IOWA | DOT

2024

TRAFFIC MANAGEMENT CENTER

Annual Report

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EXECUTIVE SUMMARY

Iowa's Statewide Traffic Management Center (TMC) is a 24/7 center located in the Motor Vehicle Division building in Ankeny, Iowa. Iowa DOT uses the TMC to proactively monitor the transportation system in real-time, focusing mainly on the primary roadway system throughout Iowa. The highly-trained professional staff within the TMC coordinates with internal and external partners to detect disturbances to traffic flow and assist with implementing strategies that provide safe, quick clearance on the roadway. TMC staff monitors cameras and assists with state and local agencies and transportation industry stakeholders to keep travelers informed and on-scene responders protected. Tools such as 511, social media, and dynamic message signs allow broad and direct notification of incidents to those affected, aiming to reduce both traffic delay and secondary crashes.

The TMC is focused on :

IMPROVING travel time reliability.
ELIMINATING secondary crash conditions.
OPTIMIZING the function of the existing transportation system.
DISSEMINATING accurate, real-time traveler information to customers.
TRACKING winter weather and special events for situational awareness.
MONITORING traffic crashes, assisting partners with facilitating safe and quick clearance.
COLLECTING critical data for Traffic Incident Management and overall system improvement.

The TMC collects traffic data to support real-time decisions during traffic incidents and archives the information for future use. A monthly report is generated that describes the TMC trends, with the intent of making modifications to policies, practices, and procedures to counter undesirable trends. The 2024 Annual Report presents this collected data from the past year in areas including incidents, crashes, Highway Helper, freight, work zones, weather, and communication. Key performance indicators are presented in the 2024 Snapshot.

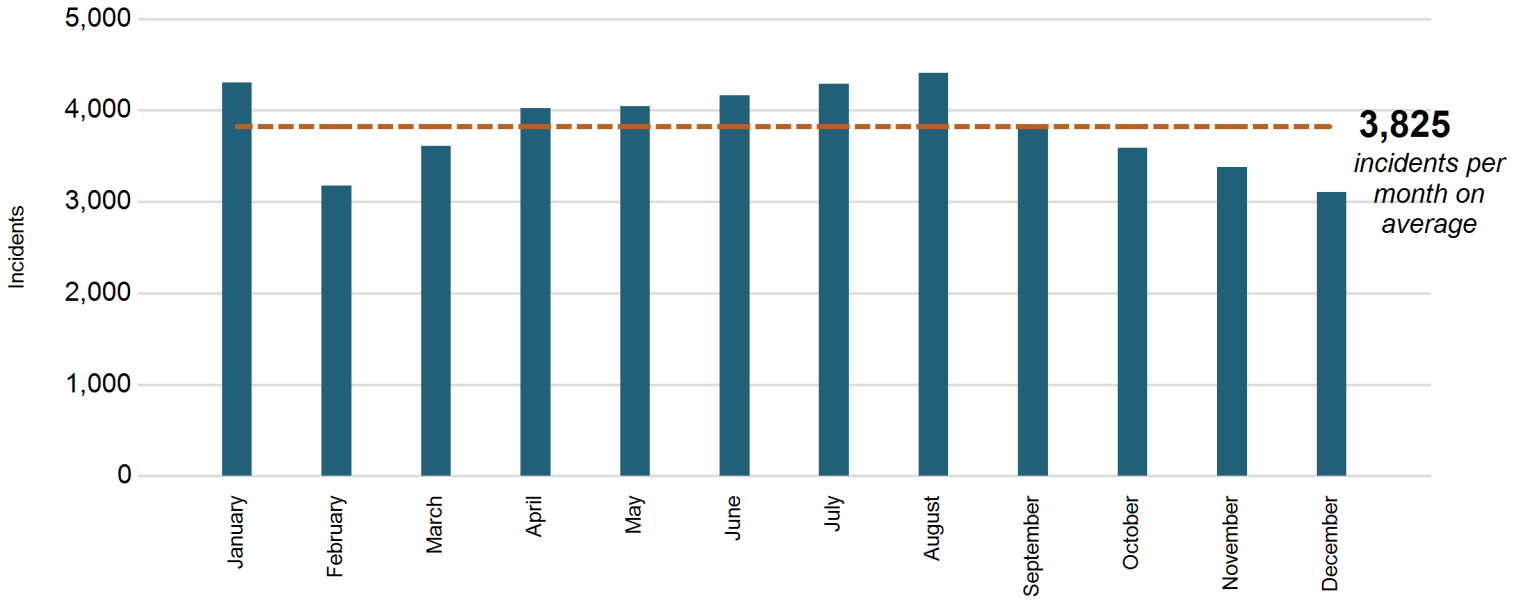
2024 SNAPSHOT		
INCIDENTS	Number of incidents monitored by Iowa's Statewide TMC	46,118
CRASHES	Average crash clearance time	1 hr 10 m
HIGHWAY HELPER	Number of responses provided by Highway Helpers	14,276
FREIGHT	Average time to clear a lane blocking incident involving a tractor trailer	2 hr 26 m
WORK ZONES	Total work zone incidents	766
WEATHER	Total flooding events	62
COMMUNICATION	Total Emergency Incident Notification (EIN) email notifications sent	19,581

2024 was a year of operational challenges and resilience for Iowa’s Statewide Traffic Management Center (TMC). Two major winter storms struck the state in January, driving significant increases in traveler engagement with the 511 systems, and challenges with commercial vehicle incidents . In June, historic flooding impacted large portions of northwest and western Iowa, straining emergency response systems and requiring unprecedented levels of coordination across agencies. Despite these challenges, the TMC continued its mission of maintaining safe and efficient transportation across the state.

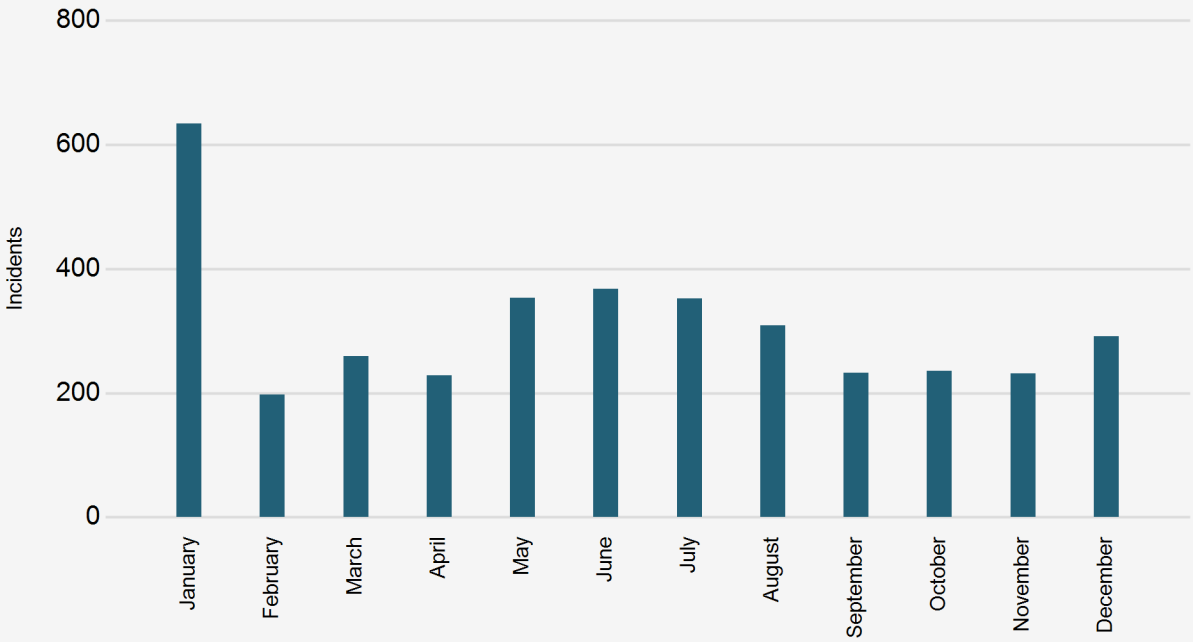
INCIDENTS

Incidents are defined as any event on the roadway that affects or can affect normal traffic flow. The TMC is informed of incidents on the roadway through technology, data sources, and various personnel. These incidents are tracked, reported, and monitored by the TMC.

Incidents monitored by TMC



Incidents with lane blockage



"Incidents with Lane Blockage" refers to the total number of incidents that resulted in at least one blocked lane of travel.

BY THE NUMBERS

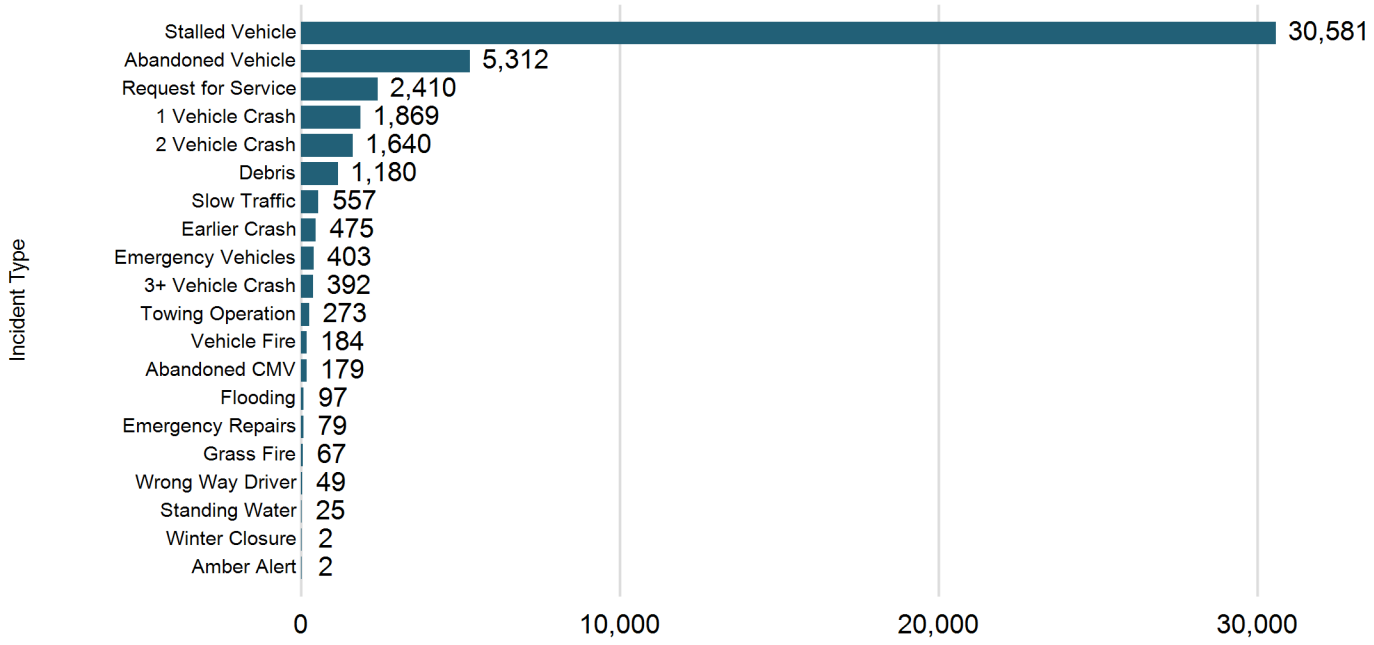
45,565
TOTAL INCIDENTS

26%
INCIDENTS DETECTED BY CAMERA

3,525
LANE BLOCKING INCIDENTS

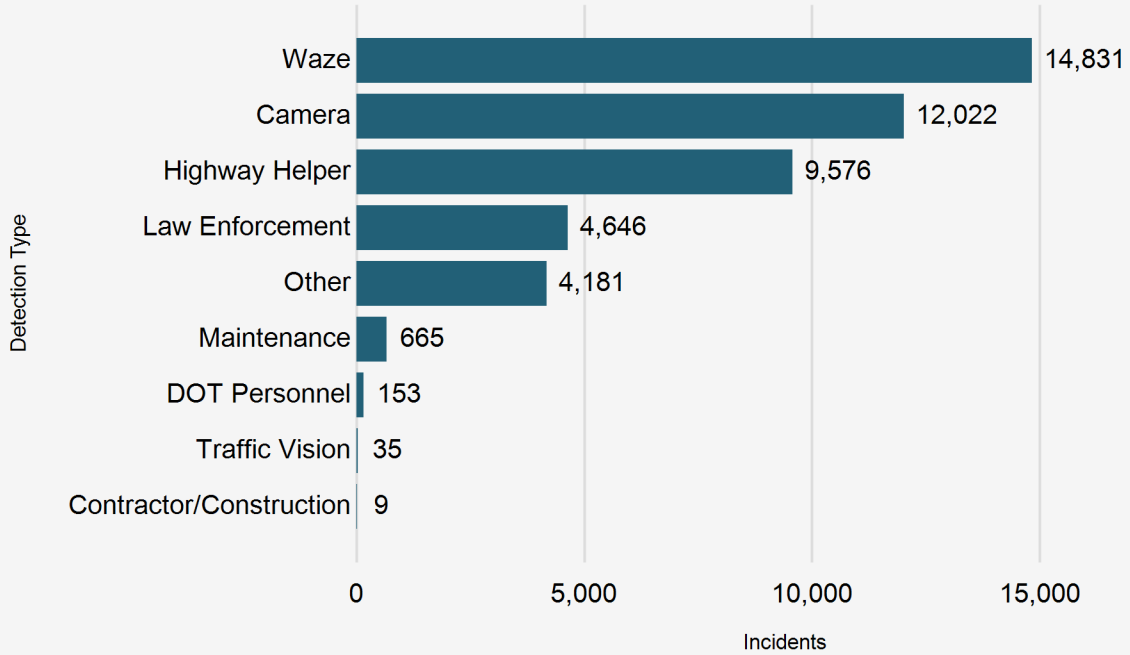
77 SECONDARY INCIDENTS REPORTED TO THE TMC

Incidents by type



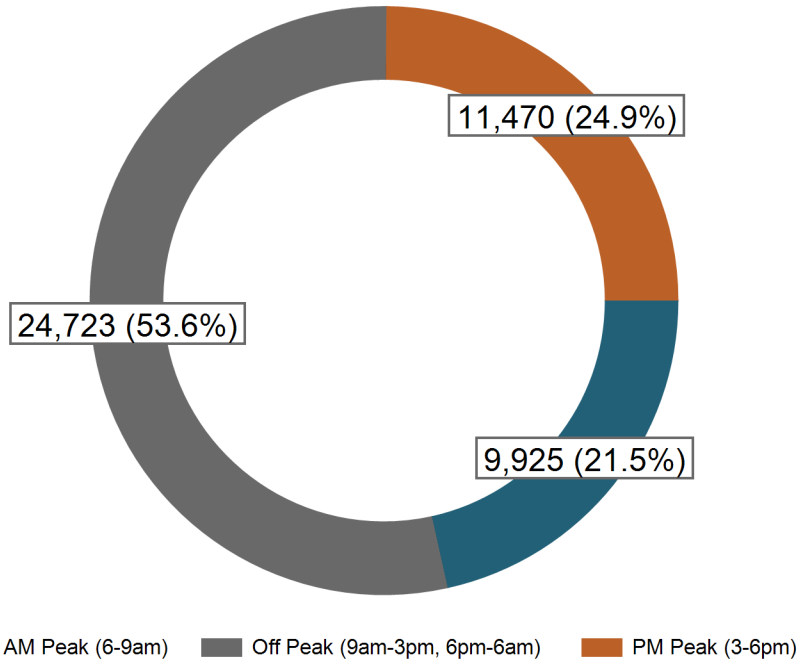
Incidents are detected by TMC operators through cameras, roadway detection, Waze alerts, or reported to the TMC through responders on the roadway.

