



**THE CITY COUNCIL OF WATERLOO, IOWA
WORK SESSION TO BE HELD AT
Harold E. Getty Council Chambers
Monday, August 19, 2024
4:45 PM**

RULES FOR WORK SESSION PUBLIC COMMENT

Iowa Code Chapter 21 gives the public the right to attend council meetings, but it does not require cities to allow public participation except during public hearings. The city council shall not receive any public comment during a work session.

Roll Call.

Agenda, as proposed or amended.

Approval of Minutes of August 5, 2024, Council Work Session as proposed or amended.

4:45 p.m. Discussion of station-specific paging.

Submitted by: Bill Beck, Fire Chief

ADJOURNMENT

Kelley Felchle
City Clerk

August 5, 2024

COUNCIL WORK SESSION
Harold E. Getty Council Chambers
4:15 p.m.

Roll Call.

Members present: Mr. Boesen, Mr. Nichols, Mr. Chiles, Mr. Simon and Ms. Wilder. Ms. Creighton-Smith arrived at 4:17 p.m. Mr. Feuss was absent.

Nichols/Wilder
to name Mr. Nichols as acting chair. Voice vote-Ayes: Five.

Mayor Hart arrived and took the chair at 4:16 p.m. Mr. Nichols and Ms. Wilder released their motions.

Agenda, as proposed or amended.

Nichols/Wilder
that the agenda as proposed, be approved. Voice vote-Ayes: Six. Motion carried.

Discussion of downtown parking.

Bridgett Wood, Finance Director, presented an overview of the downtown parking study results as provided by our consultant, Fishbeck, and noted that the full survey is available on the city's website.

The mayor and council members discussed the recommendations and cost of implementation with Bridgett Wood, and agreed on a reduction of the enforcement area and the use of kiosks for payments. Mayor Hart stated that additional details could be addressed at a later date.

ADJOURNMENT

Wilder/Simon
that the council adjourn at 4:53 p.m. Voice vote-Ayes: Six. Motion carried.

Nancy Higby, Deputy City Clerk

WFR station-specific alerting



Our goal here is to convince you of the need to change how our 911 dispatches are received at Waterloo Fire Rescue. Station-specific alerting is a system by which the right dispatch information gets to the right place without lots of sets of ears hearing extraneous information. We'll cover the many ways in which a system might benefit us as individuals, but also as a department, a City, and most importantly as part of the served public.

WFR station-specific alerting



We'll use an analogy: early firefighters had very minimal gear, which offered no protection whatsoever from inhaled smoke. A tremendous advance in the field was the development of self-contained breathing apparatus (which we call SCBA or an air mask). This allowed the firefighter to breathe clean air while also functioning in an otherwise inhospitable environment.

We will argue that we can vastly improve the health of our firefighters if we can limit the calls they hear to *only* those that require their response. We suggest that *City-wide alerting is to rubber boots and long coats as Station-specific alerting is to full turnouts and SCBA*. Both bits of technology have become essential equipment in the fire service, and both make for better and more capable firefighters.

WFR station-specific alerting



Abundant evidence suggests that any effort to limit sleep disruption is well worth it, for the function of firefighters or really anyone else. Anyone having experienced an overnight with a newborn might agree! These papers are just a small sample of the vast literature on the adverse effects of delayed and disrupted sleep amongst shiftworkers and particularly amongst healthcare workers.



Stepping back, we'd like to visually compare how our **current paging system** behaves and how a station-specific alerting system would operate.

[click for animation]

The depicted system is what we're currently using. This particular call comes in, which requires an ambulance from Station 4 and a fire engine from Station 3. Yet, overhead speakers go off at *every* station, and everyone carrying a radio hears the page. All of our vehicles catch the call too. Everything rings across the City.

