed base camp and Command Unit for:
 - 60+ personnel deployed (operational, support, logistics)
 - 12 tree cutting teams of four for NS Power support



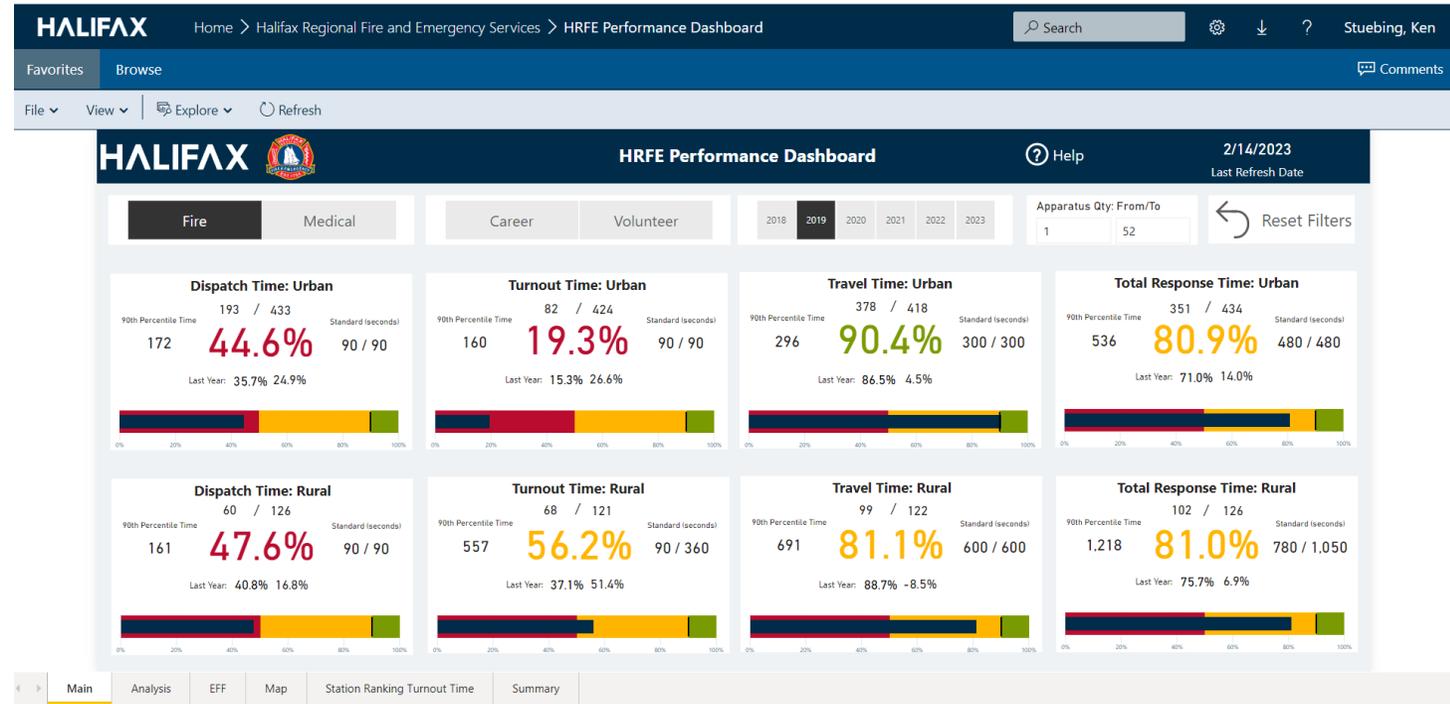


CURRENT & PLANNED INITIATIVES

ADMINISTRATIVE PRIORITIES

SERVICE EXCELLENCE – INNOVATIVE PERFORMANCE EXCELLENCE

- HRFE dashboard tools
- Technology and Innovation



SERVICE EXCELLENCE – EXCEPTIONAL CUSTOMER SERVICE

- Fire & Emergency Service Accreditation
- Medical: EHS system alignment



Commission on
Fire Accreditation
International



KEY PERFORMANCE INDICATORS

2022 CALENDAR YEAR FIRST ON SCENE TOTAL RESPONSE TIME – URBAN

79.5% ↑ 4.2%

URBAN FIRES
FIRST ON SCENE IN **8** MINUTES
FROM THE TIME THAT
911 ANSWERS THE CALL

2022	79.5%
2021	76.3%