Incidents by detection source

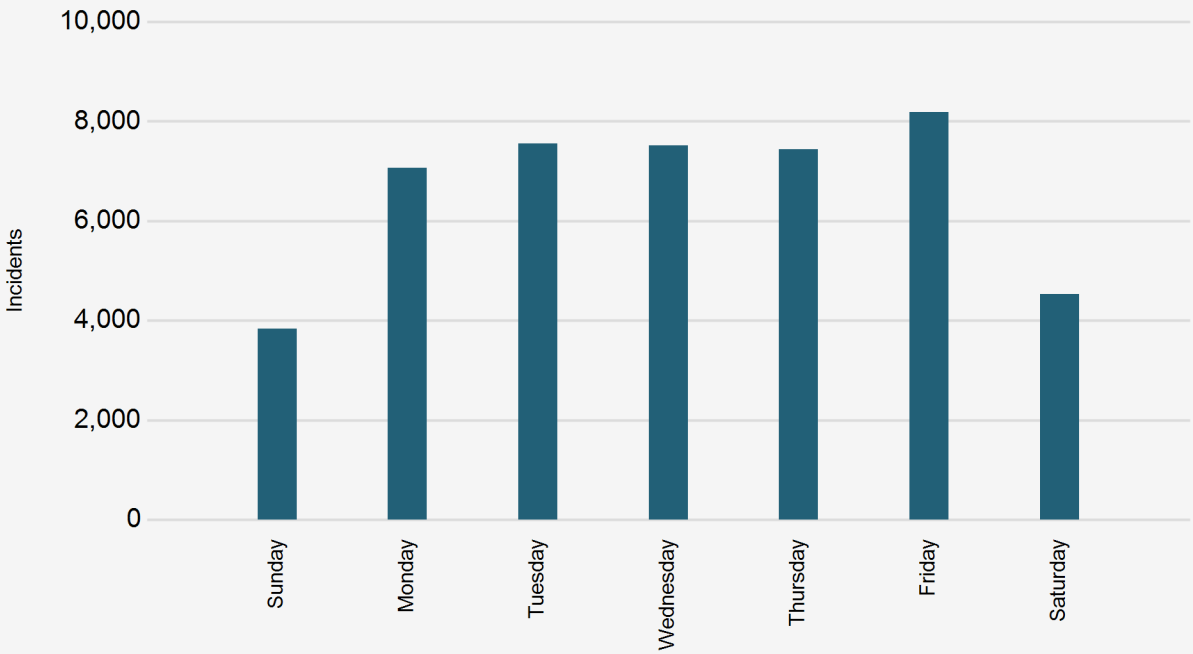


INCIDENTS

Incidents monitored during peak hours



Incidents by day of the week



Incidents more frequently occur on weekdays versus weekends due to the volume of traffic on the roadway.

BY THE NUMBERS

8,369
INCIDENTS OCCURRED ON WEEKENDS

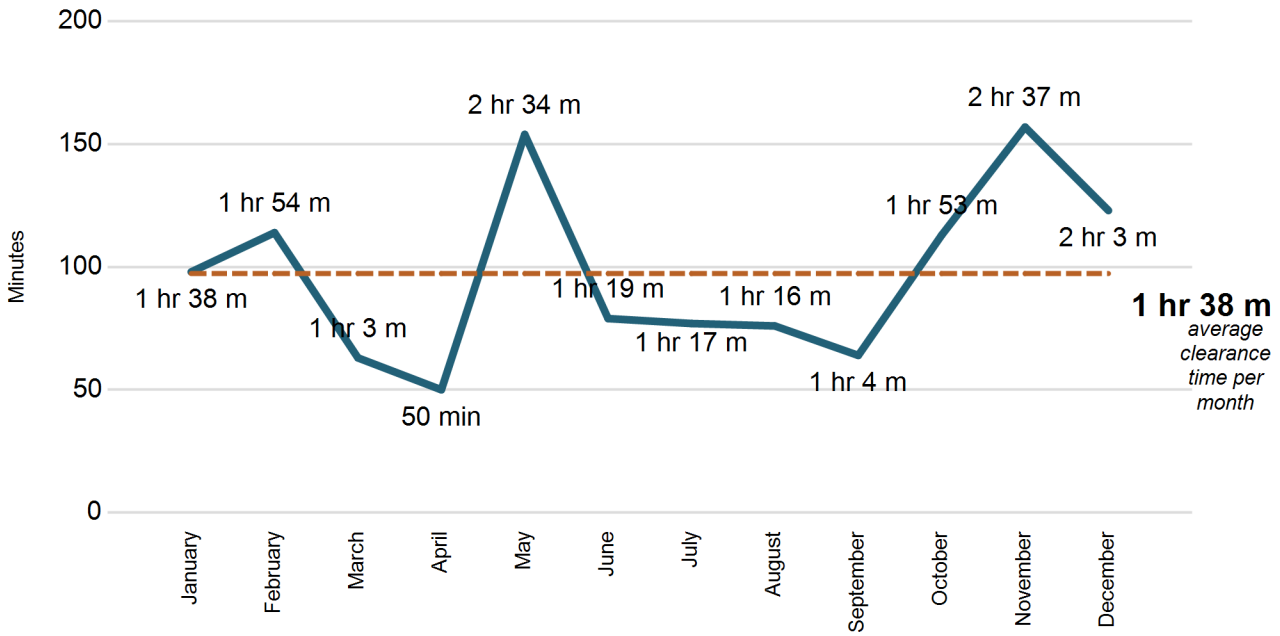
1 hr 38 m
AVERAGE INCIDENT CLEARANCE TIME

210
INCIDENTS EXCEEDING THE CLEARANCE TIME STANDARD DEVIATION

24,723 OFF PEAK INCIDENTS

The incident clearance time begins at the first notification of the incident and ends when the last responder has left the scene. This includes all traffic incident types such as stalled vehicles, crashes, etc. Weather events such as flooding are excluded from this data.

Average clearance times for incidents



Incidents with excessive clearance times

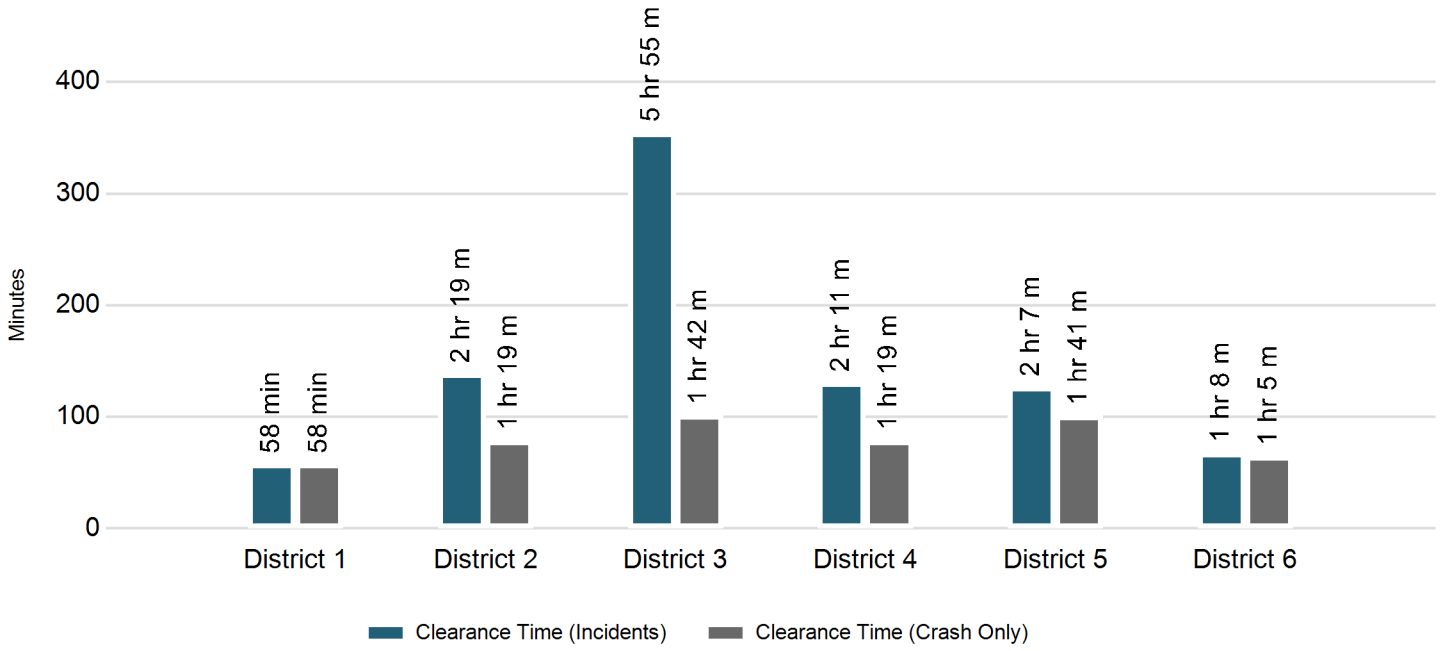
Average incident clearance times are calculated by type each month. This table shows the number of incidents which exceed the average clearance time for that type by one standard deviation.

TYPE	# EVENTS	AVERAGE DURATION	# SEMI	# FATALITY
Request for Service	1	4 min	0	0
Abandoned Vehicle	5	17 min	0	0
Debris	11	26 min	0	0
2 Vehicle Crash	35	1 hr 9 m	0	1
Abandoned CMV	1	2 hr 29 m	0	0
[Unknown]	1	3 hr 3 m	0	0
Emergency Repairs	5	1 day 16 hr 33 m	0	0
Vehicle Fire	7	1 hr 23 m	0	0
3+ Vehicle Crash	15	1 hr 5 m	0	2
Towing Operation	8	3 hr 38 m	0	0
1 Vehicle Crash	71	1 hr 12 m	0	0
Grass Fire	2	1 hr 17 m	0	0
Stalled Vehicle	27	41 min	0	0
Emergency Vehicles	14	57 min	0	0

CRASHES

Crashes are one specific type of incident reported in the "Incident" section. Clearance times are tracked and reported for all incidents as well as crashes separately. Some incident types may have long clearance time durations and therefore crash clearance time is a more appropriate indicator of the impacts of quick clearance initiatives.

Average incident and crash clearance time by district



Incident type by district

TYPE	DISTRICT 1	DISTRICT 2	DISTRICT 3	DISTRICT 4	DISTRICT 5	DISTRICT 6
1 Vehicle Crash	586	118	104	336	132	593
2 Vehicle Crash	850	68	94	156	74	398
3+ Vehicle Crash	226	14	18	26	13	95
Abandoned CMV	51	11	2	30	7	78
Abandoned Vehicle	2,556	65	91	596	83	1,921
Amber Alert	1	0	0	0	0	1
Debris	598	34	65	99	36	348
Earlier Crash	117	42	37	86	59	134
Emergency Repairs	18	3	18	11	18	11
Emergency Vehicles	195	22	22	47	7	110
Flooding	10	10	64	8	1	4
Grass Fire	18	6	3	17	3	20
Request for Service	691	289	399	250	231	550
Slow Traffic	319	1	7	31	3	196
Stalled Vehicle	12,971	579	468	6,417	569	9,577
Standing Water	12	1	4	1	2	5
Towing Operation	91	5	4	49	15	109
Vehicle Fire	67	10	15	27	11	54
Winter Closure	0	0	0	0	1	1
Wrong Way Driver	7	1	0	2	2	37
Total	**19,384**	**1,279**	**1,415**	**8,189**	**1,267**	**14,242**
% of all Incidents	**42%**	**3%**	**3%**	**18%**	**3%**	**31%**

The total number of incidents reported in Districts 1, 4, and 6 are greater than the other Districts due to additional incident tracking by the Highway Helper program as well as higher traffic volumes in those Districts.

BY THE NUMBERS

186
RURAL CRASHES OVER 120 MINUTES

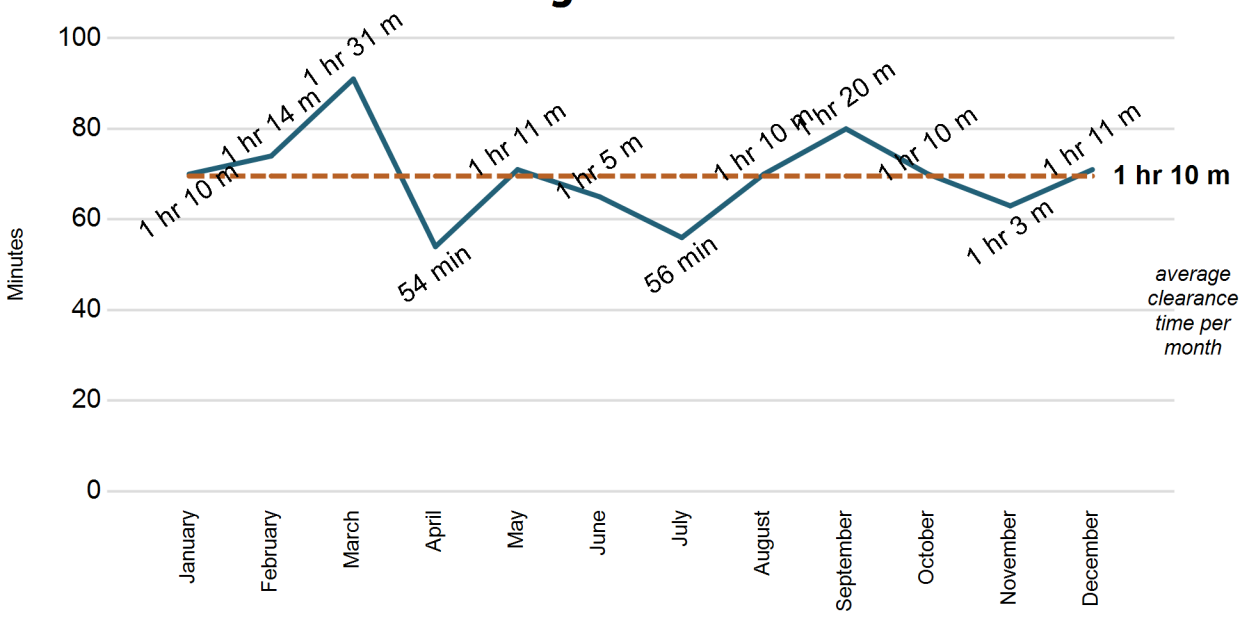
1 hr 10 m
AVERAGE CRASH CLEARANCE TIME

3,901
CRASHES MONITORED

49 WRONG WAY DRIVER INCIDENTS

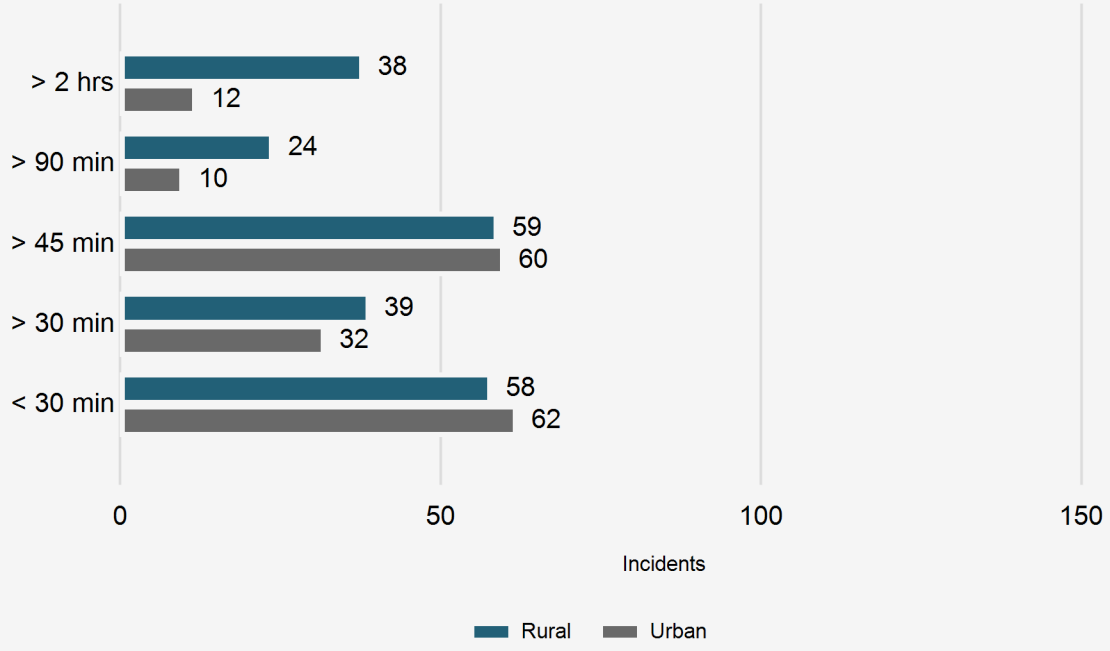
The crash clearance time begins at the first notification of the crash and ends when the last responder has left the scene. This includes only crashes and not other incident types.