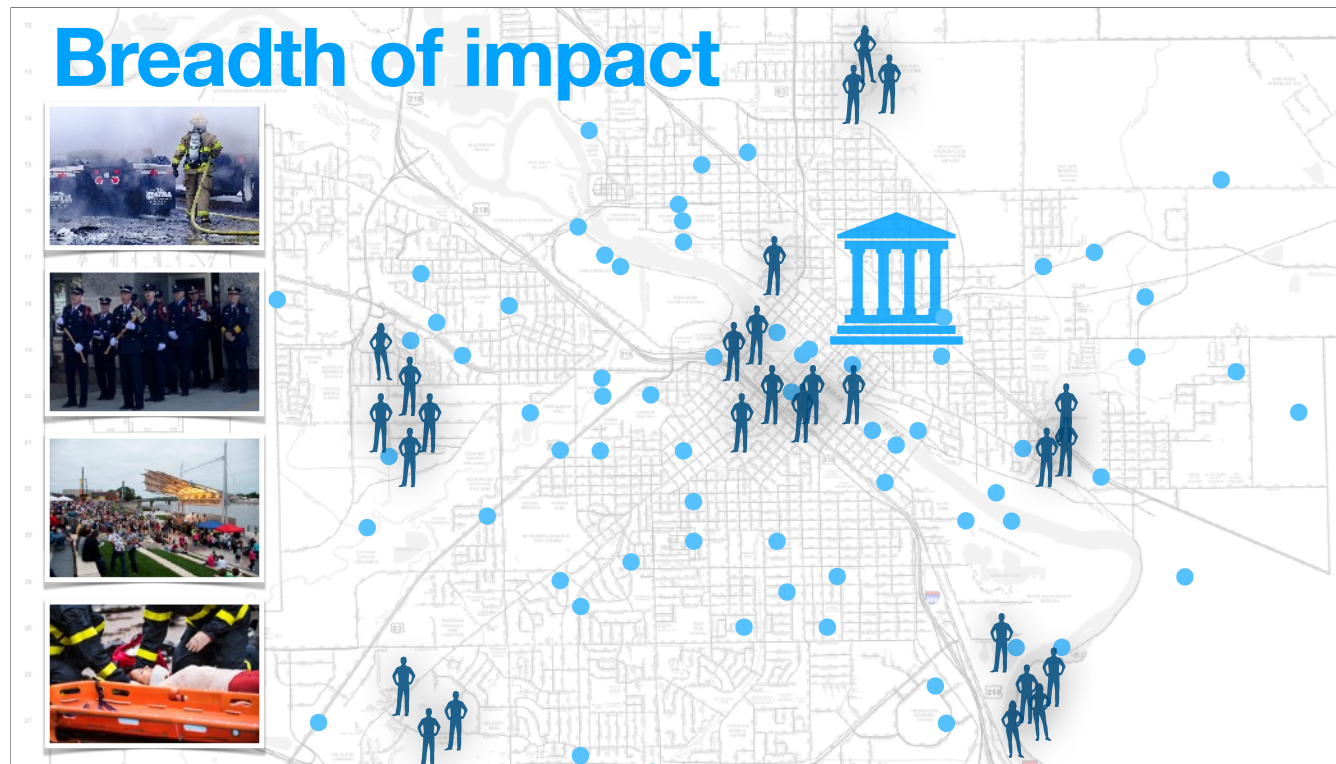
We can vastly reduce the number of unnecessary sleep disruptions for firefighters if we can limit the calls they hear to *only* those that require their response.



So here, we consider an overview of a generic **station-specific alerting system**

[click for animation]

For this call, overhead speakers go off *only* at stations 3 and 4, and those using their portable radios as wake aids at night would hear the alert at those stations, from the portable as well as the overhead speaker. Our chief officer (shown in the helmet) hears the call as well. Only those firefighters who are needed to *act* are the ones that hear this alert.



The benefits of station alerting are numerous and the impacts broad. It touches not only the *individual firefighter*, by improved physiological and mental health,

[click]

but it impacts the *department as a whole*, in part by our ability to recruit and retain the best applicants.

[click]

The system would also greatly impact *our city government and taxpayers*, through reduced health care costs and reduced exposure to other financial liabilities,

[click]

and these positive impacts ripple out toward *the public that we serve* through enhanced customer service. We will briefly consider each of these levels of impact in turn.

for the Firefighter

Lower risk of cardiovascular disease

Lower risk of diabetes

Lower risk of obesity

Less irritability

Decreased risk of anxiety

Decreased risk of depression

Lower risk of chemical dependence

Lower cancer risk



For the individual

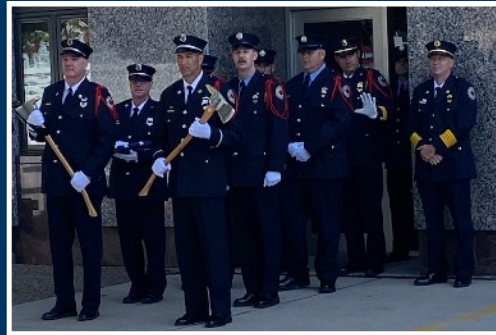
Abundant evidence suggests that inadequate and mistimed sleep is a contributor to obesity, diabetes, and cardiovascular disease, modulated through hormonal changes. The *psychological* effects of sleep deprivation are varied, and include irritability, depression, anxiety, and increased risk of chemical dependence.