2020	74.4%



TARGET
90%

71.7% ↑ 0.4%

URBAN MEDICAL CALLS
FIRST ON SCENE IN **7.5** MINUTES
FROM THE TIME THAT
911 ANSWERS THE CALL

2022	71.7%
2021	71.4%
2020	77.2%

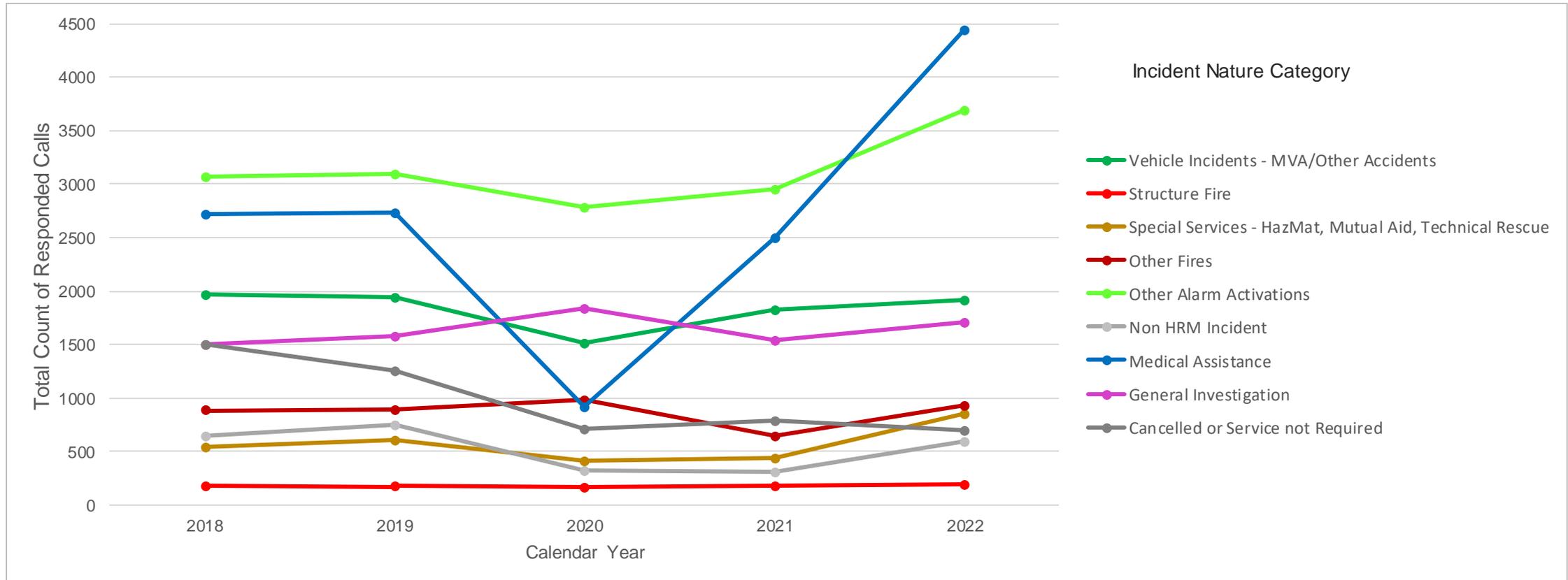


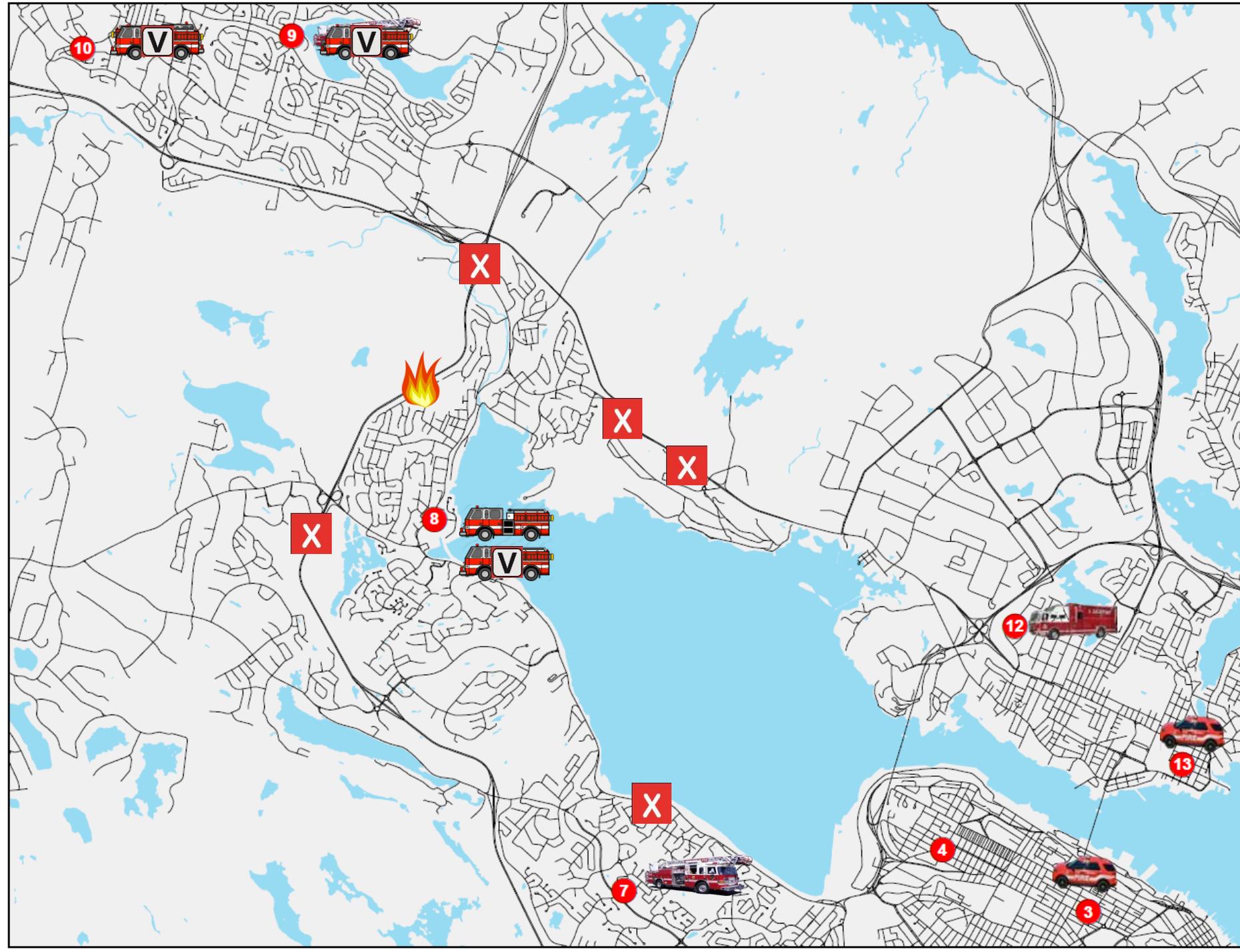


KEY PERFORMANCE INDICATORS

HRFE CALL HISTORY BY CALENDAR YEAR

In 2022, HRFE responded to 15,028 incidents – an increase of 34 per cent from 11,172 calls in 2021





EFF TARGET
11:00

Total Response Time	
Dispatch	90 s
Turnout	90 s
1 st Unit on Scene	5 m
Effective Firefighting Force	1 X 1



KEY PERFORMANCE INDICATORS

2022 CALENDAR YEAR EFFECTIVE
FIREFIGHTING FORCE FOR URBAN FIRE
EMERGENCIES

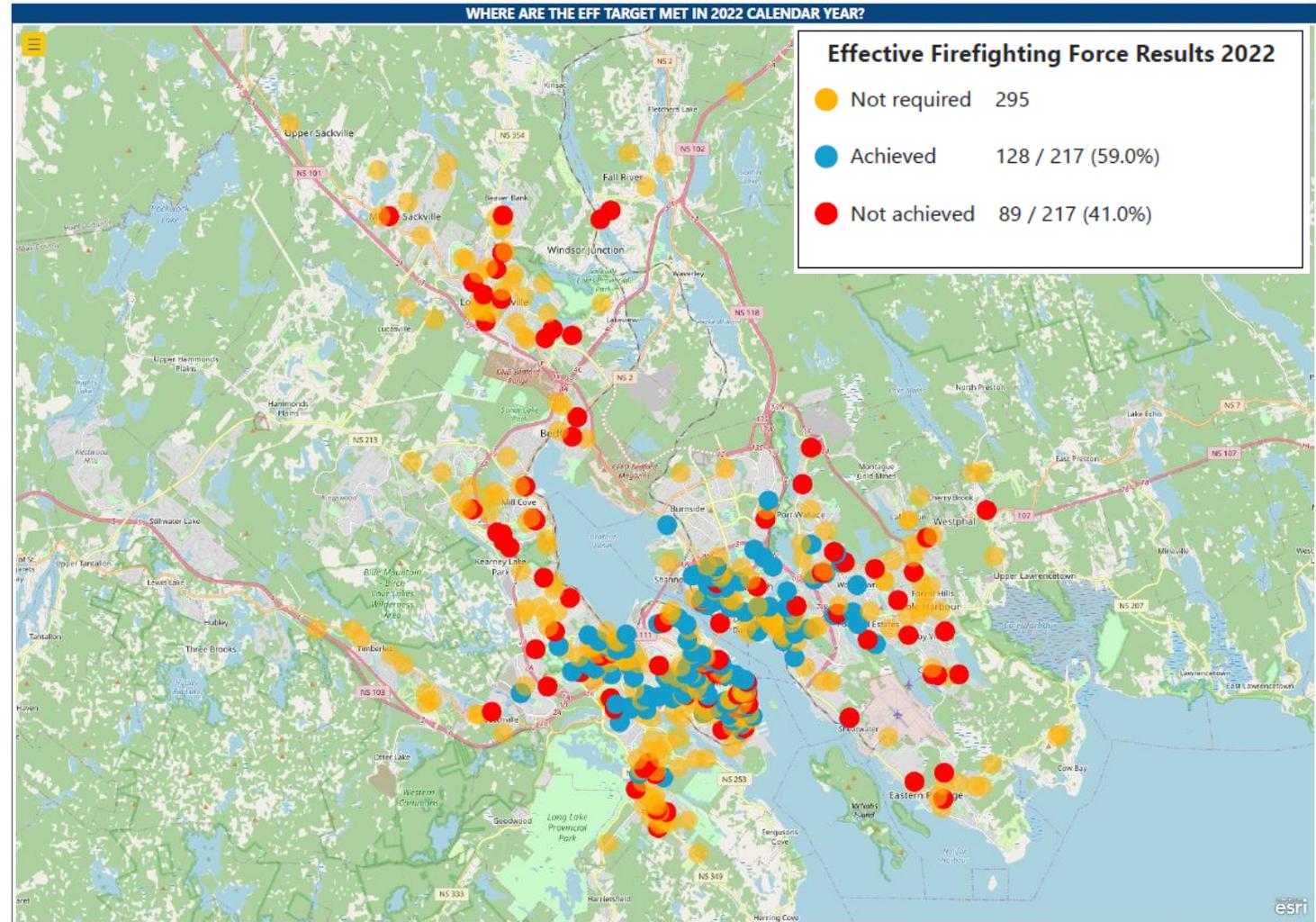
TARGET
14 FIREFIGHTERS ON SCENE
WITHIN 11 MINUTES