Average clearance time for crashes



These performance measure thresholds were developed through the Joint Operations Policy Statement (JOPS), a collaboration between DOT & DPS.

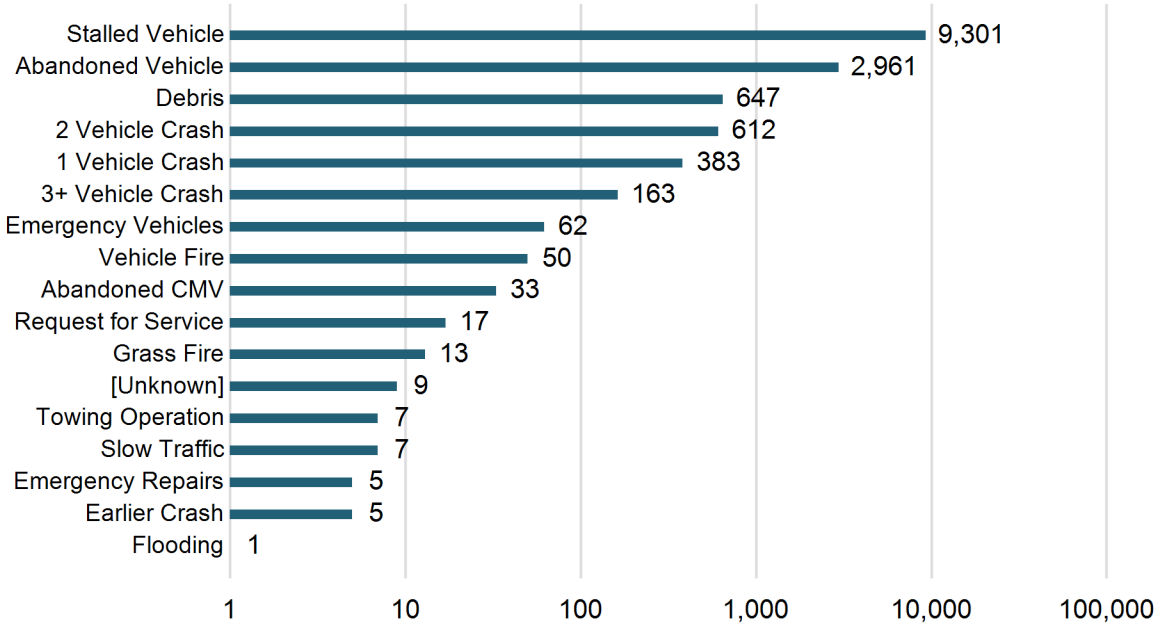
Crashes at 30, 45, 90, and 120 minute thresholds



HIGHWAY HELPER

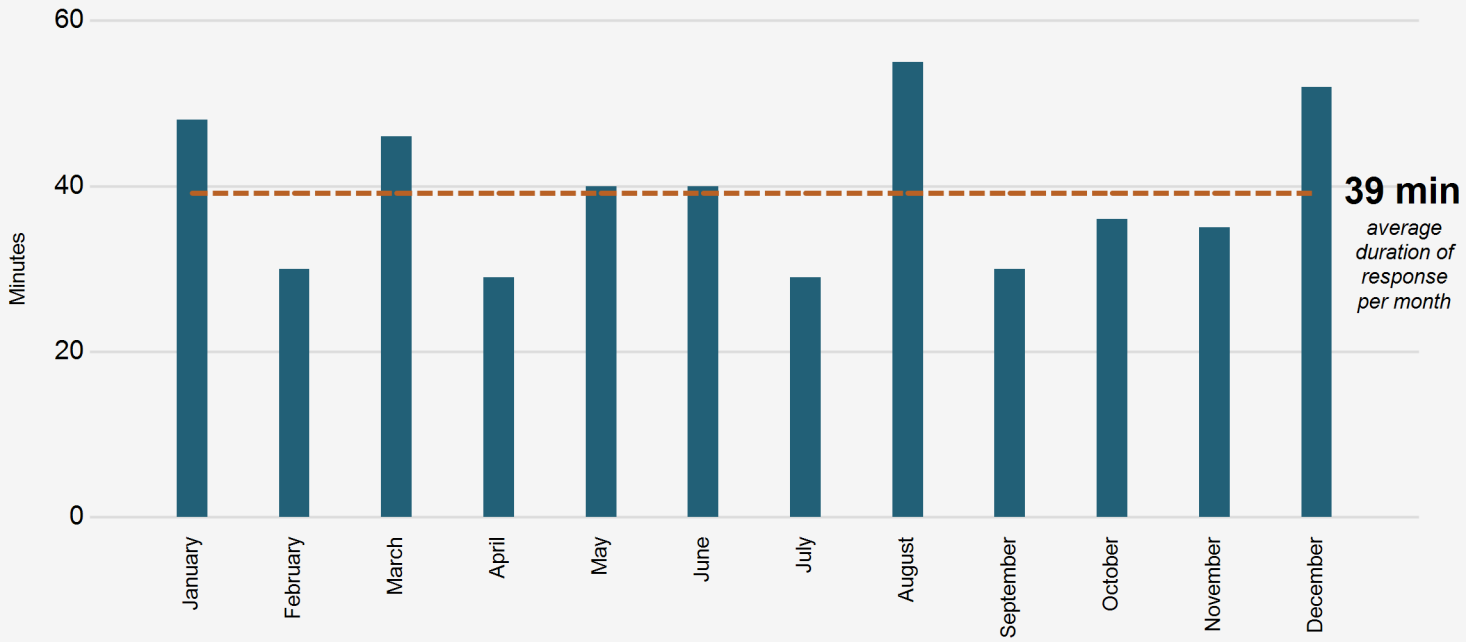
The TMC dispatches and tracks all Highway Helper activity. This section contains statistical and operational data of Highway Helper activities.

Types of incidents responses



This chart provides an overview of the number and types of Highway Helper responses.

Average duration of response



BY THE NUMBERS

14,276
HIGHWAY HELPER RESPONSES

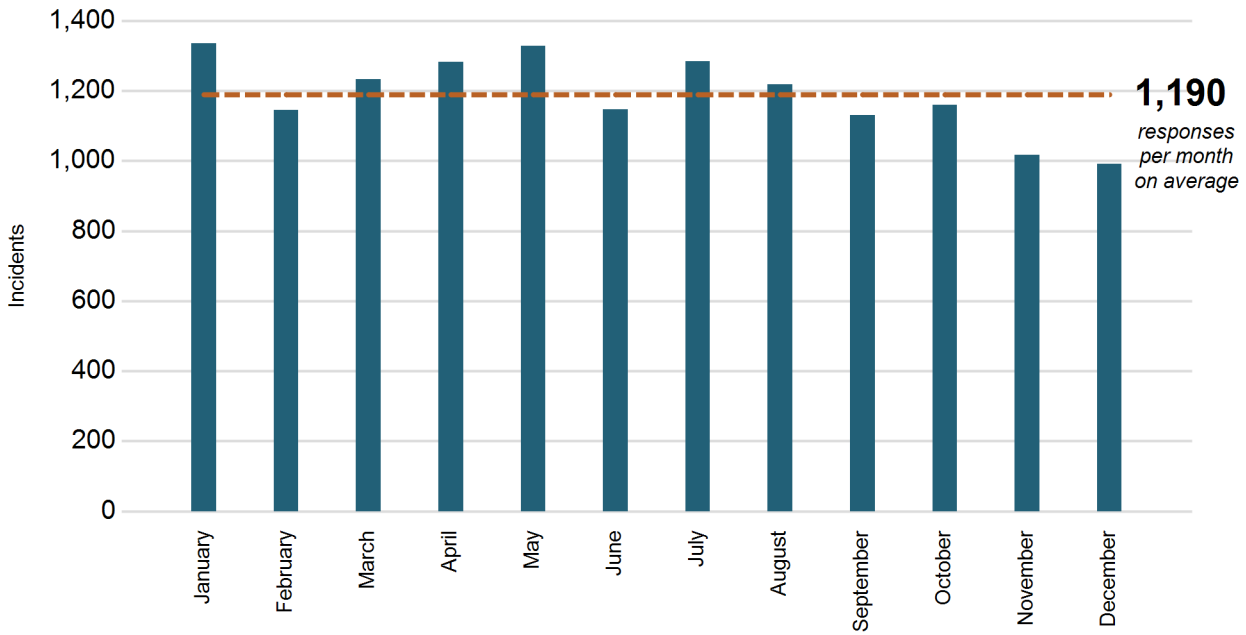
647
DEBRIS REMOVAL RESPONSES

1,532
SERVICES PERFORMED FOR THE MOTORIST (FUEL, FLAT TIRE, JUMP START, DIRECTIONS ETC)

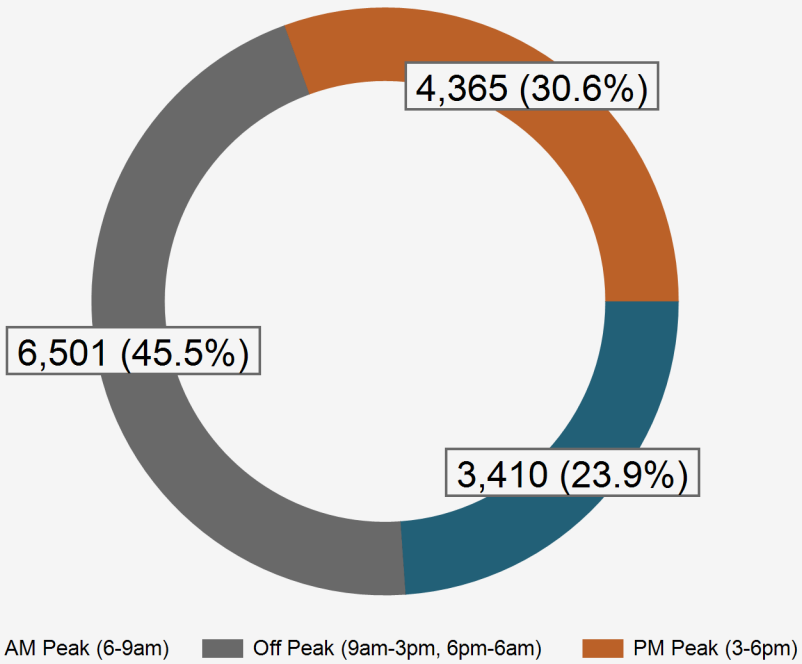
46% RESPONSES OCCURRED DURING OFF PEAK HOURS

The most Highway Helper responses during 2024 occurred in January.

Responses by month

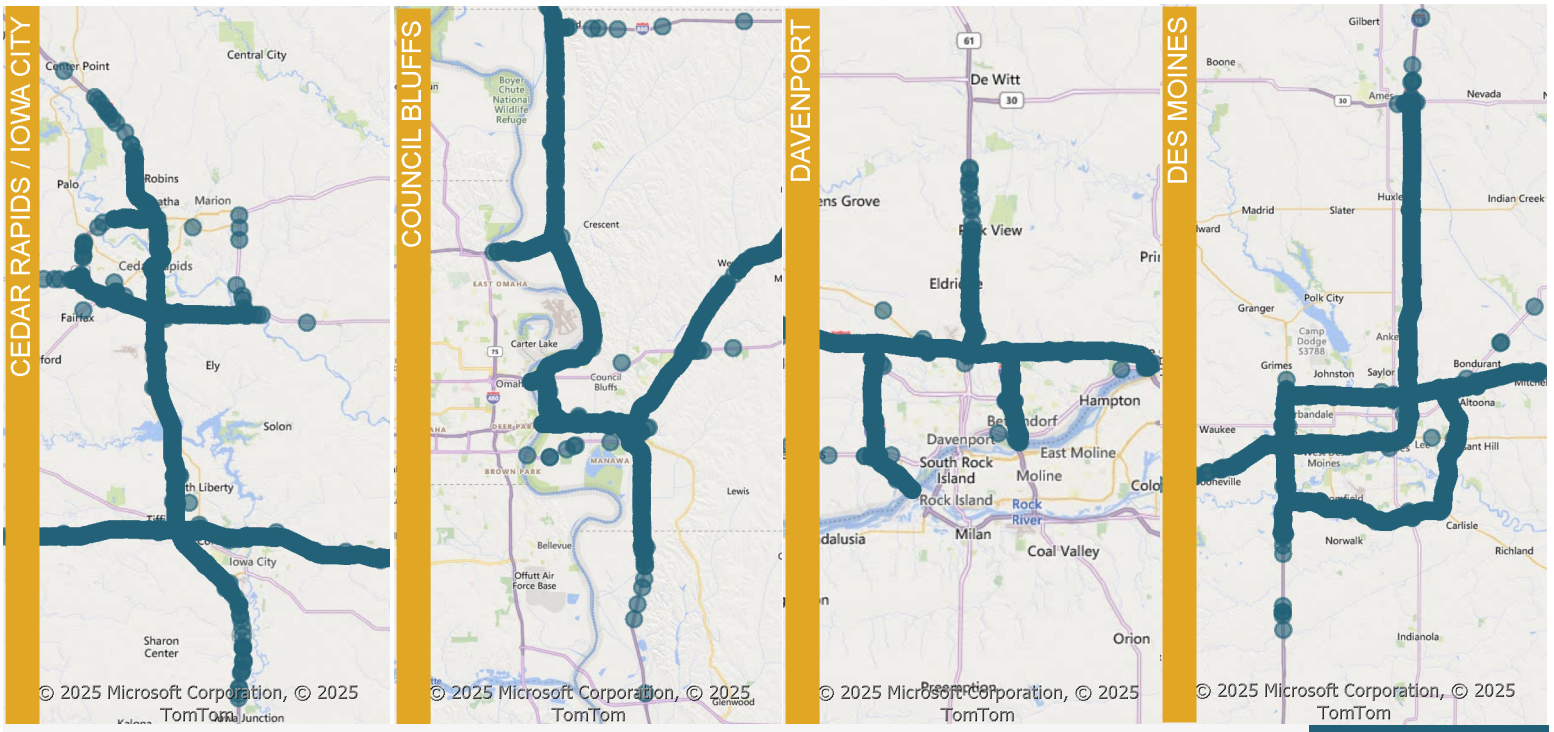


Responses by time of day

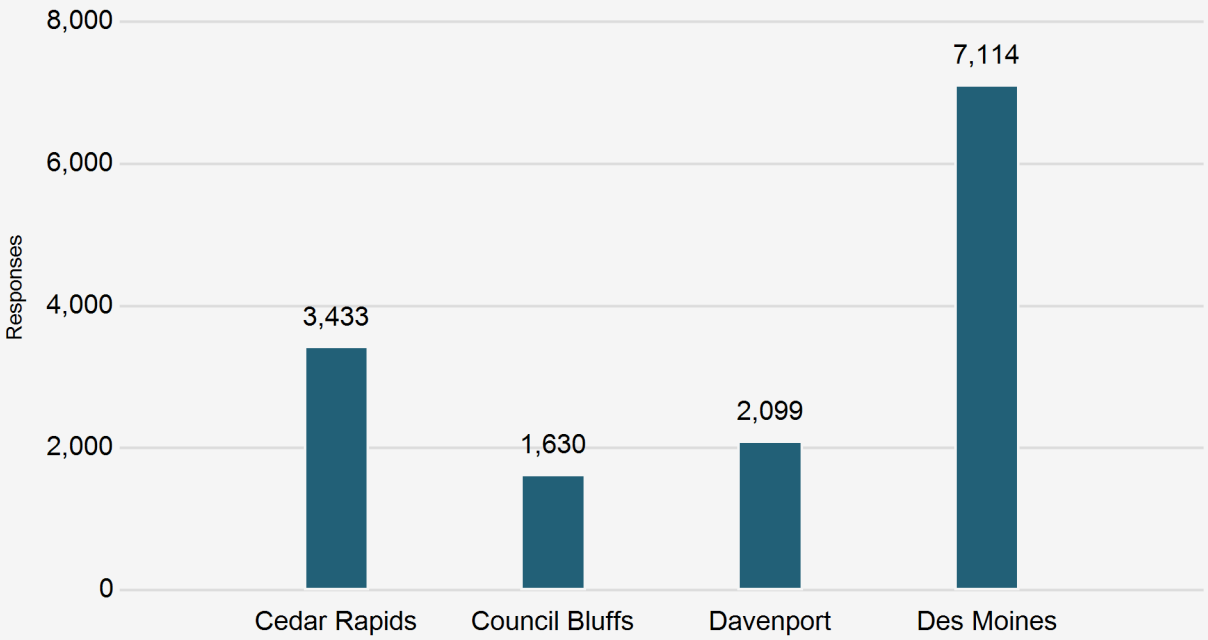


HIGHWAY HELPER

All responses by operational area



All responses by operational area



Highway Helper trucks are dispatched in four operational areas from 5am to 9pm Monday through Friday and 10am to 6pm Saturday in Des Moines, including some holidays and special events.

