



Category 5E Fire Suppression Program Evaluation

Summary

In 2020, the Department responded to 102 fire suppression calls (continuing the downward trend) and 1,026 Emergent Other calls (a six year low). Emergent other calls are responses that are initially believed to have a more significant issue, but on scene investigation reveals a false alarm, smell of burning with minor issues, electrical wires arching...). The three most common fire suppression calls in the response area are:

- Passenger Vehicle (13)
- Cooking (12)
- Mulch Fire-a new NFIRS reporting number for us (11)

The three most common Emergent Other calls in the response area are:

- Unintentional Alarms-aggregate of several codes (307 a decrease of 135 from last year)
- Smoke Detector Activation (48)
- Odor Investigation (47)

The response time performance to fire risk does show improvement over last year and meets the benchmark in some categories while narrowing the performance gap in the remaining.

Staffing has been a challenge and will continue to be an impactful issue going forward because of the pandemic, retirements and the inability to hire. This staffing short fall in conjunction with several long term injuries/illnesses cause a significant reliance on overtime to staff the department. It is likely the Department will need to fill 11 positions in the next 9 months.

The Fire Department Fleet Replacement Schedule calls for the purchase of a Quint, an Engine and an Ambulance in the FY 22-23 budget.



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Operational Performance

For High and Maximum Risk Fires (Code 3 and above) the Department missed the benchmark times for alarm handling, turn out, travel time 1st Unit, total response time first unit and total response time ERF. While not in all categories, 2020 performance times have decreased when compared to the 5 year look back times, meaning the performance is declining.

High/Maximum Risk Fire Suppression All Area 90th Percentile Times			Bench- mark	2016 to 2020	2016	2017	2018	2019	2020
Alarm Handling	Pick-up to Dispatch	Urban	1:30	1:55	1:23	1:22	2:14	2:05	1:47
Turnout Time	Turnout Time 1st Unit	Urban	2:00	2:22	2:15	2:16	2:21	2:27	2:20
Travel Time	Travel Time 1st Unit Distribution	Urban	4:15	4:43	4:37	4:42	4:38	4:29	5:12
	Travel Time ERF Concentration	Urban	8:00	8:55	8:04	9:30	9:02	9:30	8:55
Total Response Time	Total Response Time 1st Unit on Scene	Urban	7:45	8:21	7:59	8:12	8:20	7:30	8:54
	Distribution			n=235	n=69	n=43	n=53	n=38	n=32
	Total Response Time ERF Concentration	Urban	11:30	16:22	14:48	21:32	19:36	13:05	14:31



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For Moderate Risk Fires (truck fires, outside storage, outside equipment) the Department missed the benchmark times for alarm handling and turnout time (albeit by a small margin) and has shown improvement in the benchmarks of 1st unit travel time and 1st unit total response time. It should be noted that the small sample size (5) of these calls makes statistical analysis difficult.

Moderate Risk Fire Suppression All Area 90th Percentile Times			Bench- mark	2016 to 2020	2016	2017	2018	2019	2020
Alarm Handling	Pick-up to Dispatch	Urban	1:30	2:15	1:40	2:20	1:46	2:17	2:14
Turnout Time	Turnout Time 1st Unit	Urban	2:00	2:25	2:23	2:38	2:24	2:34	2:03
Travel Time	Travel Time 1st Unit Distribution	Urban	4:15	5:06	3:41	5:02	2:37	5:24	4:02
	Travel Time ERF Concentration	Urban	7:15	9:36	9:41	5:38	7:56	26:21	9:43
Total Response Time	Total Response Time 1st Unit on Scene	Urban	7:45	7:38	6:31	9:38	6:44	9:06	7:37
	Distribution			n=25	n=9	n=4	n=2	n=5	n=5
	Total Response Time ERF Concentration	Urban	10:45	20:52	20:23	10:40	12:09	14:02	26:48



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For Low Risk Fires (car fires, brush/vegetation fires, dumpster fires) the Department missed the benchmark times for all components. It can be noted that the 1st Unit total response time was missed by :02 seconds and the Pick-up to Dispatch time increased by :35 seconds.

Low Risk Fire Suppression All Area 90th Percentile Times			Bench- mark	2016 to 2020	2016	2017	2018	2019	2020
Alarm Handling	Pick-up to Dispatch	Urban	1:30	2:10	1:26	1:17	2:28	2:11	2:46
Turnout Time	Turnout Time 1st Unit	Urban	2:00	2:18	2:13	2:21	2:20	2:05	2:23
Travel Time	Travel Time 1st Unit/ERF Distribution & Concentration	Urban	6:00	6:07	6:00	5:12	6:42	6:30	6:19
Total Response Time	Total Response Time 1st Unit/ERF Distribution & Concentration	Urban	9:30	8:46	8:19	7:39	10:16	7:41	9:32
				n=209	n=44	n=45	n=32	n=44	n=44

Issues Impacting Performance:

Sample Size-unfortunately, the Department does not have a sample size in any of these categories for 2020 that would allow for reliance on these performance numbers. The Center for Public Service Excellence recognizes 100 as a sample size viable for statistical comparison. That does not mean the Department will ignore this data, but it should be viewed properly. A look at other risk categories with higher samples sizes (EMS, Emergent Other) shows the call handling time and turn out times remain consistent with the Fire Risk performance in missing the benchmark.

Performance Manager:

As of June 2021 B/C Denna has taken on the responsibility of the department performance manager. In this role we will have a Chief Officer analyzing and exploring ways to improve performance.



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Outcome Metrics

Fire Loss 2020	Property Loss	Content Loss	Total Loss
Residential Loss Planning Zone 7	\$400	\$0	\$400
Residential Loss Planning Zone 8	\$600	\$10	\$610
Residential Loss Planning Zone 9	\$0	\$0	\$0
Residential Loss Planning Zone 10	\$60,600	\$2,095	\$62,695
Total Residential Loss Department Wide	\$61,600	\$2,105	\$63,705
Non-residential Loss Planning Zone 7	\$23,720	\$1,300	\$25,020
Non-residential Loss Planning Zone 8	\$40,650	\$1,000	\$41,650
Non-residential Loss Planning Zone 9	\$137,050	\$510,600	\$647,650
Non-residential Loss Planning Zone 10	\$2,000	\$0	\$2,000
Non-Residential Loss Department Wide	\$203,420	\$512,900	\$716,320
Total Loss Planning Zone 7	\$24,120	\$1,300	\$25,420
Total Loss Planning Zone 8	\$41,250	\$1,010	\$42,260
Total Loss Planning Zone 9	\$137,050	\$510,600	\$647,650
Total Loss Planning Zone 10	\$62,600	\$2,095	\$64,695
Total Loss Department Wide	\$265,020	\$515,005	\$780,025

Fire Dollar Loss: Defined as the total loss of property involved in a fire. The total loss of property in 2020 was \$780,025. This is the second lowest dollar loss in the last 5 years.

Fire Civilian Casualties: Defined as the number of civilian fire deaths. The Department's goal is always to have 0 civilian deaths. In 2020, we had 0 fire related deaths.

Fire Service Injuries: Defined as the number of firefighter injuries that occurred during fire incidents and caused the individual to miss work. The Departments goal is to have 0 days of work missed due to injury. In 2020, we had 3 individuals that were injured during fire suppression activities and missed work.

The Fire Marshal has been experimenting with ways to track dollars saved since the beginning of the 2021 calendar year, but we have yet to find an appropriate model. This process will take some time because of the need for data/dollar input on actual fire incidents.

Strategic Plan Goals and Objectives

Goal 1: Objective A (Strategic plan goal #2) - Beginning in January 2019, the Management Analyst will accurately track, monitor, and report identified monthly response data, for use in operational decision-making.



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The Department has established accurate response data reported on a monthly basis. The next step is for the Management Analyst to obtain the ability to produce quality, verified data on a quarterly and annual basis and to be the lead member of the data team. Currently the department is dependent on a shift fire fighter to culminate the data. The use of a shift fire fighter in this role is unsustainable.

Goal 2: Objective B (Strategic Plan Goal #15)– We will continue to work with neighboring municipalities to develop a plan for providing fire protection and EMS to unincorporated areas of Elk Grove after the Elk Grove Township Fire district disbands.

The Village and Department have been working with Mt Prospect, Des Plaines and Elk Grove Township to create a fair and equitable response plan to the remaining portions of Elk Grove Townships response area once the agency is no longer financially viable. The Department will likely take on one manufactured home park and several plots that are entirely surrounded by the Village. The Department anticipates an increase in call volume of approximately 200 calls for the township area. It remains to be seen how many mutual aid given requests are generated into Mt Prospect and Des Plaines with the removal of Elk Grove Township.

Training

The Training Battalion Chief and the Training Committee are responsible for the department's fire suppression training. The Training Committee consists of 16 members, of which 14 are OSFM certified Instructors, the remaining members are subject matter experts. The Training Battalion Chief is an OFSM certified Instructor II and Training Program Manager. The Training Division is responsible for the creation and administration of training, member evaluations, and the validation of the training schedule. For 2021 the fire department has participated in 24,601 hours of training (289 hours per member) so far this year, both in house and through external opportunities. Department personnel have achieved 12 certifications from the Illinois Office of the State Fire Marshal. Based on the types of training that members participated in with accurate record-keeping, the Village received training cost reimbursement of \$ 7,689.88 from the State of Illinois for the calendar year of 2020.

The global emergency has continued to place pressures on the department's Training Division. The Division has attempted to increase training opportunities both via outside instruction and internal opportunities but has continued to deal with cancellations and enhanced safety protocols. The Division has worked to provide training in a manner that provides the safety requirements necessitated by the global emergency yet provide the opportunities for education and training. The Training Division is working to ensure that all members have the appropriate training to achieve yearly requirements.



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The Training Committee has also implemented two new programs that will enhance our membership's education. The Division has a new Quint/Truck training program to ensure a more cohesive experience for all new recruits. Along with the new Quint/Truck program the Committee enhanced the existing Acting Lieutenants training program by creating monthly educational seminars based on a Lieutenants job requirements. These seminars will increase the knowledge and comfort levels of our actors but also expose members interested in promotion to the position of Lieutenant.

Equipment

The Department did not purchase any vehicles during this budget year.

Projected needs: The vehicle replacement plan calls for the removal of RE10 (V115) a 1998 Pierce Quantum, RA8 (V129) a 2006 Ford 450 and Q8 (V138) a 2015 Pierce Velocity. We have obtained a preliminary trade-in value for the Quint of \$400K. I recommend we discuss the 8 year replacement plan with the Village Manager. If approved we move forward with replacing the Quint and Ambulance, pushing the Engine another year. If not approved, we keep the Quint and replace the Engine this year.

Staffing

For calendar year 2020 our authorized staffing was 81 (down from 84) with 27 per shift, this reflects carrying 3 vacancies for most of the year. In addition to the three intentional vacancies, the department has two members on long-term medical leave, a 3rd on long term administrative leave and has been unable to fill 2 other vacancies. Effectively putting the Department staffing at 76.

This lower staffing availability has increased overtime costs. The Department is currently working with the Police and Fire Commission to hire new employees with the goal of counting towards manpower by the end of 2021.

Projected needs: It is fair to anticipate 6 vacancies occurring between now and May 15 of 2022 in addition to the 5 spots we currently have unfilled. The Department should prepare for the on-boarding of 11 new employees within the next 9 months if we are to regain staffing of 84 members/28 per shift.

Program Improvement Plan

Alarm Handling Time:

Approximately 18 months ago the Department adjusted (increased) the call handling time from 1:04 to 1:30 to align with the goals stated by NWCDS. In that period NWCDS has consistently failed to meet that benchmark across all categories of risk including fire suppression.

Projected Needs: The Department will need to either adjust the calling handling time upwards



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(and therefore increasing total response time), or meet with NWCDS to determine paths to bring their times within their benchmark.

Deployment Strategies: As predicted the consolidation of Station 9 and Station 8 has decreased response times to the Tonne Road corridor, but increased response times to the South Eastern portion of the response area. Response times in District 9 are a challenge. The Departments reliance on Bensenville in that area is in question with that agencies financial troubles.

Projected needs: The Department will exam the response times in District 9 in comparison to the newly established benchmarks. The Department may need to consider different auto aid companies, or implementing emergent response for more vehicles when responding to this area.

Deployment Strategies: Once the Department takes on the responsibility of the manufactured home park, it will be necessary to monitor the accessibility for our larger suppression vehicles in that area.

Projected Needs: Monitor call type and volume in the newly acquired area and determine the proper vehicle response to that area.

Hazard Identification: The Department will continue to work with Northwest Central Dispatch and the Fire Marshal to establish a differentiated response to AFA's based on the building risk assessment done each year by ISD.

Projected Needs: It was agreed with ISD to move the annual risk assessment from February to October. Once complete the Department will work with NWCDS to establish a reduced response on AFA's to low risk buildings. It is anticipated that vast majority of buildings in the response area will fall under this reduced response.