59% ↓ 3.8%

2021 61.3% (106 vs. 67)
*Fall River not included

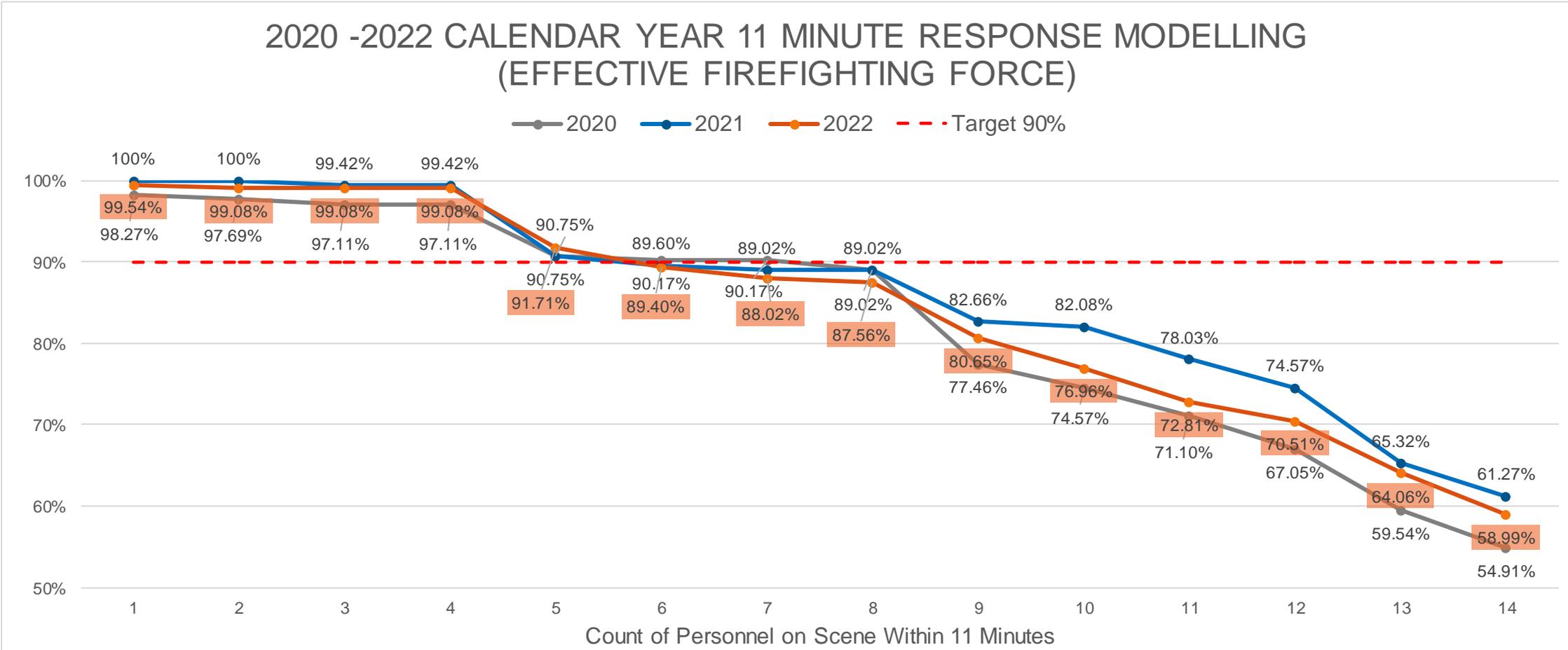


TARGET
90%





KEY PERFORMANCE INDICATORS



To address the gap in performance, Regional Council authorized 10 new firefighters (= 2 FFs 24/7) in 2022 assigned to Bedford/Sackville area. The recruits are currently in training and will be operational June 2023.