BY THE NUMBERS

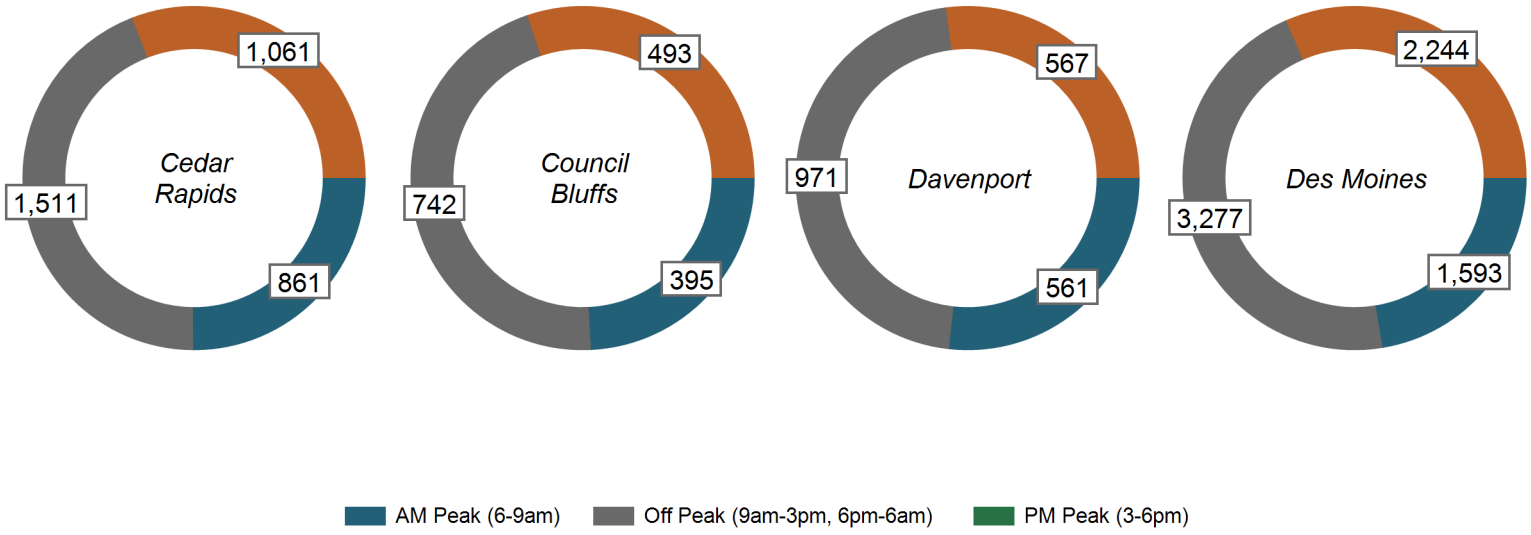
24%
RESPONSE DURING AM PEAK HOURS

31%
RESPONSE DURING PM PEAK HOURS

14,276 TOTAL RESPONSES IN 2024

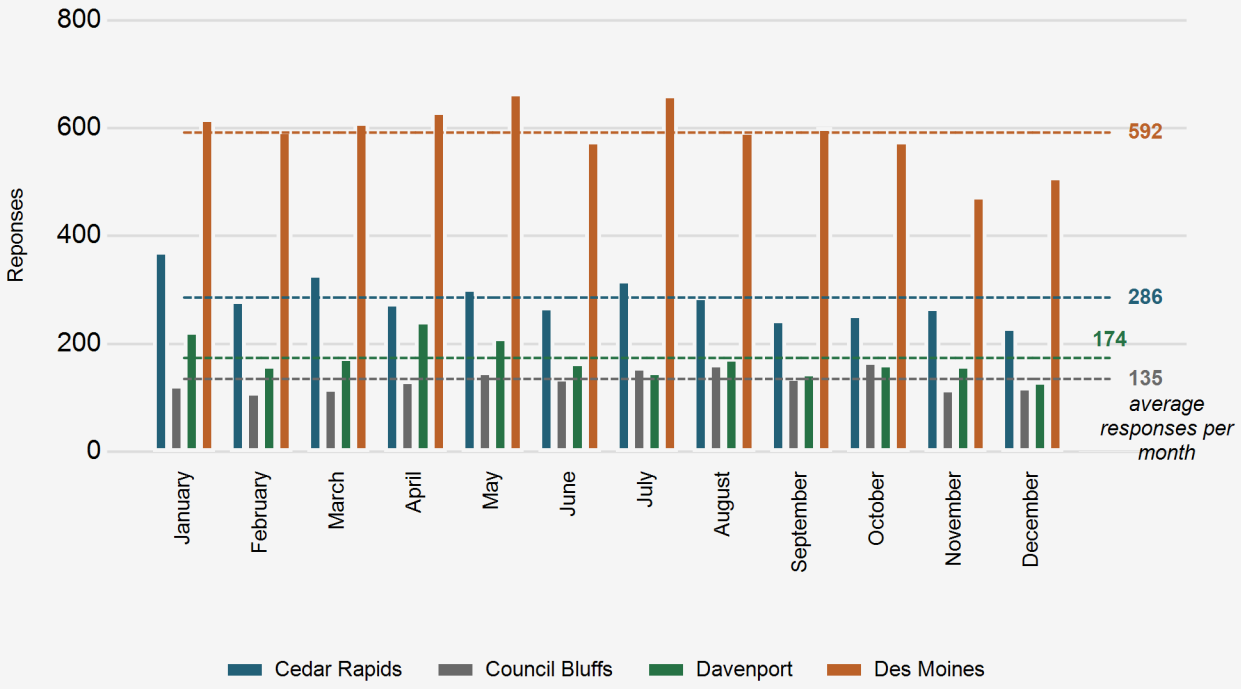
7,114
HIGHWAY HELPER RESPONSES IN DES MOINES

All responses by time of day by operational area



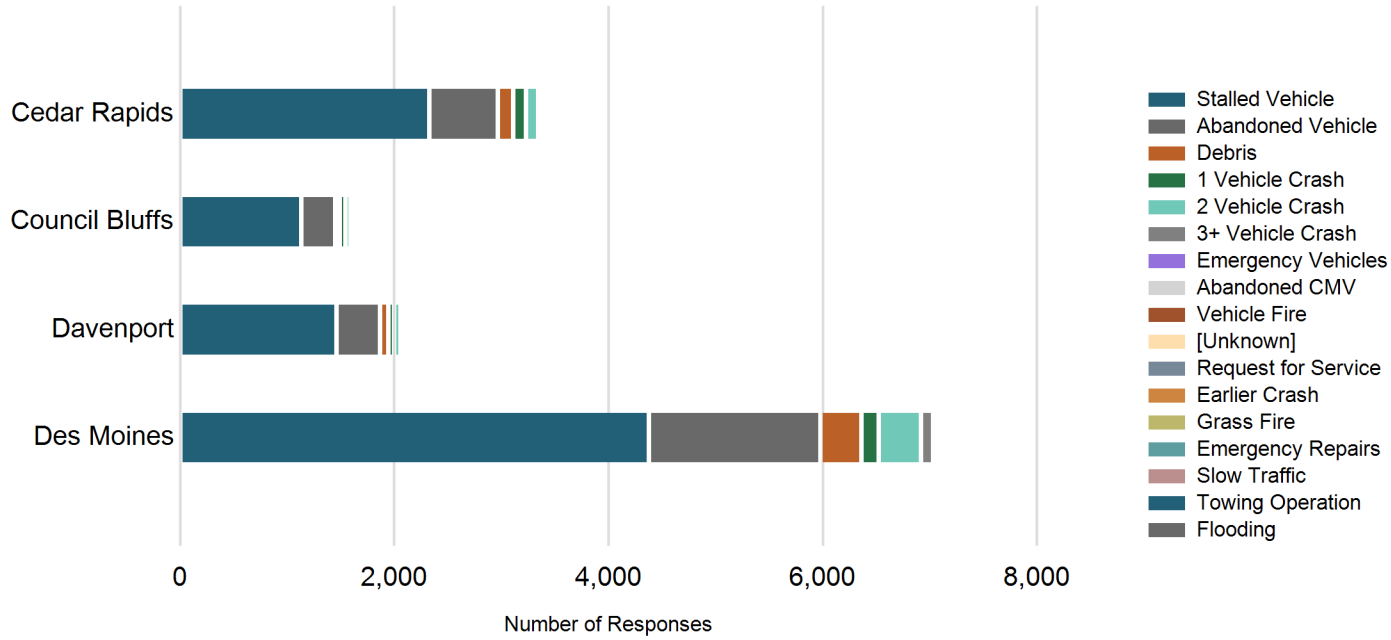
The Highway Helper service operates twelve months a year with higher responses during winter months. Additional service is provided for special events, such as the Iowa State Fair.

All responses by month by operational area

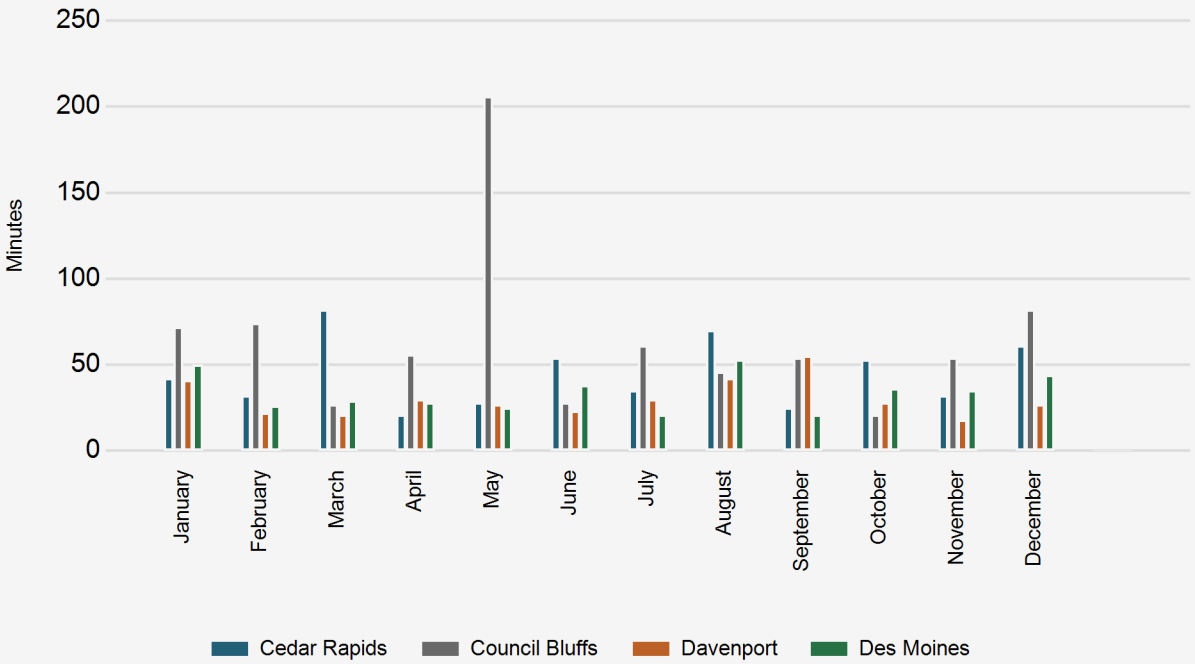


HIGHWAY HELPER

Types of incident response by operational area



Average duration of response by operational area



The duration of the Highway Helper response is determined by tracking the time between when the Highway Helper truck arrived on scene to the time departed.

BY THE NUMBERS

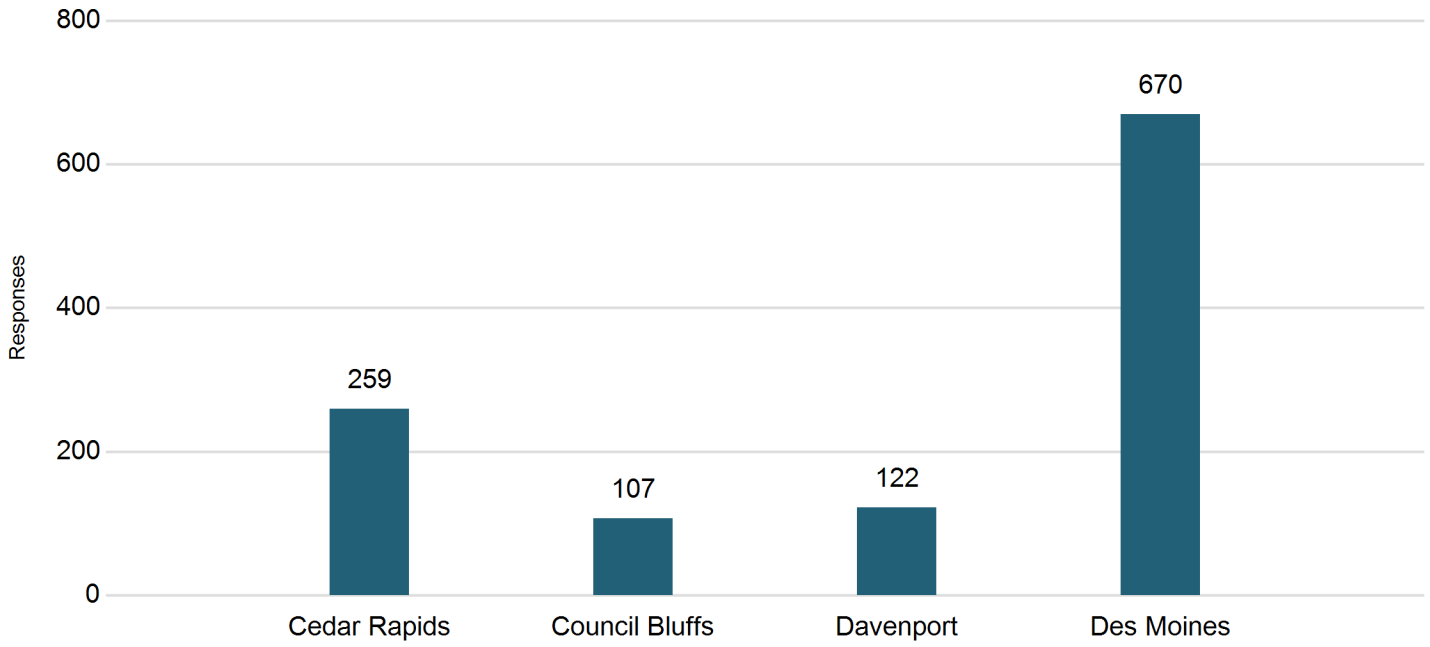
1,226
RESPONSES TO LANE BLOCKING INCIDENTS

40 min
AVERAGE RESPONSE DURATION

65%
RESPONSES TO STALLED VEHICLES

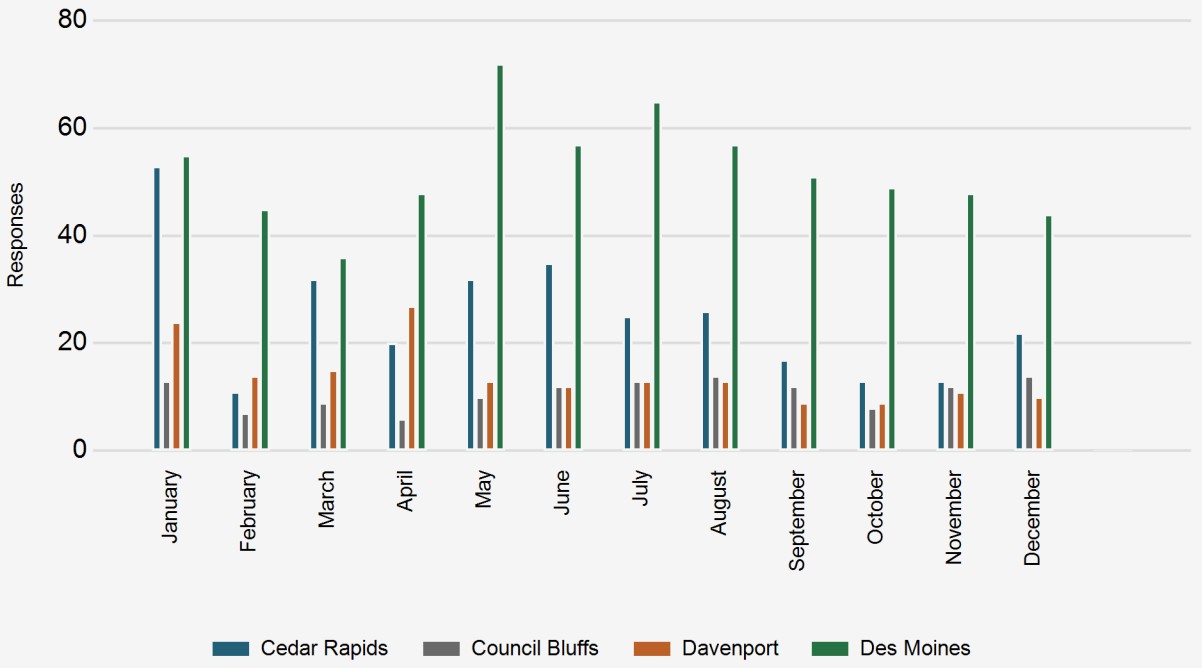
1,158 RESPONSES TO CRASHES

Responses to crashes only by operational area



Highway Helpers assist with lane blockages to achieve faster clearance times and protect responders.

Responses to lane blockage incidents



TRIP

Towing and Recovery Incentive Program (TRIP)
TRIP is a new program in the Iowa City and Des Moines areas that helps clear crashes more quickly, offering incentives to towing companies to have specialized equipment ready to respond to commercial vehicle crashes.

TRIP began as a pilot a few years ago in Iowa City. In January, the program was expanded to the Des Moines metropolitan area. Ashley Hochberger, from our Traffic Operations Bureau, said, “We focused on large truck crashes for this new program because these types of crashes can typically take longer to clear, increasing the risk for everyone else on the road.” Hochberger said, “We started in Iowa City because of the large construction project at the I-80/380/218 interchange. With this large work zone, we anticipated an increase in crashes, especially those involving large trucks. To get these crashes cleared more quickly, we started working even more closely with the heavy-duty towing companies in the area. By having open and honest discussions and building mutual respect, we have developed great working relationships that help everyone improve safety and efficiency.”

How does the program work?

When a towing company applies to be part of the program, it must meet a list of safety criteria, follow all regulations that apply, and agree to have specific equipment ready to go quickly to clear a scene.

Hochberger explained, “Once a crash happens, our maintenance staff or law enforcement on the scene contact the law enforcement dispatch in the area. Dispatch calls a towing company that has been enrolled in the TRIP program. The towing company then has 45 minutes on weekdays and 60 minutes on nights and weekends to arrive at the crash scene.

When they get to the scene, they will work with law enforcement on-scene to begin clearing the crash. To qualify for an incentive payment, the crash must be cleared within 90 minutes of when they are given the green light to clear the scene. If special equipment is needed, the towing company can earn an additional incentive for having that equipment ready and the scene cleared in the 90-minute window.”

The new program is all about connecting the right people with the right equipment to get the job done. Captain Scott Knudtson with our Motor Vehicle Enforcement said, “Prior to TRIP, we would sometimes have trouble getting towing companies to respond to incidents or they would not bring the correct equipment with them. Now, we know the capabilities of each company and they have an extra incentive to get to the scene and get it cleared quickly.”

Mitch Wood, our eastern Iowa maintenance manager, said, “Overall, TRIP has developed into a very valuable program for everyone involved. It was a bit of an adjustment when we first started since it was brand new. To me, TRIP has increased collaboration between DOT staff, law enforcement, and tow companies. I see good relationships developing through TRIP that equates to a better response and better service for travelers.”

To prove his point, Wood continued, “Recently, the program proved very beneficial when we had a horrific multi-vehicle crash on I-80 in which people were killed. TRIP was activated due to the number of vehicles involved. All three tow companies that are part of our program assisted and were on the scene soon after the incident occurred and were able to clear the initial incident, helping reduce the risk of another crash.”

In addition to supporting our core value of safety first the TRIP program works towards our five-year priority goals of improving transportation system safety.

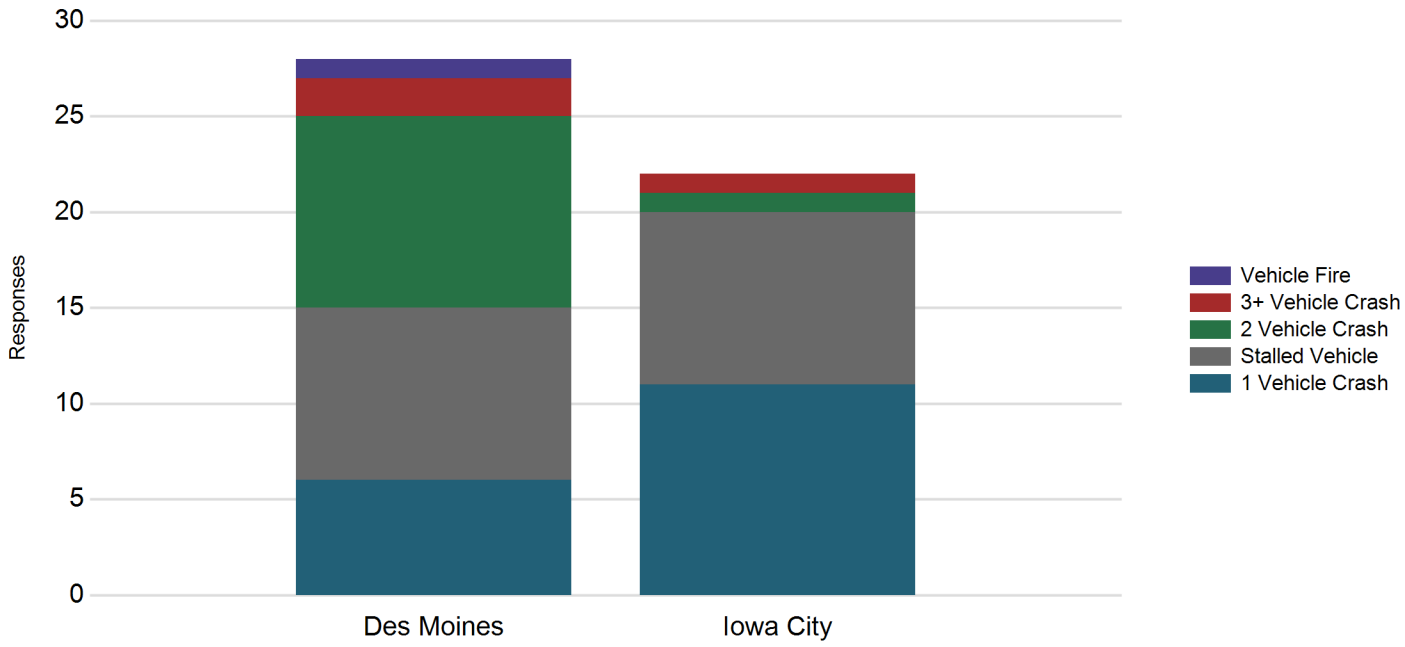
Iowa DOT - Clearing Crashes Quicker to Keep You Safer on Iowa's Roads

BY THE NUMBERS

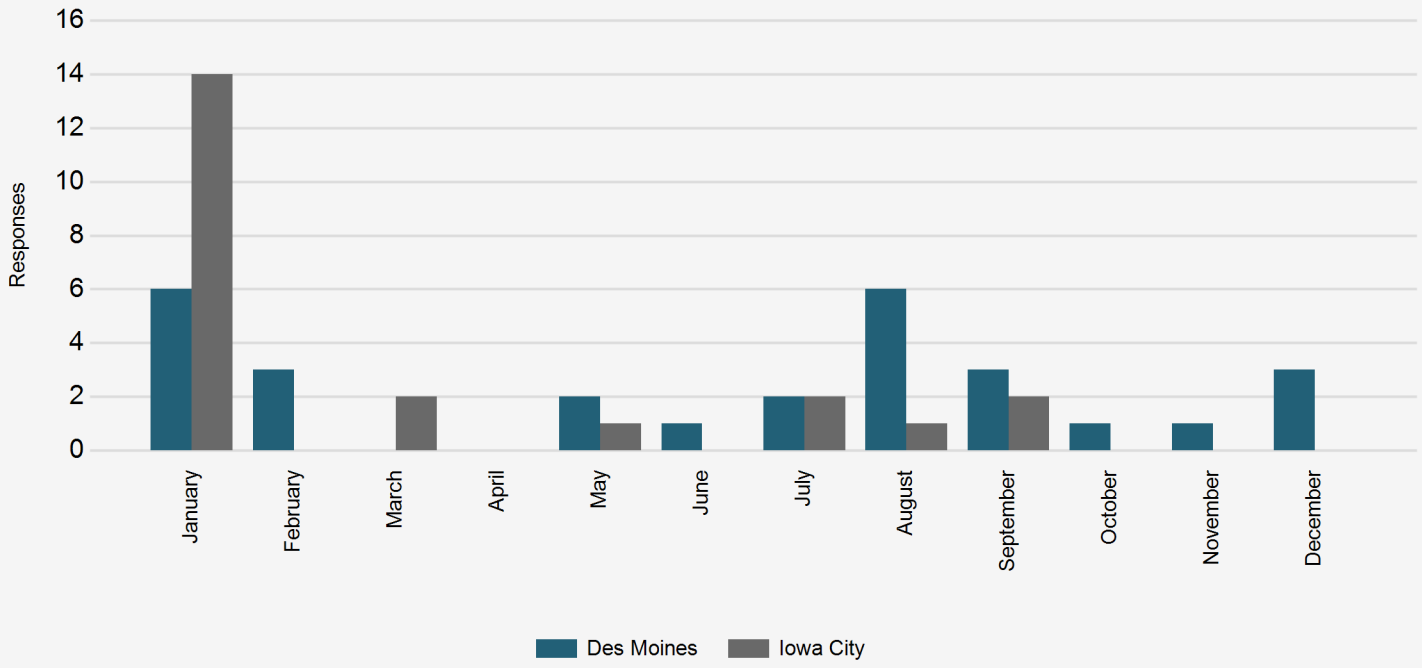
5	5	55
PARTICIPATING TOW COMPANIES (DES MOINES AREA)	PARTICIPATING TOW COMPANIES (IOWA CITY AREA)	TOTAL RESPONSES

29% RESPONSES ON WEEKENDS

Responses by incident type



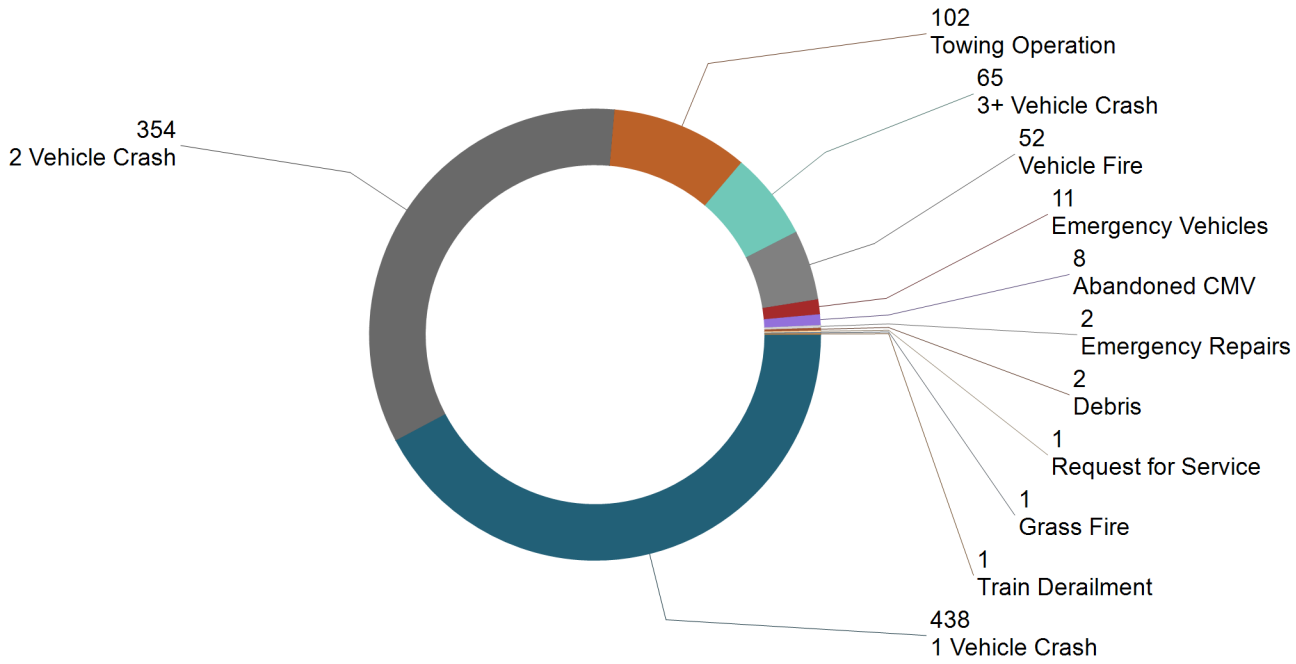
Responses by month



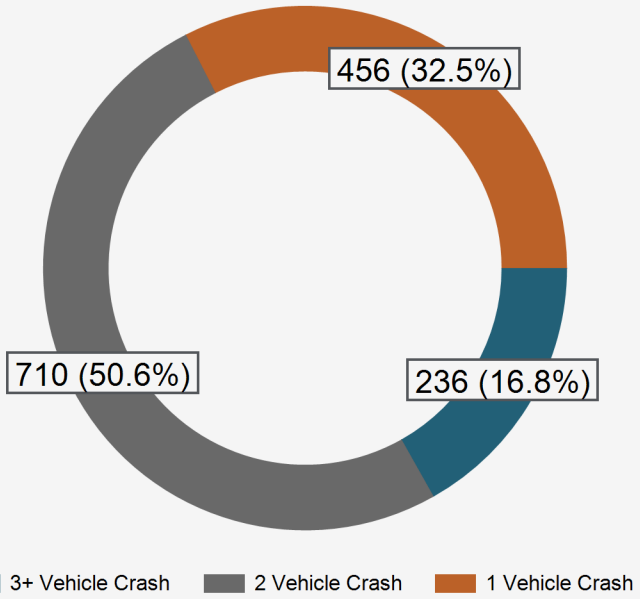
FREIGHT

Incidents involving freight transportation are specifically tracked as they are reported to the TMC. This section contains statistical and operational data regarding freight.

Types of incidents involving a semi



Number of vehicles involved in semi related crashes

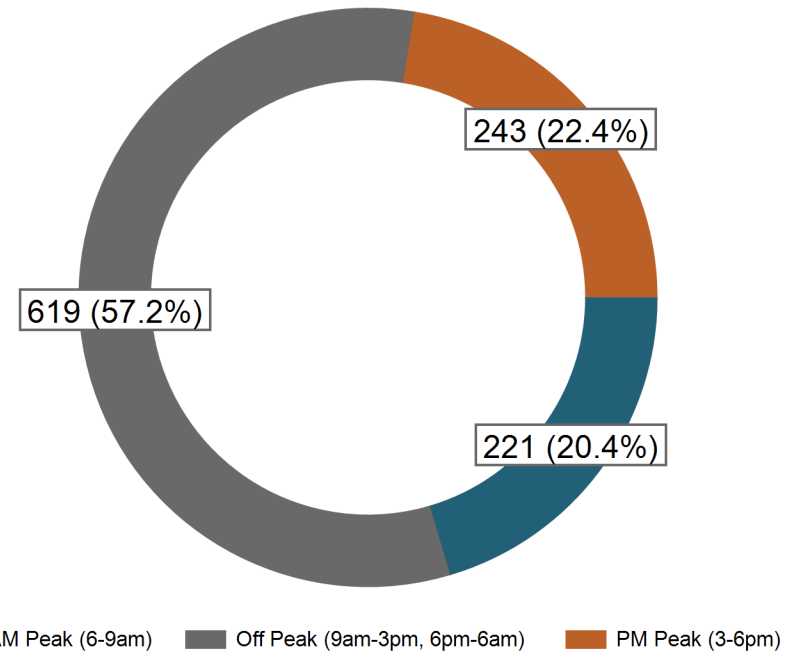


Incidents involving a semi have the potential to be more impactful on traffic since they are a larger vehicle which may take additional time to clear. The TMC specifically tracks when an incident or crash involves a semi to better understand these traffic impacts.

BY THE NUMBERS

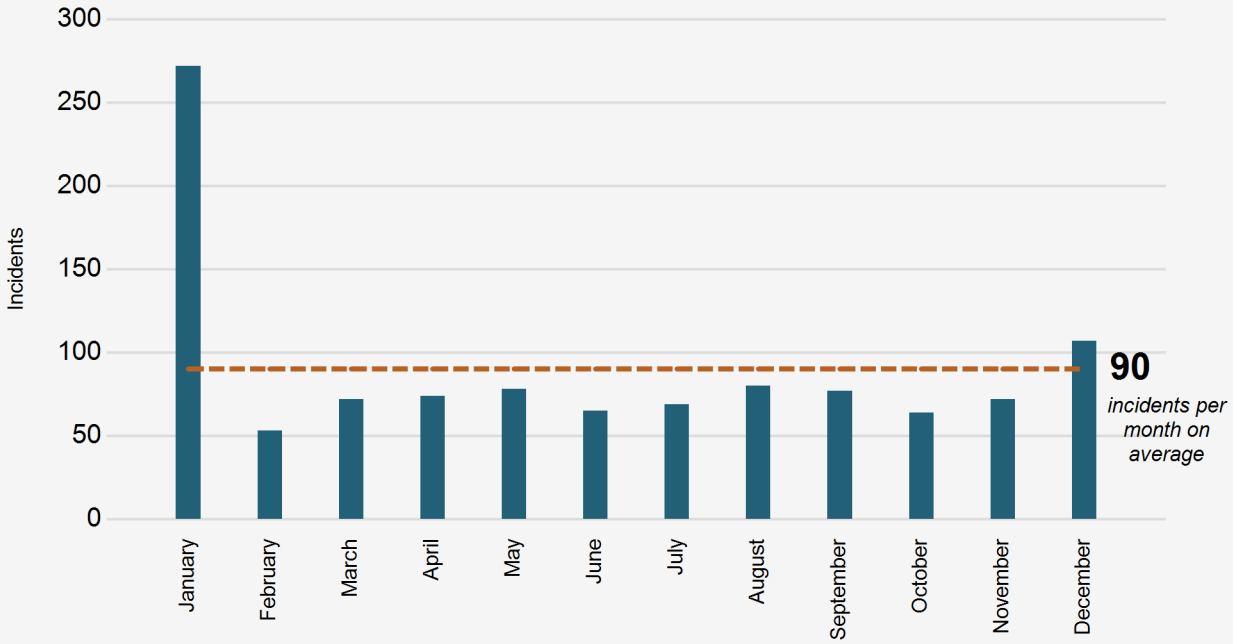
224	87	2 hr 7 m
RAIL INCIDENTS	TRAIN DERAILMENTS	AVERAGE CLEARANCE TIME FOR LANE BLOCKING INCIDENTS INVOLVING A TRACTOR TRAILER
5 HAZMAT SPILLS		

Freight incidents by time of day



Freight incidents are incidents involving semis or railroads.

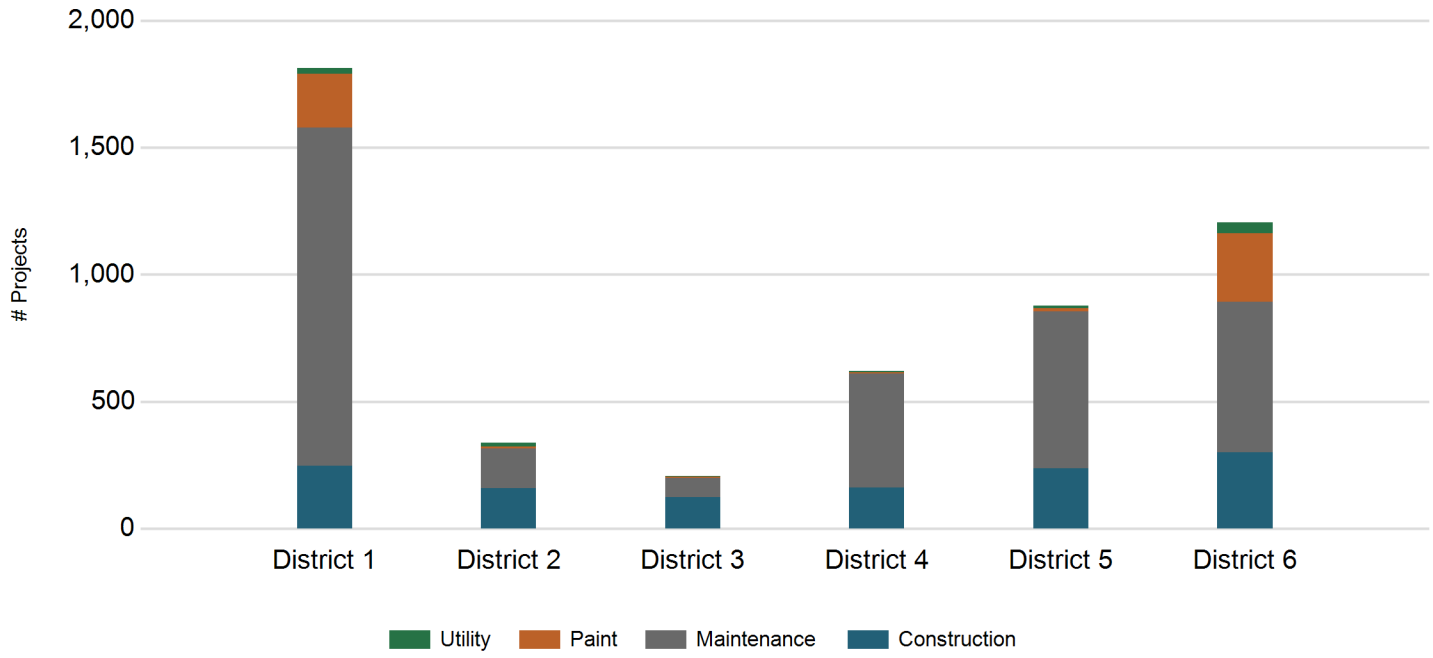
Freight incidents by month



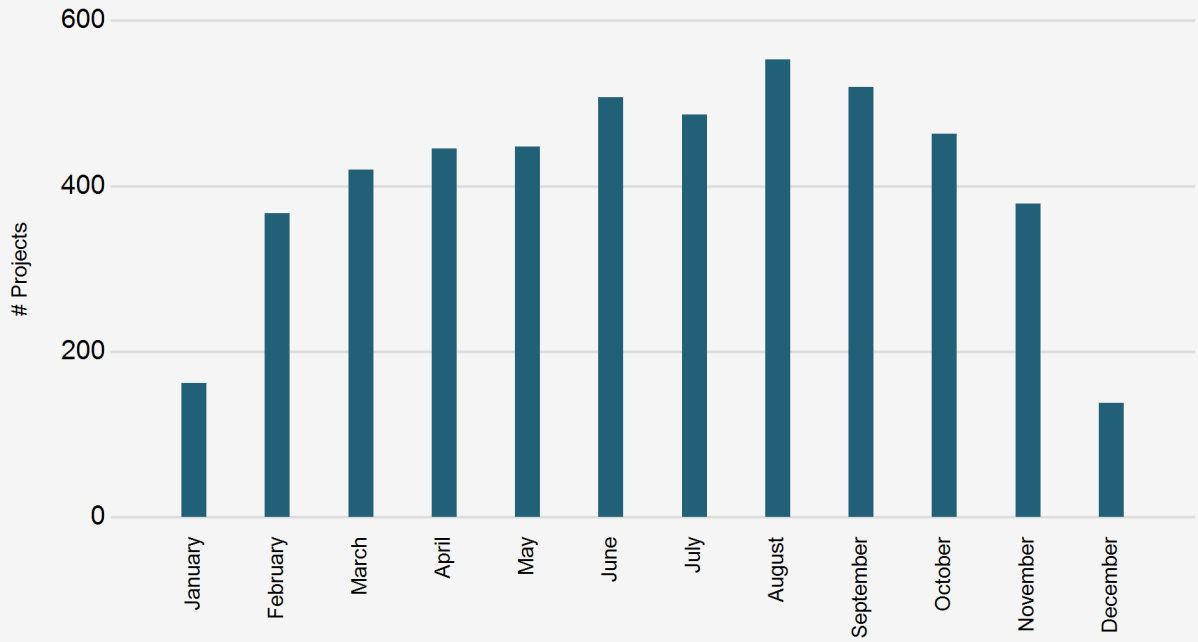
WORK ZONES

Work zone activity is tracked by the TMC for each change in a work zone, not a project as a whole. An event is logged into the system for each work zone configuration change or lane closure on a project.

Work zone events by district



Number of work zone events by month



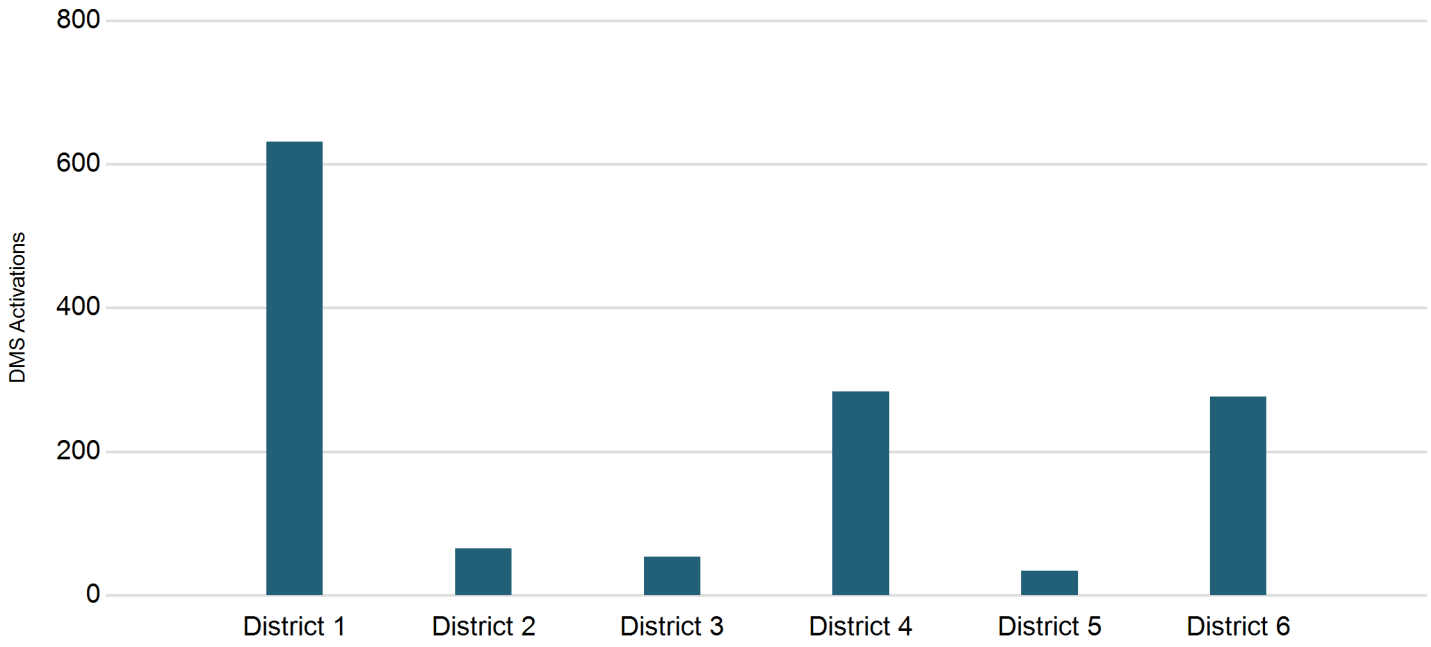
The data is used by the TMC to provide messages on the DMS, manage work zone contact information, and situational awareness.

BY THE NUMBERS

766	1,342	5,062
WORK ZONE INCIDENTS	WORK ZONE DMS ACTIVATIONS	TOTAL ROADWORK EVENTS

45 INTELLIGENT WORK ZONES

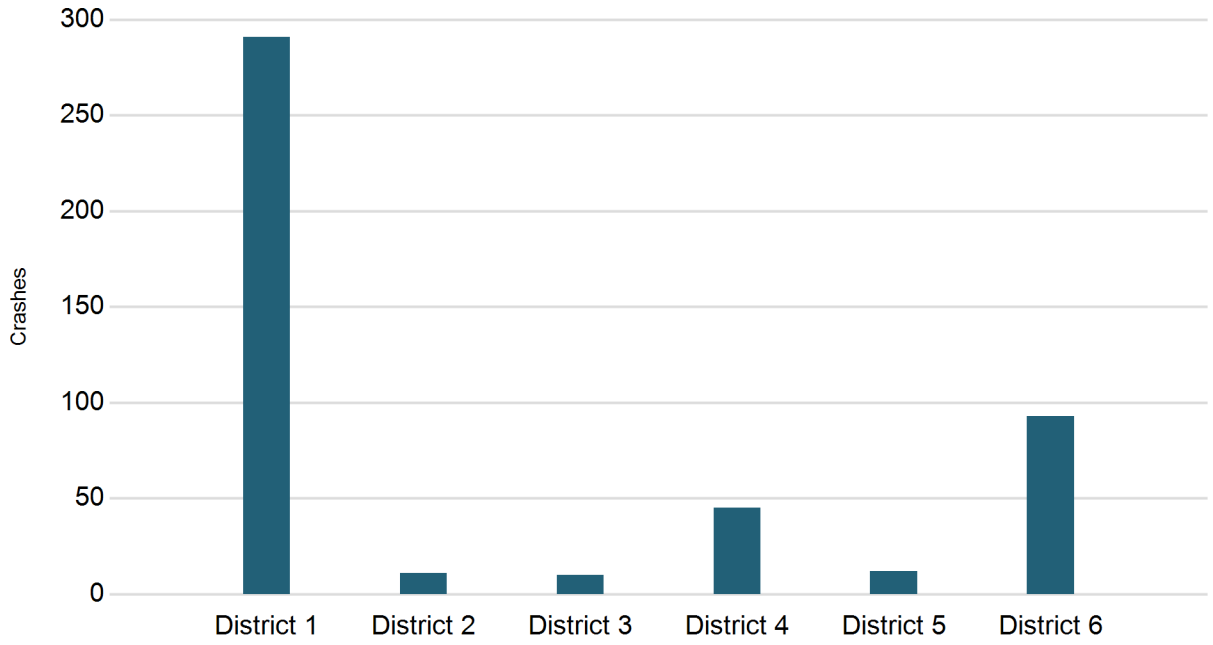
Work zone DMS activations by district



The reported values are based on events that require action by TMC operators and not reflecting all work zone related crashes. Changes in the number of TMC reported work zone incidents between years may be due to work zones located in highly monitored areas by the TMC.

Work zone crashes by district

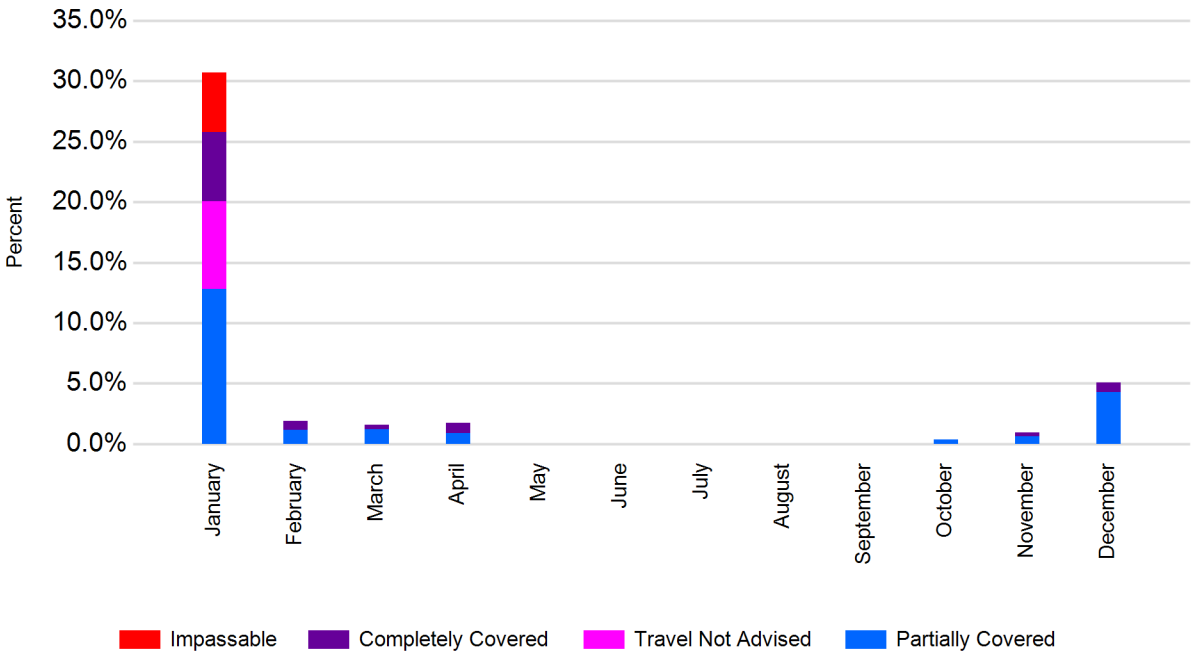
** As reported to the TMC*



WEATHER

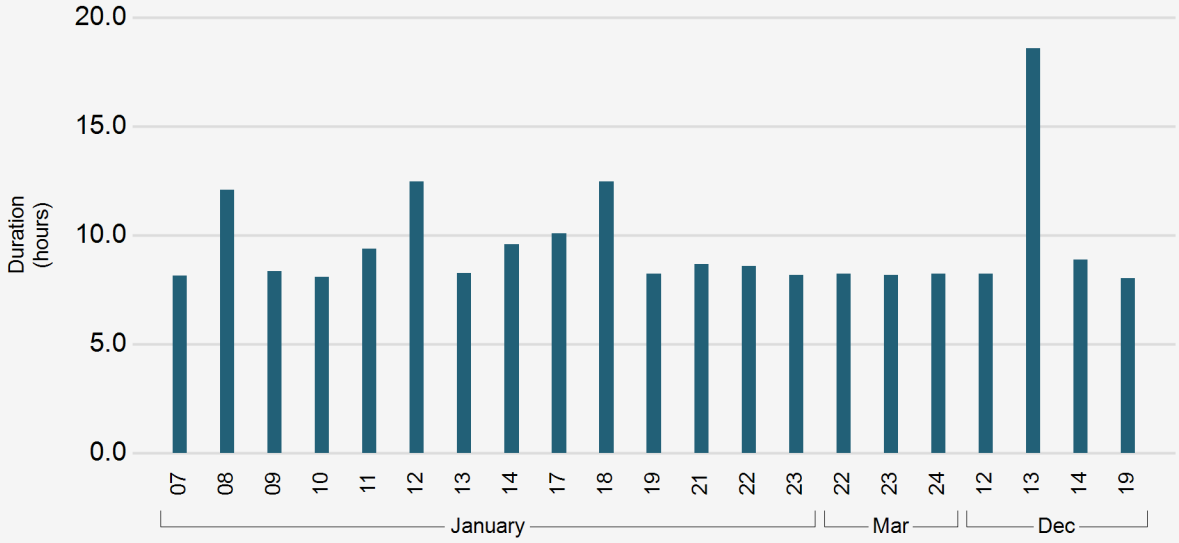
Weather can have a serious impact on the safety and mobility of roadway users. The TMC responds to dynamic conditions by using technology and communication tools to assist partners in restoring the transportation system to normal conditions.

Road conditions by type



This chart displays the percentage of time during the month over all segments where adverse winter weather conditions were reported.

Winter events



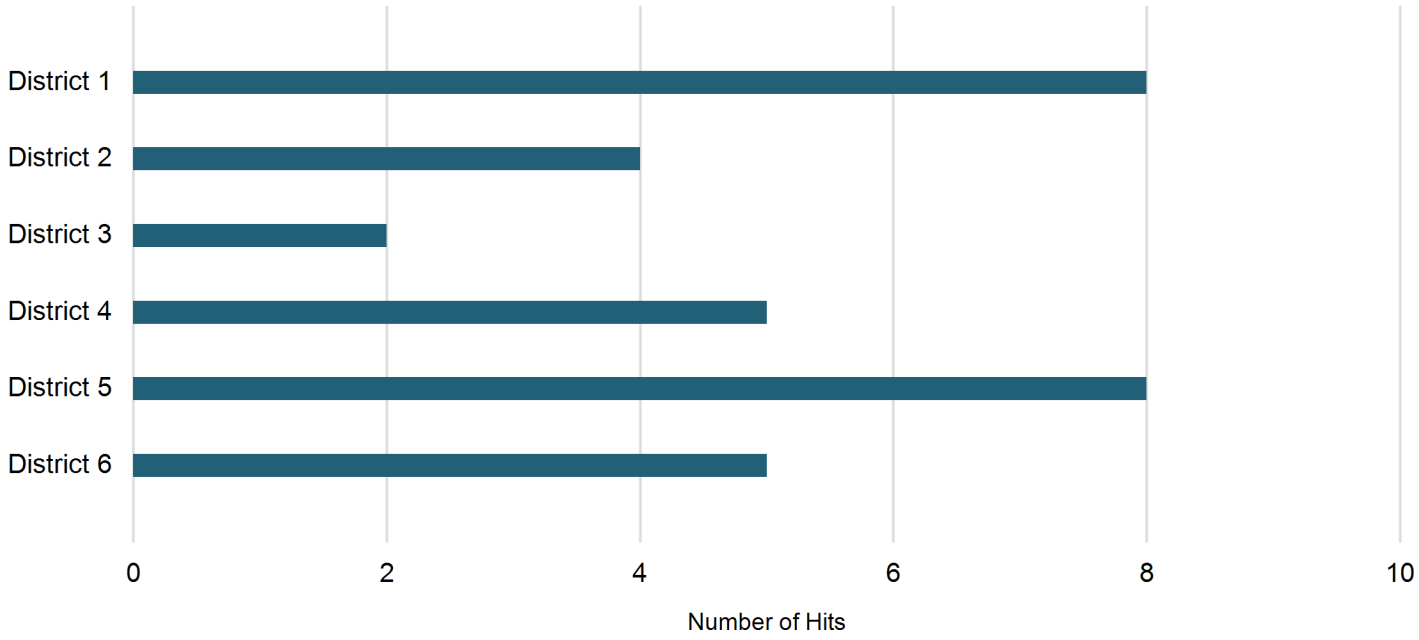
These winter events were determined based on a Winter Warning or Advisory where at least one crash has been reported to the TMC within the affected counties.

BY THE NUMBERS

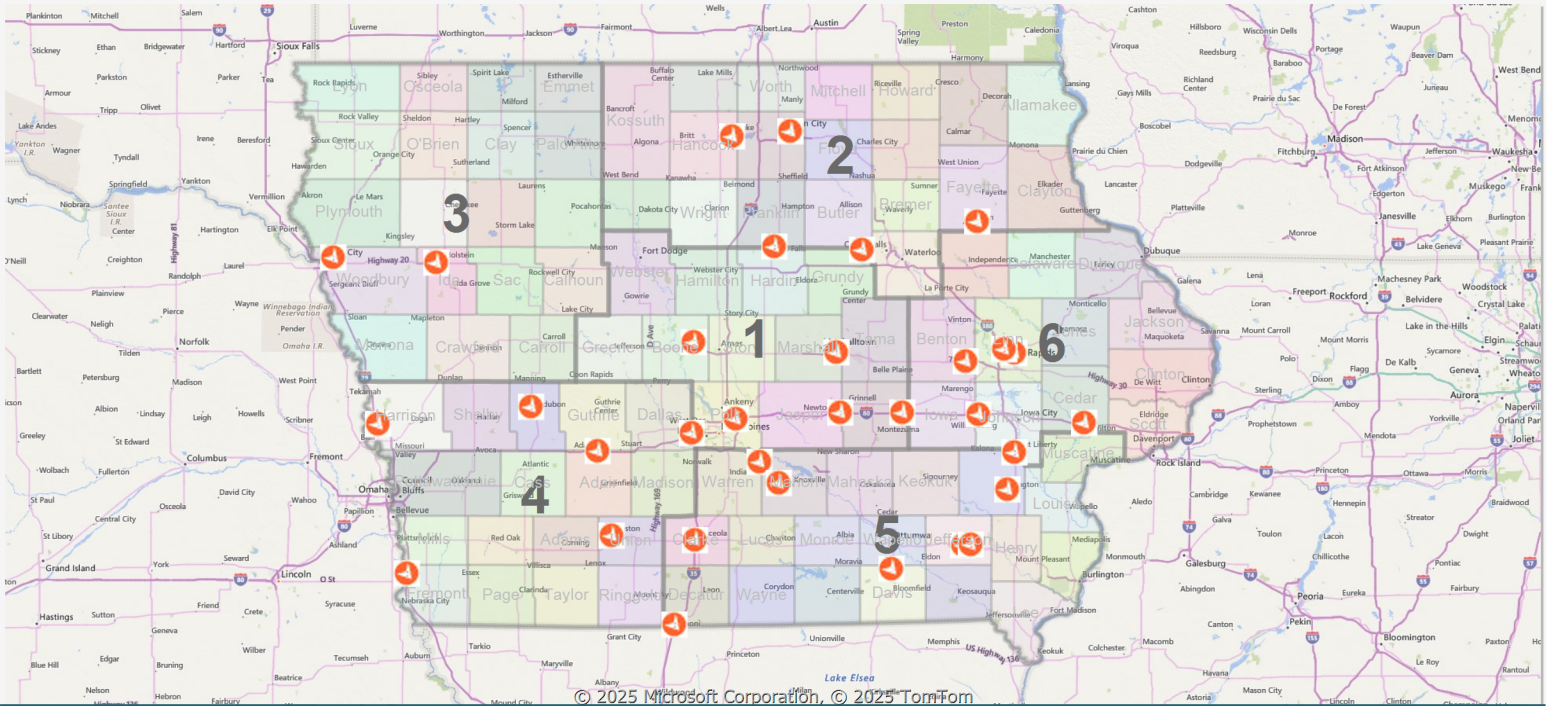
21	62	32
WINTER EVENTS	FLOODING EVENTS	SNOW PLOW HITS

383 INCIDENTS DURING WINTER EVENTS

Snow plow hits per district



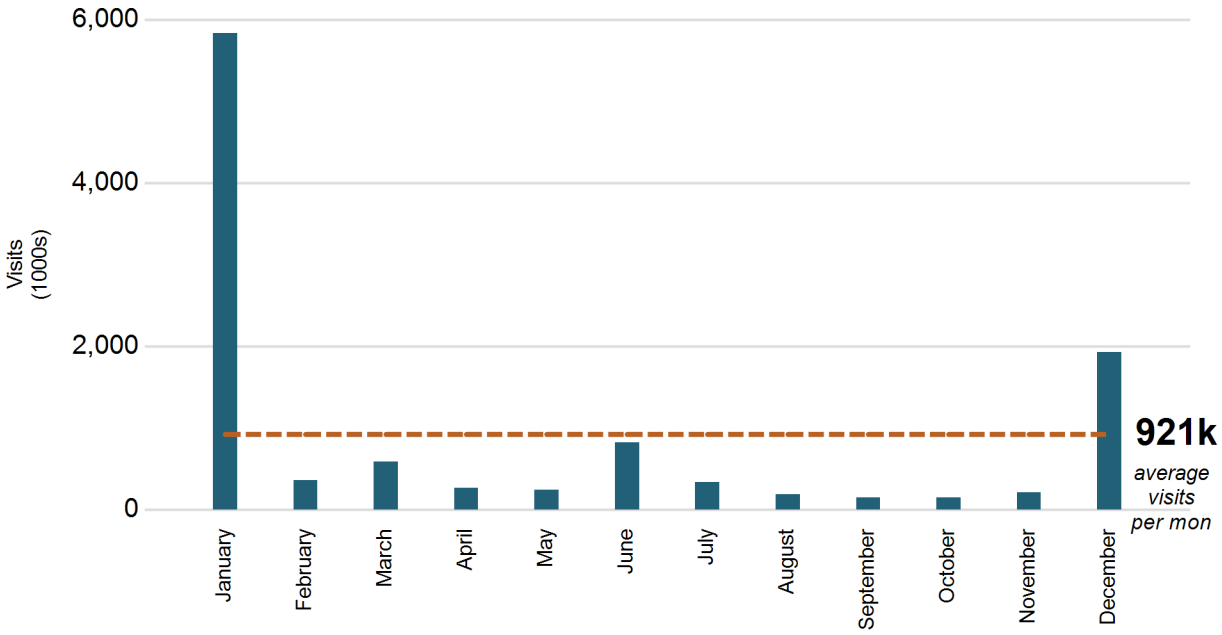
Snow plow hits



COMMUNICATION

Communication technologies play a crucial role in traffic operations. Effective traffic management, largely stemming from the TMC, relies on efficient communications and information systems to provide accessible guidance to the traveling public.

Visits to 511 website

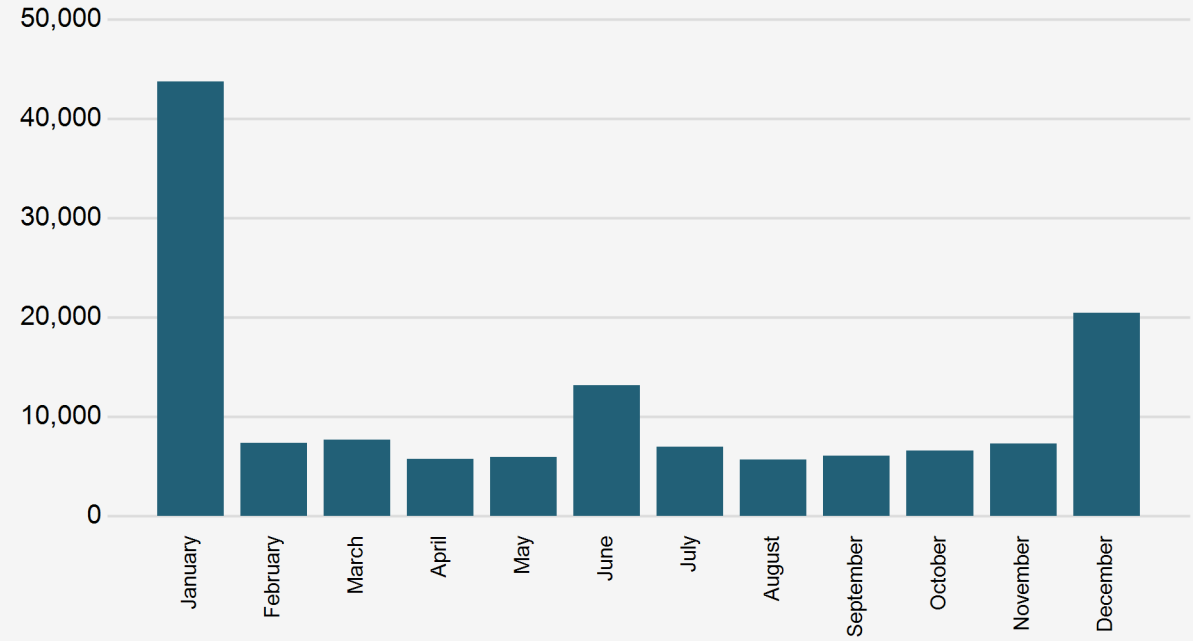


Two (2) blizzards occurred in January 2024, causing 511 website visits and phone calls to increase in number.

View Article:

NWS Article

511 mobile application downloads



The Iowa 511 mobile app offers real-time traffic information, including traffic events, speeds, cameras, and winter road conditions. It also features a Trucker Mode with resources specific to commercial vehicle operators, such as weigh station locations and restrictions.