Cancer risks are elevated in the fire service, which may be directly related to circadian rhythm disruption, driven by a generalized weakening of the immune system.

Eight of our members have been diagnosed with job-related cancers in as many years. Two individuals were forced into retirement as a consequence. Within the last ten years, the department suffered an active-duty death due to liver cancer, and another member battled brain cancer for a number of years, dying only months after his retirement.

All of these risk factors improve if we can reduce unnecessary sleep disruption.

for Waterloo Fire Rescue



- Reduced absenteeism
- Enhanced productivity
- Improved recruitment
- Improved retention
- Improved morale
- Leadership development

For WFR

Sadly, our department has experienced a rash of brain drain, where some of our best talent has left, due in part to the lack of standard technology like station-specific paging. We are absolutely *certain* that the implementation of an alerting system will greatly benefit our ability to recruit the best and brightest and to keep them here. We have recently lost two of the best young paramedics in the state, who are now serving other communities in Iowa.

for the City of Waterloo

Decreased legal liabilities

Lower healthcare costs

Fewer injuries

Fewer job-related disabilities

Fewer accidents



For our city government and our taxpayers

Healthier, more rested firefighters are not only better at their jobs but they also reduce costs for our taxpayers, as the risks of injury, disability, and accident decrease.

The adverse effects of fatigue and sleep disruption are well studied and include drug-dosing errors and other forms of medical malpractice, accidental needle sticks, inattention and poor decision-making, as well as increased risk of injury and motor-vehicle accidents. Indeed, the level of cognitive impairment of fatigued healthcare workers is similar to having a blood-alcohol level at or above the legal limit.

If we can prevent a single case of debilitating cancer... or if we can prevent one major collision... this system will have paid for itself.