PERFORMANCE

HALIFAX HRFE Performance Dashboard Help 17-Feb-22 Last Refresh Date

Platoon Type
Career Volunteer

RESPONSE_TIME_PASS?
No Yes

DISPATCH_TIME_PASS?
No Yes

TURNOUT_TIME_PASS?
NA No Yes

TRAVEL_TIME_PASS?
NA No Yes

INCIDENT_RESPONSE
Fire Medical

District Type
Rural Urban

Date From/To
1/1/2018 2/17/2022

Year
2021

Month Name
All

DISTRICT
All

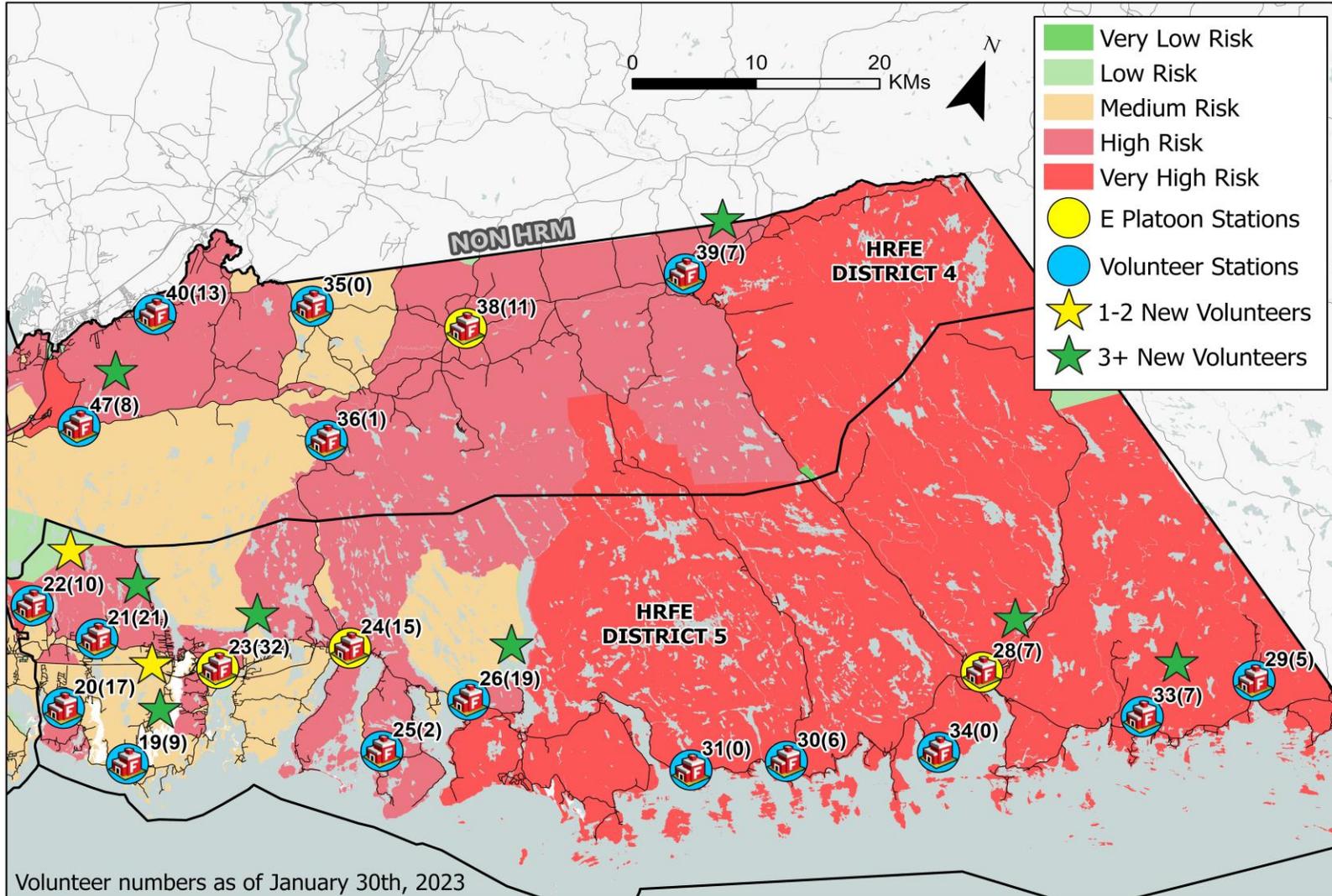
STATION_NAME
All

PLATOON
All

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STATION 38 (MIDDLE MUSQUODOBOIT) & FIRE DISTRICT 4 RISK ASSESSMENT



STATION	# VFF 2019 MAP	# VFF UPDATE	CHANGE
19	4	9	+5
20	15	17	+2
21	15	21	+6
22	8	10	+2
23	22	32	+10
24	15	15	0
25	2	2	0
26	14	19	+5
28	3	7	+4
29	6	5	-1
30	7	6	-1
31	0	0	0
33	3	7	+4
34	0	0	0
35	0	0	0
36	1	1	0
38	12	11	-1
39	4	7	+3
40	13	13	0
47	3	8	+5



KEY PERFORMANCE INDICATORS

CURRENT STATE – 14 EFF PERFORMANCE

Historical ability for 14 Firefighters (EFF) in 11 minutes from 2018 - 2022

Station 8 - Bedford Zone

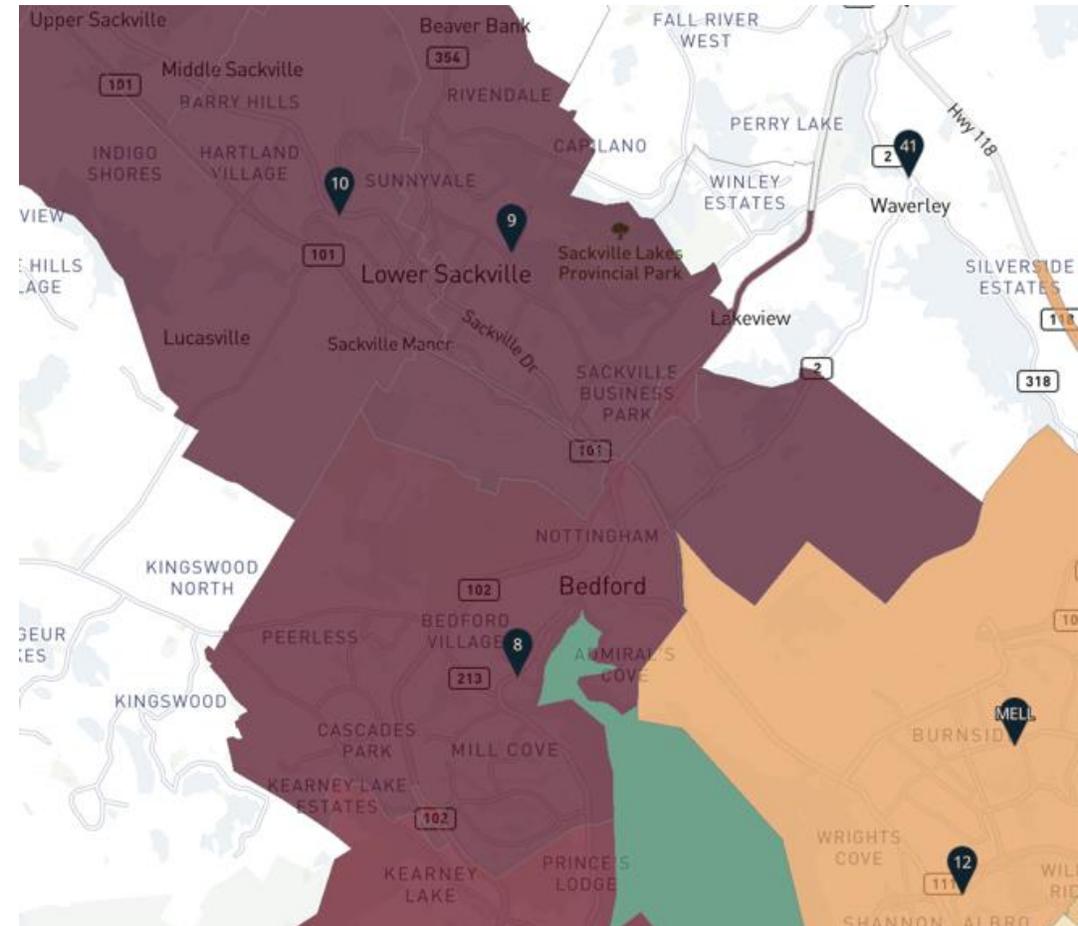
8%

2 out of 26

Station 9 – Metropolitan Ave / Lower Sackville

0%

0 out of 21 EFF





KEY PERFORMANCE INDICATORS

PREDICTIVE ANALYSIS

Predicted improvement towards EFF in 11 minutes

Station 8 - Bedford Zone

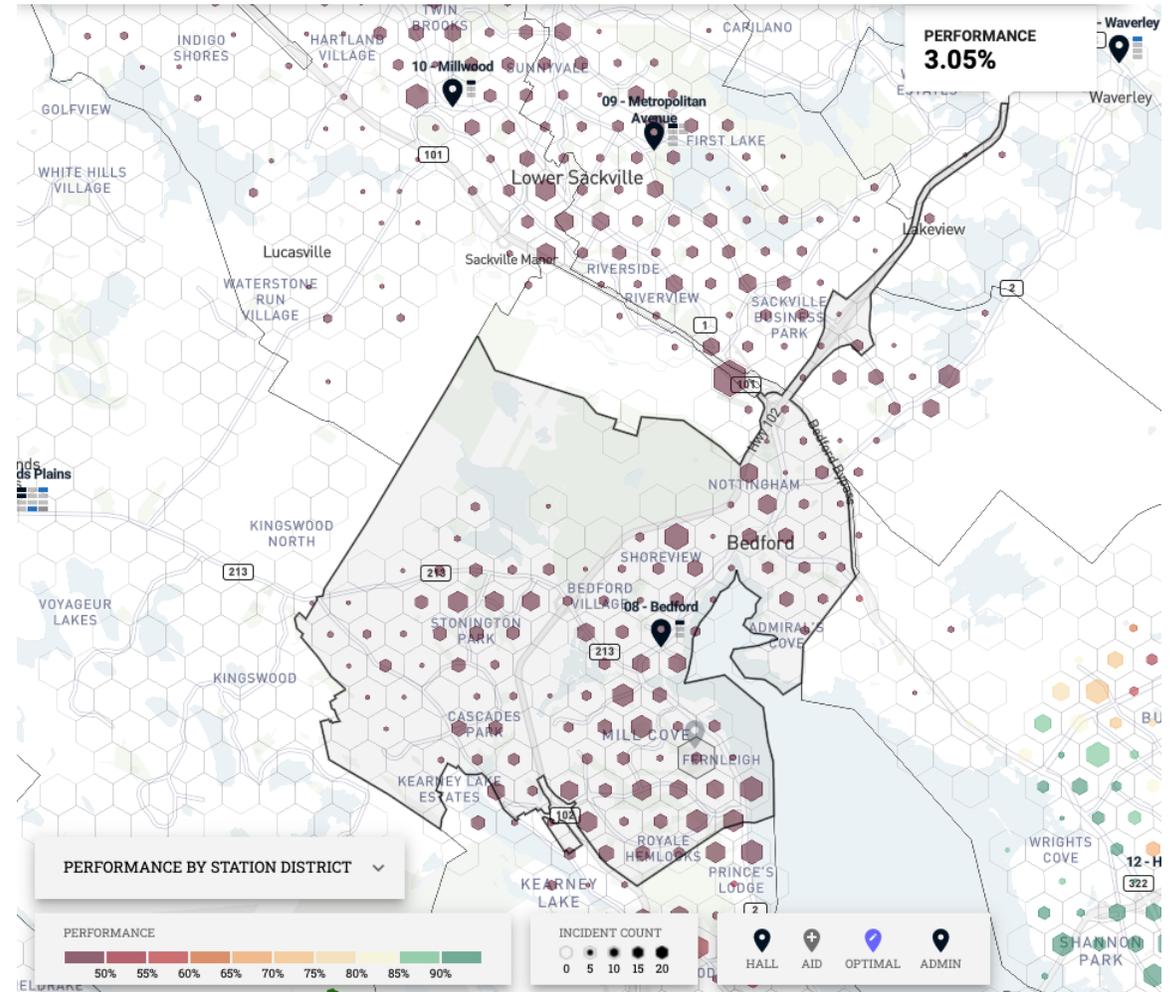
3.05%

Expected calls to reach performance target

Station 9 – Metropolitan Ave / Lower Sackville

2.17%

Expected calls to reach performance target





SATURN (Situational Awareness Tool Update Response Network)

The screenshot displays the HALIFAX SATURN software interface. At the top left, the 'HALIFAX SATURN' logo and 'User Guide' link are visible. A search bar with the text 'Find address or place' is located below the logo. The main map area shows a detailed view of Halifax, Nova Scotia, with numerous colored markers (red, blue, green, yellow, pink) indicating various emergency incidents. Several green lines are drawn across the map, labeled 'Hospital Evacuation Route'. A sidebar on the right titled 'Recent Activity' provides a summary of the current incidents:

Icon	Activity	Count
	Fire Calls	1
	Location pin: HF19000011320	
	Markup Points	0
	Markup Lines	12
	Markup Areas	1
	Street Closures	97
	Street Encroachments	4

At the bottom left of the map, a scale bar indicates 1km and the coordinates are -63.705 44.699 Degrees.

Incident Intelligence

Community Risk Reduction

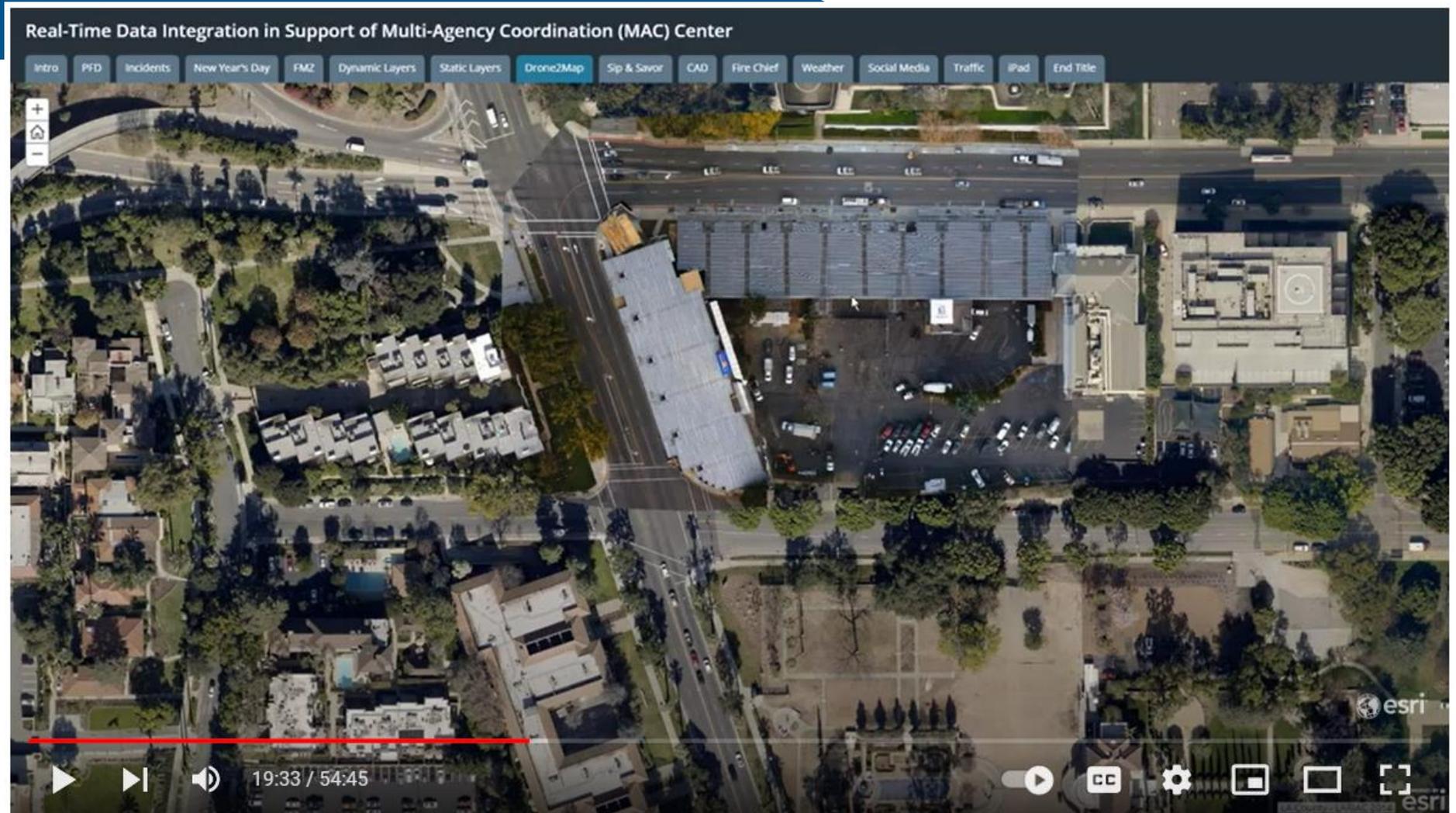
Accreditation

Pre-planning

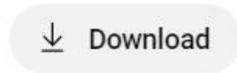
HUSAR Real Time Data Capture

Managing Civil Unrest

Etc.....



Real-Time Data Integration in Support of Multi-Agency Coordination Center





IAFC Became Central Data Collection Point For Many Fire and EMS Associations

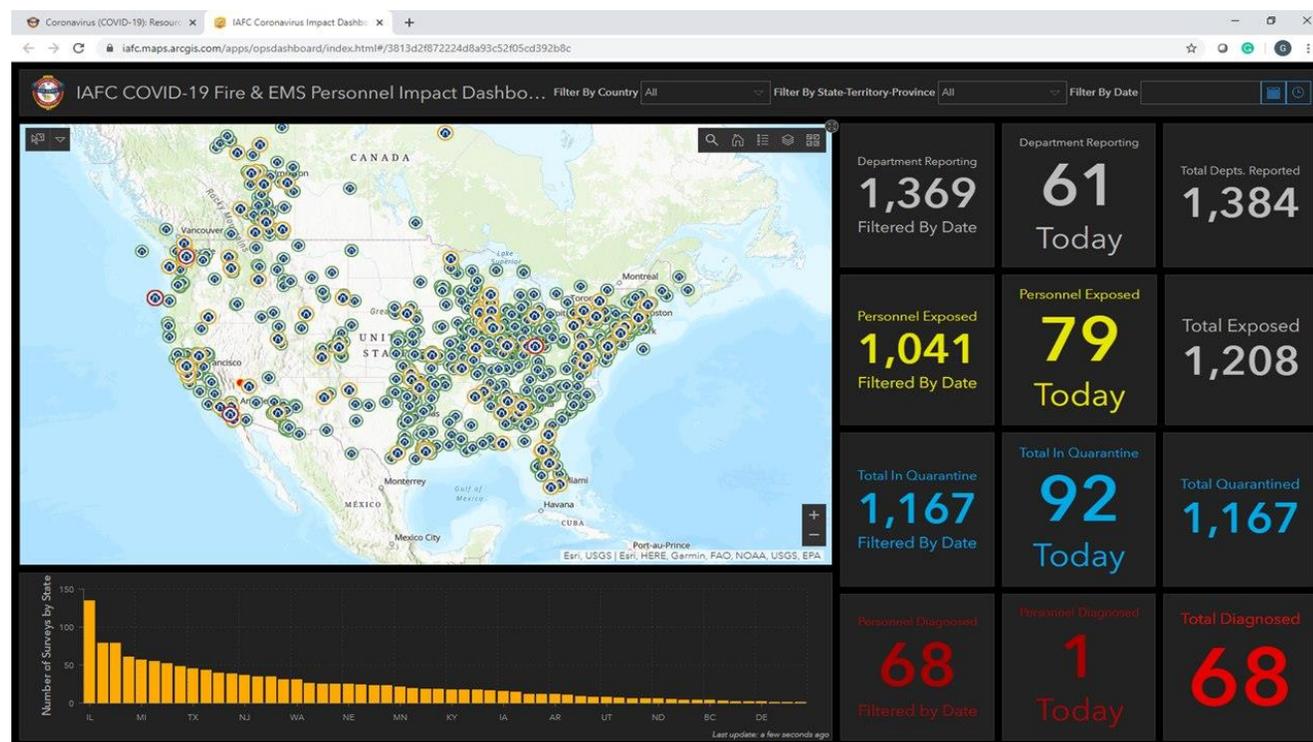
Tracked Infections of fire and EMS personnel

Quarantining of fire and EMS personnel

PPE Shortages

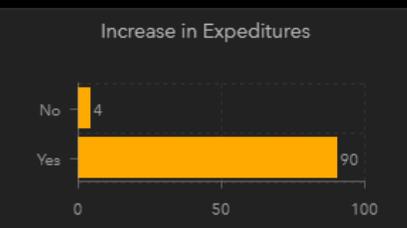
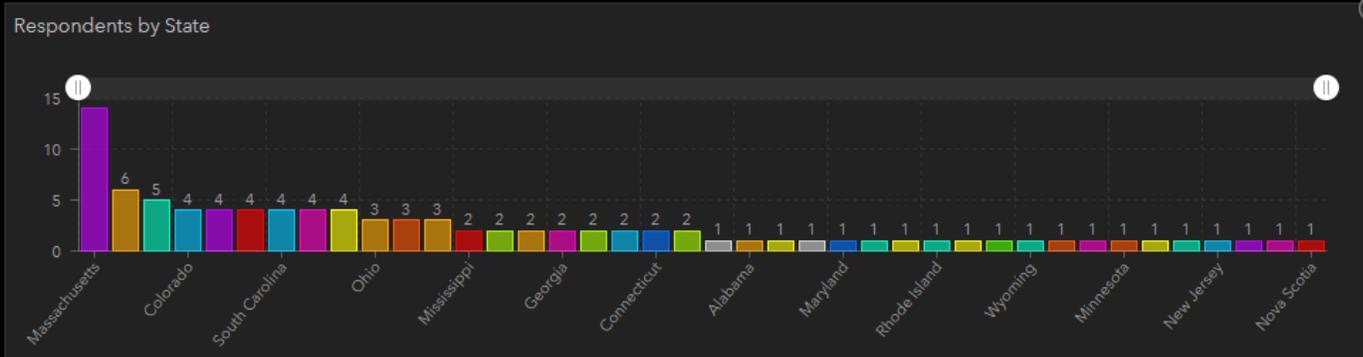
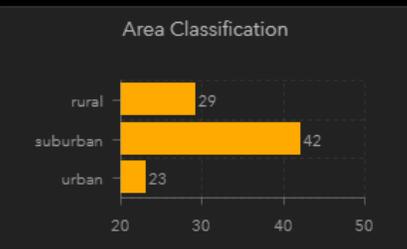
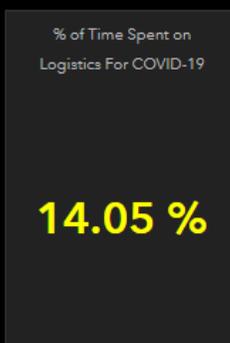
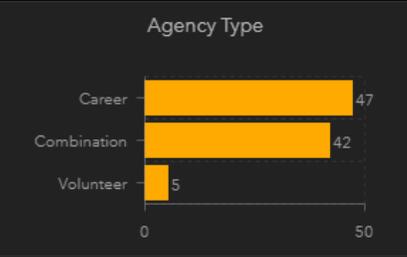
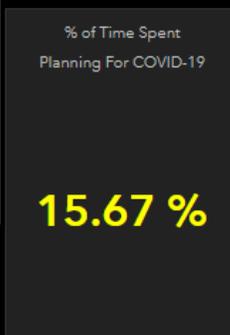
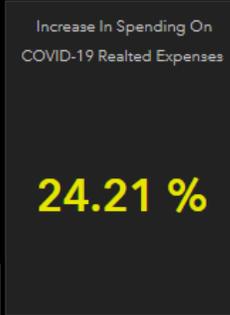
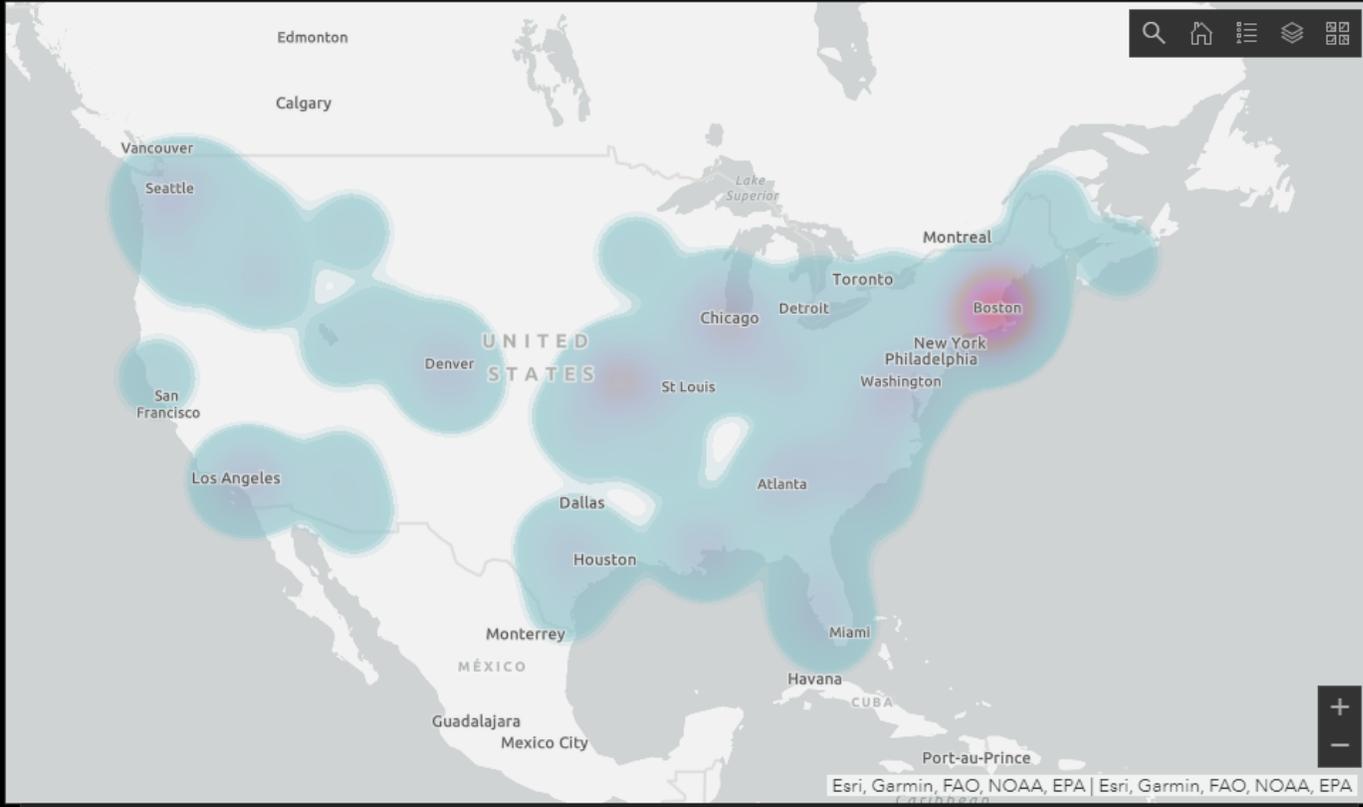
Economic Impact

Federal Reimbursement



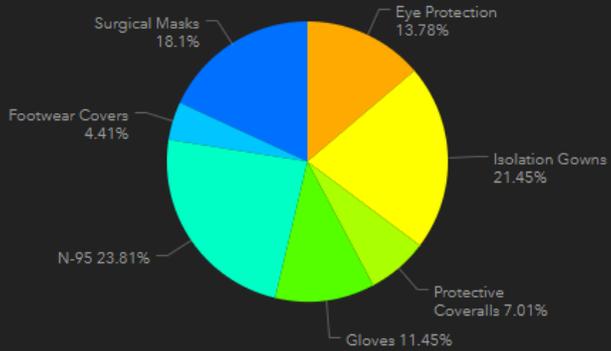
IAFC COVID-19 Fire & EMS Economic Impact Public Dashboard

Filter By State All



COVID-19 Fire & EMS Agency PPE Request Assessment

PPE Types Requested



Last update: a few seconds ago

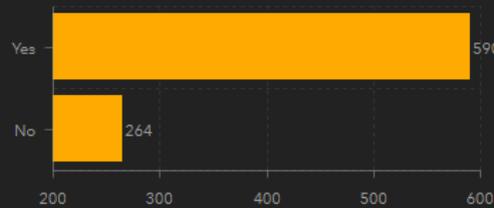
Number of Submissions

854

Requested PPE From SNS



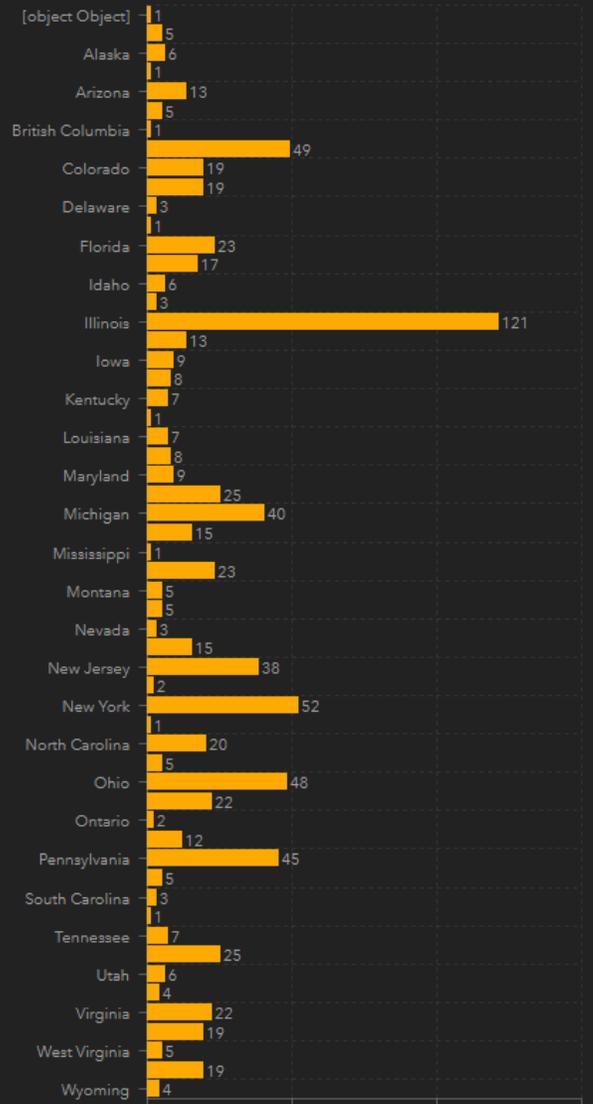
Received PPE From SNS



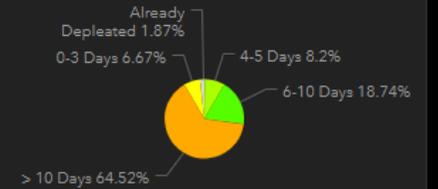
Percentage of Your SNS Requests That Was Filled



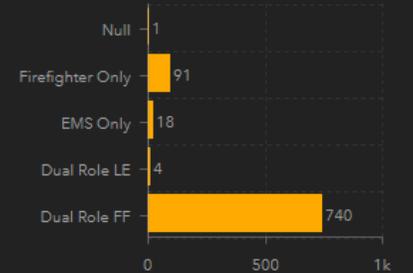
States Participation



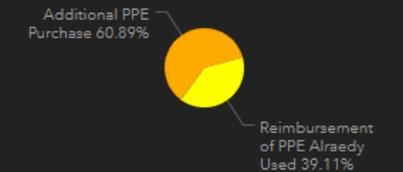
As of 15 FEB 2020 The Number of Days of PPE You Had On Hand



Provider Roles



Which Do You Consider More Important for Use of AFG CARES Funding?



Other PPE Sources



Last update: a few seconds ago

DISSEMINATING INFORMATION FOR THE FRONT LINE

The video used for disseminating information for the front line was removed due to Copyright restrictions.

The video used was https://youtu.be/Zg_nD_x0bgM

Playback was from 0:54 to 1:21.



Poll Question 2

How does your fire agency produce regular data analysis reports from your dispatch and/or fire records management system?

- A) We use GIS to provide dynamic visual products for analysis.
- B) My agency produces static reports (i.e., PDF files, etc).
- C) My agency does not develop reports.



Using GIS to Improve Emergency Planning and Response

Chief Stuebing

Demonstrations - GIS Applications for Fire, Rescue & EMS

Renee Bernstein

Summary & Resources

David Hamilton

Q & A

All

Poll Question 3

Is your agency deploying mobile applications to collect data and/or provide situational awareness in the field?

- A) We are already utilizing mobile apps in the field.
- B) We are not currently deploying mobile apps to the field.
- C) We are planning to deploy mobile apps to the field in the near future.
- D) Do not know.



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By attending this session, you have learned:

- That you can easily measure performance and perform data analysis for operations.
- How GIS-based analysis assists in your agency's accreditation and community risk reduction processes.
- About leveraging GIS to perform target hazard analysis.
- How mobile applications are a great way to expedite data collection and enhance situational awareness in the field.

Esri Events

Esri Safety & Security Summit

<https://www.esri.com/en-us/about/events/es3/overview>

Safety and Security Summit @ Esri UC

Overview Agenda Get Involved Plan Your Attendance FAQ Registration Details

Safety and Security Summit @ Esri UC

July 8-11, 2023 | San Diego, California

Get registration details →

Esri User Conference

<https://www.esri.com/en-us/about/events/uc/overview>

Esri User Conference

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Esri User Conference

The world's largest GIS conference

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Register now →

Esri Sponsored Events

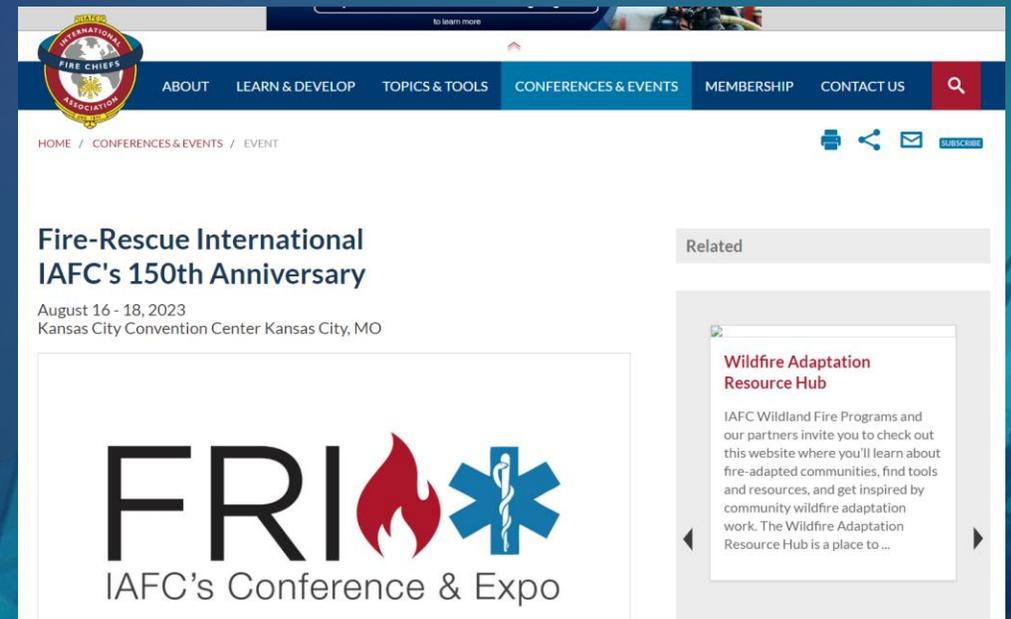
Metro Fire Chiefs Conference

<https://www.metrofirechiefs.net/>



Fire-Rescue International

<https://www.iafc.org/events/event/2023/08/16/default-calendar/fire-rescue-international-150th-anniversary>



Resources

Esri Canada Public Safety

<https://www.esri.ca/en-ca/solutions/industries/public-safety/overview>

Esri Canada Fire, Rescue and EMS

<https://www.esri.com/en-us/industries/fire-rescue-ems/overview>

ArcGIS Solutions

<https://www.esri.com/en-us/arcgis/products/arcgis-solutions/overview>

Esri Canada NG9-1-1

<https://www.esri.ca/en-ca/solutions/industries/public-safety/segments/next-generation-9-1-1>

Instructor Led Training

ArcGIS Analysis Workflows for Public Safety

<https://learn.esri.ca/en/training/course-catalogue/industry-focused/arcgis-analysis-workflows-for-public-safety>

Field Data Collection and Management with ArcGIS

<https://learn.esri.ca/en/training/course-catalogue/sharing-collaboration/field-data-collection-and-management-using-arcgis>



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Q & A

All



Questions

Thank You

- The recording will be available online at: resources.esri.ca/webinars
- If you have any additional questions about the content presented to you, feel free to contact me @

dhamilton@esri.ca

<https://www.linkedin.com/in/david-hamilton-30838b1b/>

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