BY THE NUMBERS

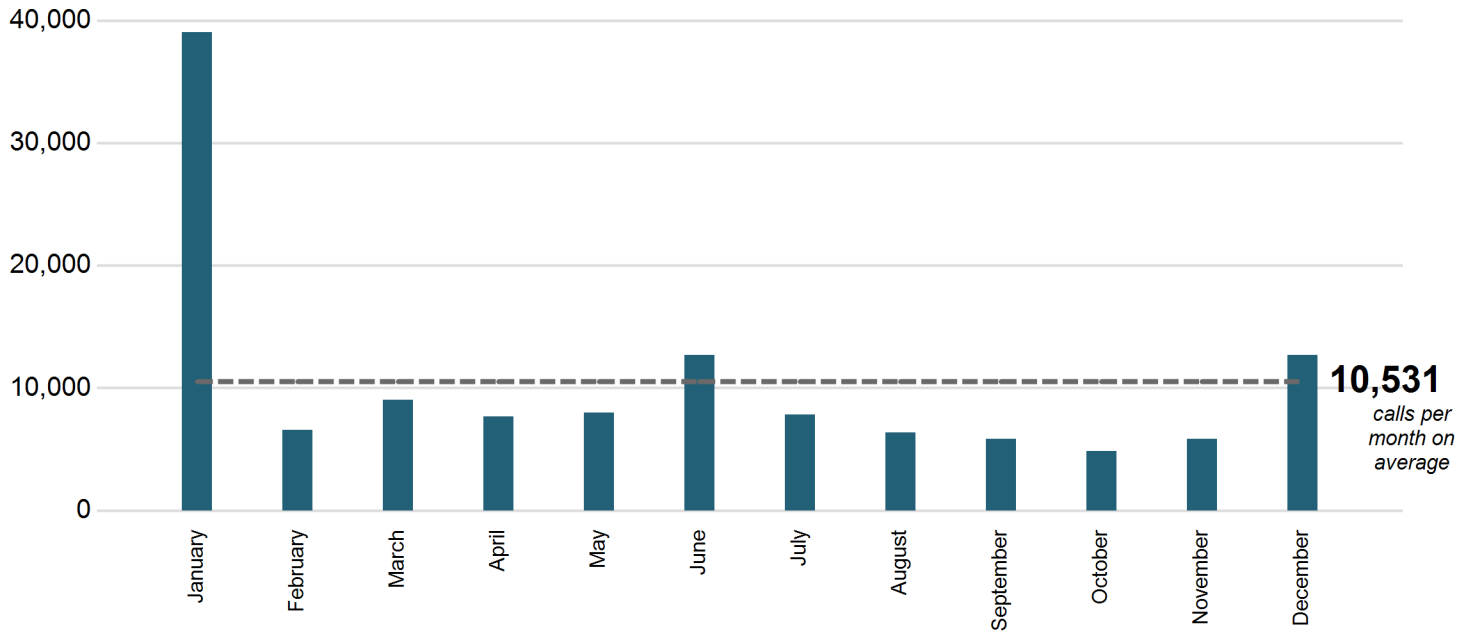
136,875
511 APP DOWNLOADS

126,367
PHONE CALLS TO 511

6,052,398
VISITS TO 511 TRAVELER INFORMATION WEBSITE

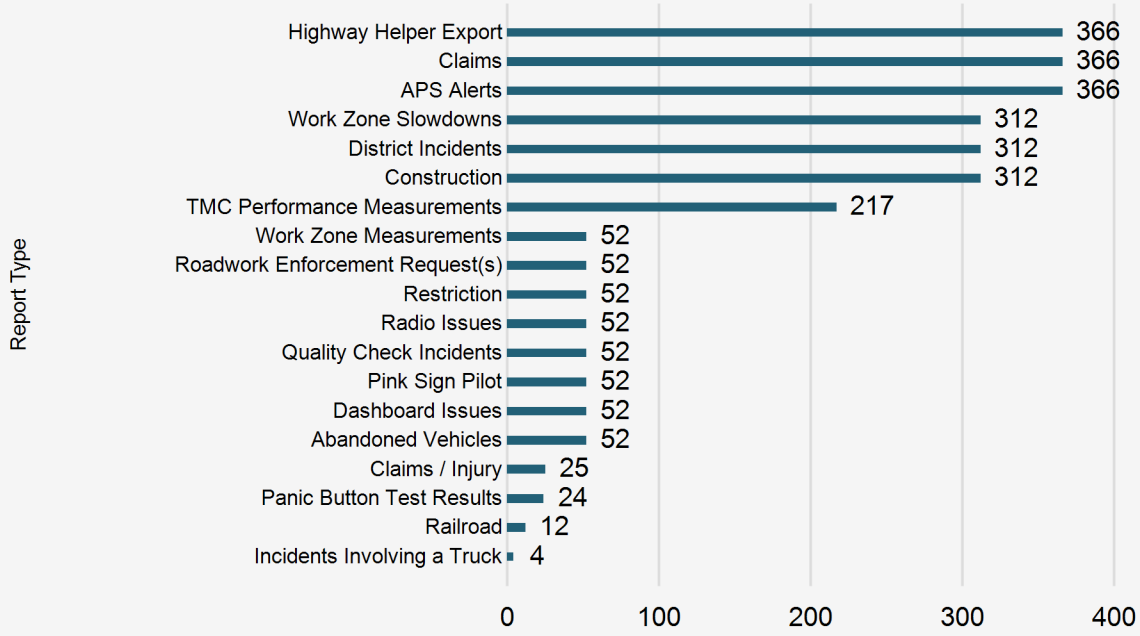
2,732 TMC DATA REPORTS GENERATED

511 phone calls by month



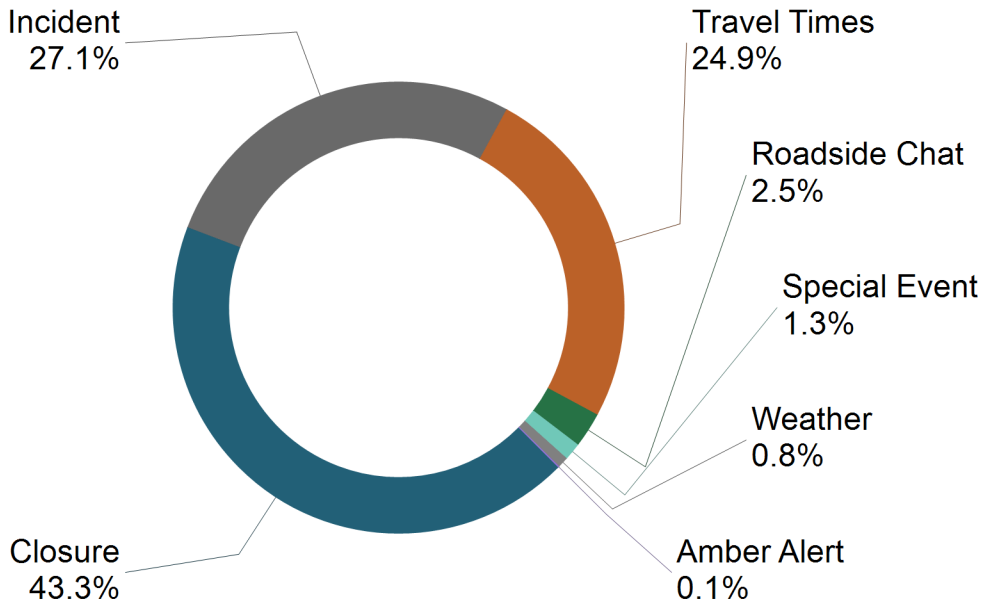
The information tracked by the TMC is shared through multiple reports with internal and external stakeholders.

TMC data reports generated by type



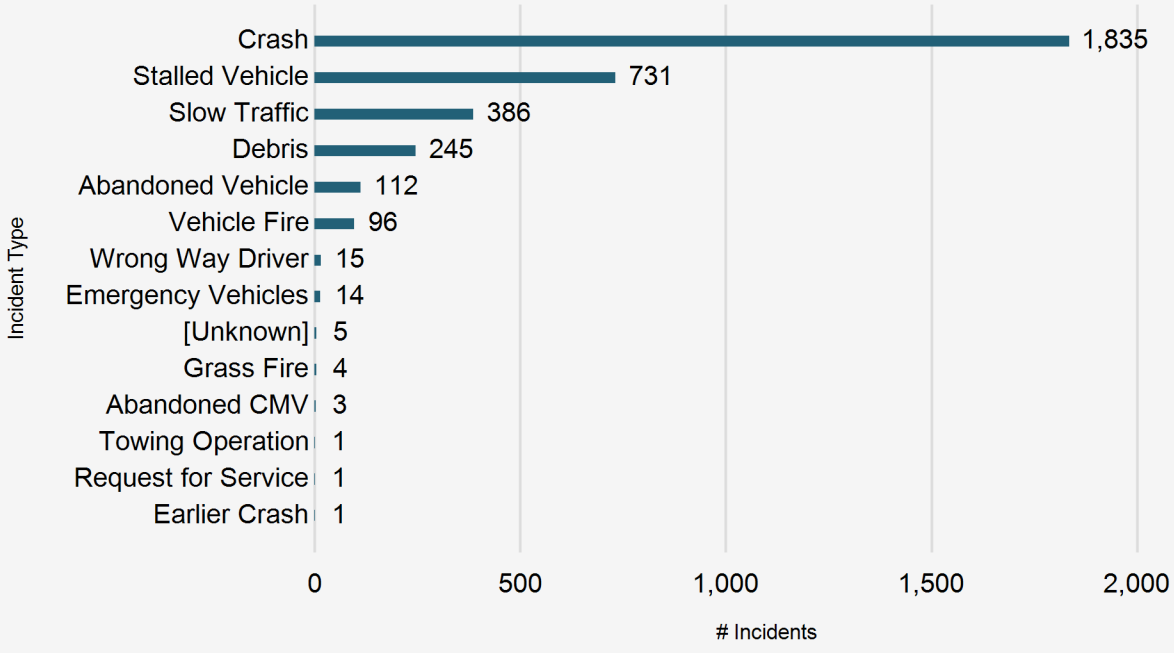
COMMUNICATION

DMS messages by type



Dynamic Message Signs (DMS) are operated by the TMC and the message content, duration and types are tracked.

DMS messages by incident type



This chart provides an overview of the number of unique DMS messages posted for different incident types utilized by the TMC.

BY THE NUMBERS

3,449
INCIDENTS UTILIZING DMS MESSAGES

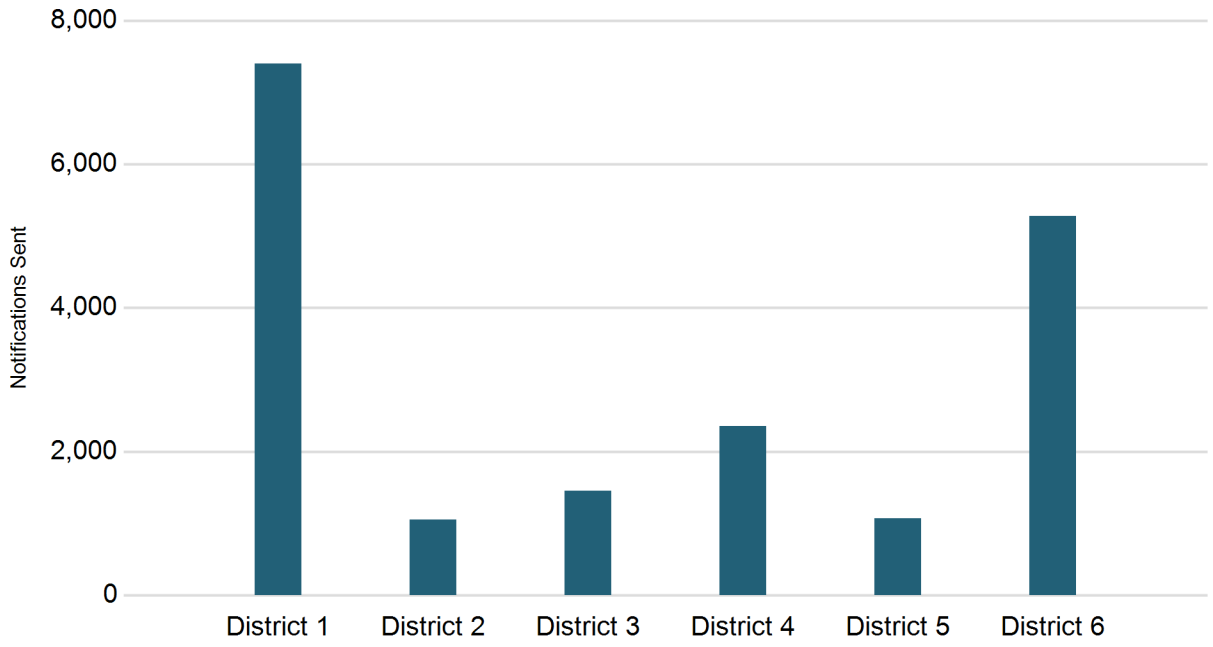
19,581
EMAIL NOTIFICATIONS SENT

27%
UNIQUE DMS MESSAGES RELATED TO INCIDENTS

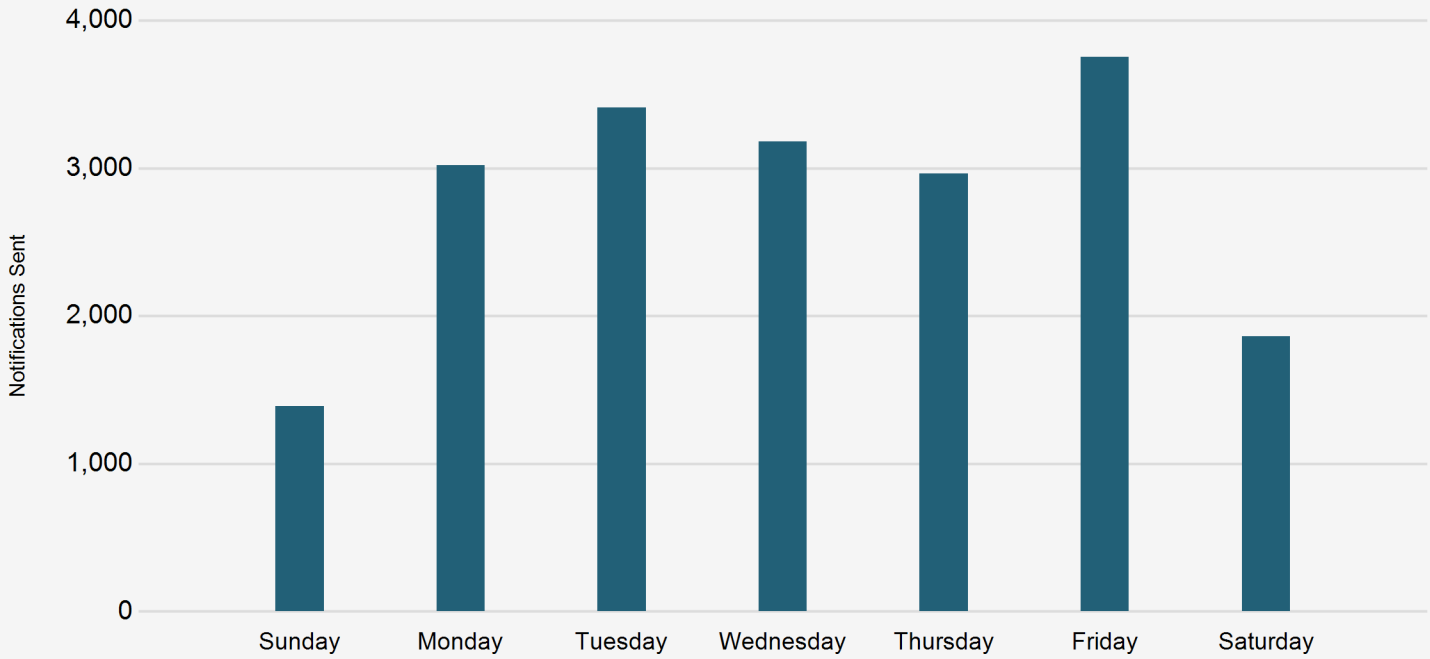
83% EMAIL NOTIFICATIONS SENT ON WEEKDAYS

Emergency Incident Notifications (EINS) are e-mail alerts sent by the TMC for more impactful events on the transportation system.

Email notifications sent by district



Email notifications sent by weekday



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