for the Served Public



Faster arrival times

Better patient care

Better patient outcomes

Better patient satisfaction

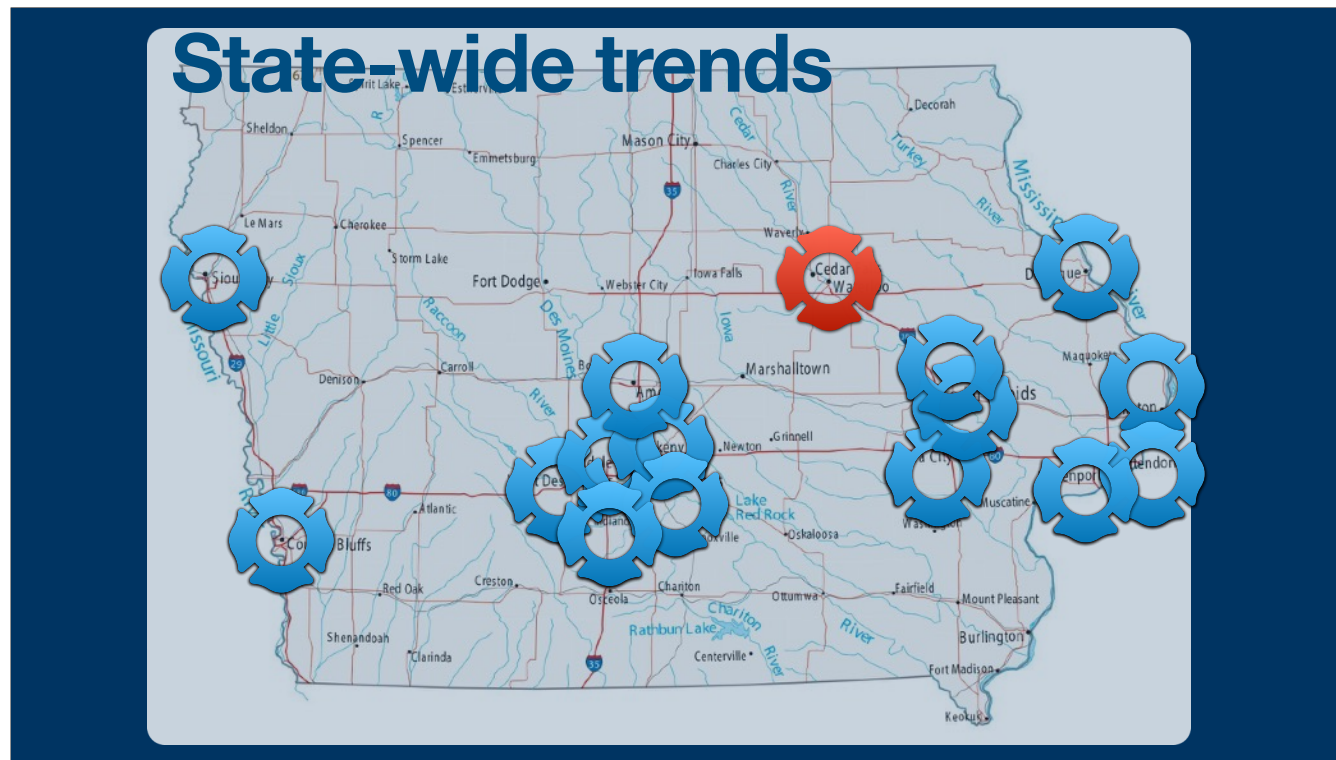
More consistent service

For our served public

Perhaps most importantly, these benefits ultimately reach our served public.

Automated dispatch systems can shave off many tens of seconds if not a minute or more in sending apparatus to an emergent need. As soon as the call taker can resolve the address and nature of the incident, the system instantaneously alerts the necessary units without further intervention from the dispatcher. Not only does this save crucial seconds, but the system permits the dispatcher to attend to the distressed caller with fewer distractions. A station-specific alerting system can also handle many simultaneous calls, providing a consistent level of service despite dispatch being busy.

For the public, we would expect better overall customer service from a better rested workforce. We should be able to offer better and more consistent patient care, better decision making, and better physical performance. This system will help ensure that the service rendered at 3:00 am is just as good as the service rendered at 9:00 am, when the firefighter has just begun the shift.



Let's turn to consider where we stand as a department. Red circles show all the agencies in Iowa with three or more stations.

[click]

Shown here in blue are the agencies of our size that have already upgraded to a station-specific alerting system. Note that Waterloo is the lone agency without this technology. Many of these other agencies have been using station-specific alerting for decades.

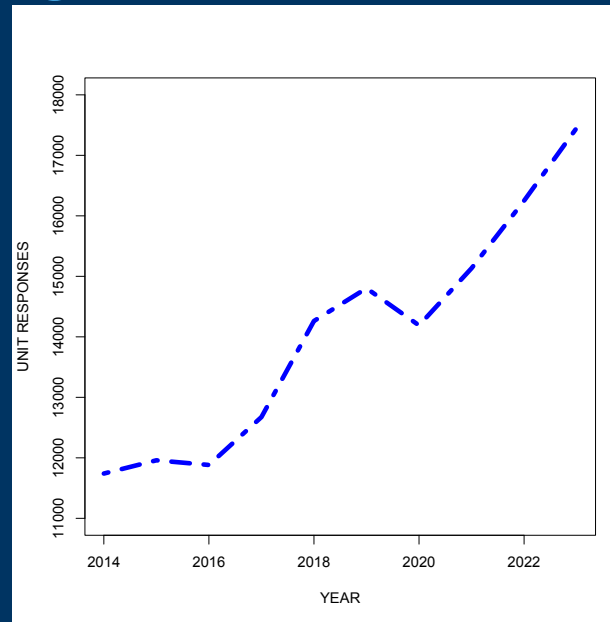


We should also be curious what impact station-specific alerting would **actually** have in reducing alerts heard overnight. Our current dispatch system alerts us (system-wide) about 10 times per night, as an average, shown as the gray bar.

This plot also shows the number of alerts that we *would* hear if we were to implement station-specific alerting: most stations would hear about two alerts per night, for the calls for which those stations are *actually* needed. As a whole, the system would provide an 82% improvement in reducing the number of unnecessary alerts heard by crews.

— — —
We used data from our department for the first 90 nights of 2024, for all calls between the hours of 2100 to 0700. Average number of alerts that would have been heard under SSP were: 3.4 (STA1, a 64% improvement), 2.5 (STA2, 75% improvement), 1.7 (STA3, 83%), 2.0 (STA4, 80%), 0.58 (STA5, 94%), 0.78 (STA6, 92%).

Increasing demand for service



Crucially, even if we are to do nothing, our risk exposure continues to grow. Calls for service continue to increase at a rate of about 5% per year, increasing the number of alerts heard by our crews by the same amount. At that rate, we expect calls for service (and overnight disruptions) to double every 20 years.

The implementation of station-specific alerting appears to be only viable means by which to truly future-proof this ever increasing demand for services. From bottom to top, our department is unanimous in its belief that station-specific alerting would provide a tremendous return on investment.

This plot shows a continued trend toward greater and greater demand for service, over the last several years. There is a 5.4% increase in runs, on average, year over year in the last nine.

[Data from 2014 to 2022 are from the Comprehensive Annual Financial Report for 2022 (Waterloo Finance); Data from 2023 are from 2023 Report with Individual Stats (WFR)]



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Proposal Prepared for: Waterloo Fire Department

Address 425 E 3rd St
City Waterloo
State & Zip Code IA 50703
County Black Hawk
Phone/FAX 3192914460
Contact Name Chief Bill Beck
Contact E-mail bill.beck@waterloo-ia.org

USDD G2 FSA System 1 Yr War/Maint

ITEM	QTY	PART NO.	DESCRIPTION	UNIT	EXTENDED
1				\$ -	\$ -
2	1	Dispatch	Primary Dispatch	\$ 88,933.00	\$ 88,933.00
3	1	ST HQ	Headquarters	\$ 96,612.00	\$ 96,612.00
4	1	ST#2	Station #2	\$ 80,650.00	\$ 80,650.00
5	1	ST#3	Station #3	\$ 66,343.00	\$ 66,343.00
6	1	ST#4	Station #4	\$ 67,090.00	\$ 67,090.00
7	1	ST#5	Station #5	\$ 60,164.00	\$ 60,164.00
8	1	ST#6	Station #6	\$ 66,343.00	\$ 66,343.00
9	1	RTIC	RTIC Station	\$ 60,164.00	\$ 60,164.00
9	8	LTE	LTE Network Backup option - SIM Card and Data Service by City*	\$ 3,000.00	\$ 24,000.00
10				\$ -	\$ -
11				\$ -	\$ -
12			- Warranty includes telephone remote access support (8:00 AM - 5:00 PM MST).	\$ -	\$ -
13			- See Warranty Statement for complete details. Warranty on HDTV is manufacturers only, no other warr	\$ -	\$ -
14			- Any electrical hardware and labor costs required will be the responsibility of Waterloo FD	\$ -	\$ -
15			- Exact Scope to be defined after final design is determined. RACOM will assist Waterloo Fire in	\$ -	\$ -
16			getting a quote from a local preferred electrician.	\$ -	\$ -
17			- Wiring / cabling, cable pathway, backboxes installed by City / Electrician.	\$ -	\$ -
18			- Wiring provided with system by RACOM	\$ -	\$ -
19			- Extended Warranties year 2 - 5, and year 6 - 10 available	\$ -	\$ -
20			- City to provide Network Connectivity Dispatch to each Station	\$ -	\$ -
21			- *LTE SIM Card and data provided by City	\$ -	\$ -
22			- BHC CAD Vendor Interface Cost not included - needs to be verified.	\$ -	\$ -
24				\$ -	\$ -
25				\$ -	\$ -
26				\$ -	\$ -
27				\$ -	\$ -
				Total Equipment Price	\$ 610,299.00
				Installation	\$ -
				Subtotal	\$ 610,299.00
				Taxes	\$ -
				Shipping	\$ 12,000.00
				Total	\$ 622,299.00

Terms of Purchase: Network Dispatch to Stations by City. Network and 16/4 Cabling, Cable pathway, back boxes installation provided by Building Contractor with RACOM support. Shipping Fees Estimated, Actual Invoiced. Year 1 Warranty and Support included at No Cost. Year 2-5 and 6-10 shown as options
G2 MOBILE FSAS APP - Single Dev Lic - Up to 24 Lic-Per-ATX = \$0.00 ea as long as system has support . Dispatch Cost included, with station alerting and paging for WFD. Quote expires 10/28/2024

Tax Rate

System Description: Waterloo Fire Department USDD Primary Dispatch G2 Fire Station Alerting System.

Proposal Presented By: D Vos

Date: 8/9/2024

Proposal Accepted By:

Date: