



**Lacey Fire District Three
1231 Franz St SE
Lacey, WA 98503**



**Response Time Compliance Report
For 2017**

March 2018

EXECUTIVE SUMMARY

In 2017 Lacey Fire District was dispatched 13,860 times, a call volume about 6% higher than in 2016. This number of calls equates to an average of one dispatch about every 38 minutes every day during the whole year. Crews from four staffed stations managed the calls with additional volunteer response from a fifth station when the volunteer residents were available.

The average response time (alarm to arrival) for the first arriving District unit at a call (including all call types) is 7 minutes 09 seconds.

The District continues to meet or exceed nearly all of the adopted performance standards and is consistently meeting NFPA requirements for assembling sufficient personnel on scene to manage a structure fire.

INTRODUCTION

In 2005 the Washington State Governor signed House Bill 1756, which required fire service agencies to:

- establish performance measures for service delivery and response time objectives
- evaluate their performance against their adopted standards on an annual basis based on data from each geographical area of the agency
- report the results to the applicable elected officials as well as to the community

Beginning in 2007, fire service agencies were required to issue an annual written report based on their evaluations. In addition to the evaluation, the report had to contain the predictable consequences of any deficiencies and address steps necessary to achieve compliance with the established objectives.

This legislation was ultimately codified as Chapter 52.33 RCW Fire Departments – Performance Measures, which applies specifically to fire protection districts.

On November 1, 2007, the Lacey Fire District Board of Fire Commissioners adopted Resolution Number 783-11-07, which established the District's Emergency Response Reporting Standards. These standards and this report serve as official compliance with Chapter 52.33 RCW and set forth our performance measures.



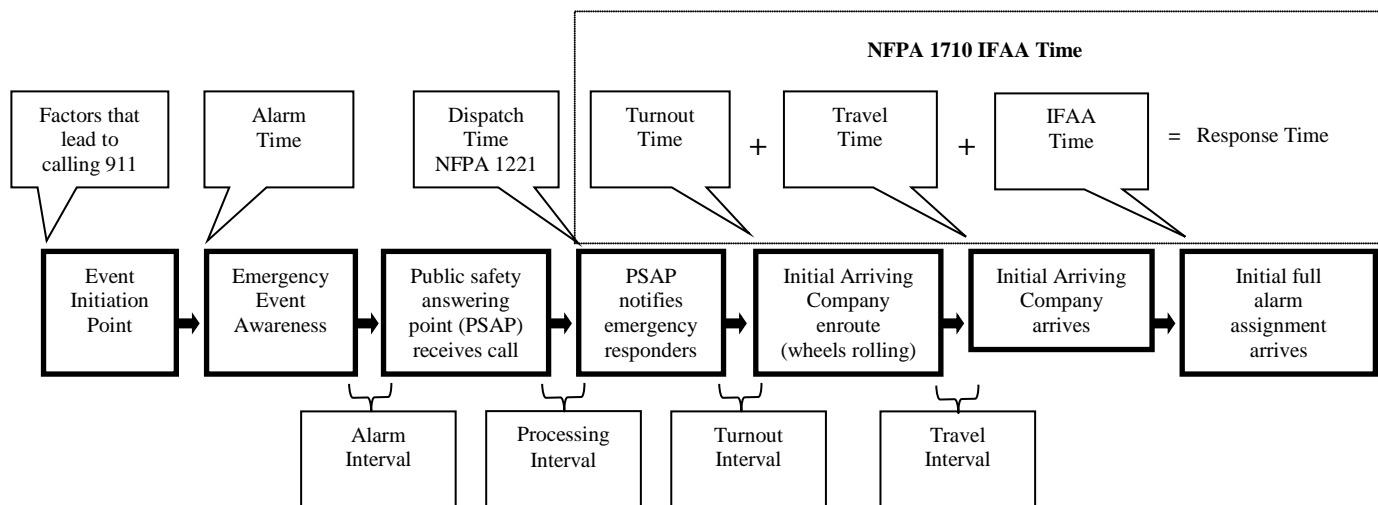
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Response Time Compliance

Response time is traditionally thought of as the time it takes the fire service agency to *arrive* to deal with your emergency. In fact, response time can be divided into a series of subcomponents or events, some of which can be quantified and analyzed. The series, or “cascade” of events includes:

1. Something happens – vehicle accident, fire, heart attack, etc.
2. Someone calls 9-1-1
3. 9-1-1- center answers the phone
4. 9-1-1- center processes the call and alerts the fire service agency
5. Fire service agency starts enroute to your call
6. The first fire service agency unit arrives and begins to help with your emergency
7. All fire service units dispatched arrive to handle your emergency

This “Cascade of Events” can be depicted as shown below:



Chapter 52.33 RCW requires that fire service agencies set standards and report on three of the subcomponents:

- turnout time (called turnout interval in the above diagram)
- the time it takes the first unit capable of managing the emergency to arrive (called travel interval in the chart above)
- for a structure fire, the time it takes the full initial alarm assignment time to arrive (referred to in the chart above as IFAA time, and is functionally the travel time for all the responding apparatus that make up the agency’s full initial alarm assignment)

Turnout Time

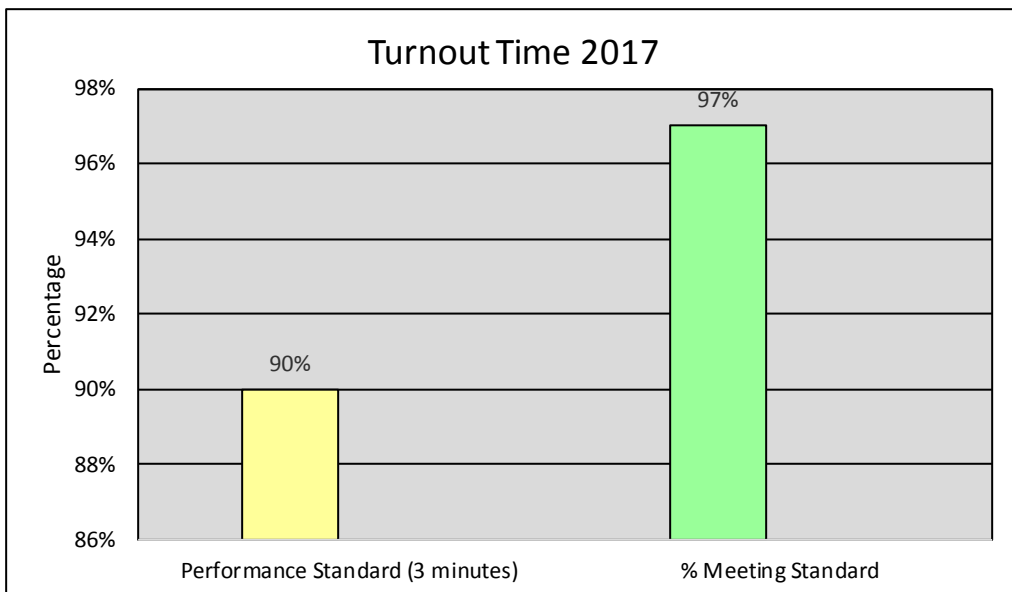
Turnout time is the sub-component of time starting when the units receive notification of an emergency and ends when they begin their response.

Turnout time has no geographical significance, therefore, the District set the same standard for all stations and all units. **The Turnout Time performance standard for Lacey Fire District is 3 minutes, 90% of the time.** Another way to make that statement is 90% of the time we will be enroute to a call in the District within 3 minutes of being dispatched.

An analysis of our response data shows that we far exceed this performance standard, with the District being enroute within 3 minutes or less 97% of the time.

90% of the time, our turnout time is 2 minutes 17 seconds or less.

Our average turnout time – that is, 50% of the time a District unit is enroute to a call – in 1 minute and 16 seconds or less.



Response Time (Travel Time)

RCW 52.33 Fire Departments – Performance measures, defines *response time* as the time starting when the units begin to respond to the incident and ending when a unit or units arrive on the scene of the incident. Functionally, this is the time subcomponent where the unit is traveling to the incident, so to avoid confusion this report uses the term **Travel Time** to denote this subcomponent.

RCW 52.33 requires:

- Setting time standards for the travel time for the first unit to arrive at a fire suppression incident, an EMS incident, a wildland incident and at a special operations incident.
- Setting time standards for travel time for a “full first alarm assignment.” This requires all the units the District designates as the first alarm for a structure fire arrive within a certain amount of time.
 - For a residential structure fire, Lacey Fire District has established a full first alarm assignment that consists of three engine companies, one ladder company, a command unit, a medical unit and a Chief Officer.
- An annual evaluation of the response data based on geographical areas within the District
- An annual written report of the performance of the District based on the evaluation. The report must also include predictable consequences of any deficiencies and steps necessary to achieve compliance with the established time standards.

Additionally, while many fire agencies report averages, RCW 52.33 specifically requires setting the standards that will be achieved 90% of the time. The 90% requirement provides citizens a greater assurance of consistency in service levels.

Lacey Fire District Travel Time Standards by Geographic Area

The District has established the geographical divisions by utilizing station areas. The chart below identifies the travel time standard for the first arriving unit.

Area	Target Standard for 1 st arriving unit, 90% of the time	Types of Calls
Station 31 – Lacey core	11 minutes	EMS, wildland, fire calls
Station 32 – Lake St Claire	15 minutes	EMS, wildland, fire calls
Station 33 – Ruddell Road	13 minutes	EMS, wildland, fire calls
Station 34 – Hawks Prairie	13 minutes	EMS, wildland, fire calls
Station 35 – Willamette Dr	14 minutes	EMS, wildland, fire calls
All station areas	17 minutes	Special operations calls
All station areas	17 minutes	Full first alarm assignment

Travel Time Performance – Emergency Medical Service responses

Travel time is displayed below for the first arriving unit (engine, aid unit or truck) that can provide emergency medical care. The EMS category includes motor vehicle accidents with injuries as well as responses to homes, businesses, care centers, etc for medical service calls. Travel time varies by station area, but the performance level of 90% applies to all areas.

2017

EMS – 1 st arriving unit	St 31 11 mins	St 32 15 mins	St 33 13 mins	St 34 13 mins	St 35 14 mins
Total # of calls in station area	3055	577	2842	1984	543
For reporting compliance, 90% of the time, travel time is less than or equal to:	6:52 – 6:53 minutes	12:51 minutes	8:24 minutes	8:11 – 8:15 minutes	7:38 minutes

5 Year Comparison

Station 31

Target travel time - 11 minutes

EMS – 1 st arriving unit	2013	2014	2015	2016	2017
Total # of calls	2674	2937	3064	2938	3055
# responses less than or equal to 11 minutes	2625	2889	3008	2872	2978
Percentage compliance	98%	98%	98%	97%	97%
90% of the time, travel time is less than or equal to:	6:54 minutes	6:50-6:51 minutes	7:00 – 7:01 minutes	7:07 minutes	6:52 – 6:53 minutes

Station 32

Target travel time - 15 minutes

EMS – 1 st arriving unit	2013	2014	2015	2016	2017
Total # of calls	499	495	489	706	577
# responses less than or equal to 15 minutes	487	472	473	691	548
Percentage compliance	97%	95%	96%	97%	94%
90% of the time, travel time is less than or equal to:	12:08 minutes	12:46 minutes	12:53 minutes	12:40 minutes	12:51 minutes

EMS – 1st Arriving Unit, continued

Station 33

Target travel time - 13 minutes

EMS – 1 st arriving unit	2013	2014	2015	2016	2017
Total # of calls	1890	2167	2393	2375	2842
# responses less than or equal to 13 minutes	1843	2110	2338	2316	2784
Percentage compliance	97%	97%	98%	97%	98%
90% of the time, travel time is less than or equal to:	8:37 – 8:38 minutes	8:34 minutes	8:20 minutes	8:28 minutes	8:24 minutes

Station 34

Target travel time - 13 minutes

EMS – 1 st arriving unit	2013	2014	2015	2016	2017
Total # of calls	1568	1701	1746	1870	1984
# responses less than or equal to 13 minutes	1534	1658	1691	1825	1933
Percentage compliance	98%	97%	97%	97%	97%
90% of the time, travel time is less than or equal to:	8:05 minutes	8:18-8:20 minutes	8:29 minutes	8:22 minutes	8:11 – 8:15 minutes

Station 35

Target travel time - 14 minutes

EMS – 1 st arriving unit	2013	2014	2015	2016	2017
Total # of calls	333	441	528	597	543
# responses less than or equal to 14 minutes	322	431	517	591	531
Percentage compliance	97%	97%	98%	99%	98%
90% of the time, travel time is less than or equal to:	10:42 – 10:54 minutes	8:31 minutes	8:22 minutes	7:54 minutes	7:38 minutes



Travel Time Performance, Wildland Fire responses

Travel time is displayed below for the first arriving unit – an engine or a brush truck - capable of initiating wildland fire suppression. Travel time varies by station area, but the performance level of 90% applies to all areas.

2017

Wildland – 1 st arriving unit	St 31 11 mins	St 32 15 mins	St 33 13 mins	St 34 13 mins	St 35 14 mins
Total # of calls	24	5	21	26	11
For reporting compliance, 90% of the time, travel time is less than or equal to:	7:01 minutes	12:36 minutes	7 :26 minutes	11:14 minutes	10:08 minutes

5 Year Comparison

Station 31

Target travel time - 11 minutes

Wildland – 1 st arriving unit	2013	2014	2015	2016	2017
Total # of calls	15	16	27	20	24
# responses less than or equal to 11 minutes	15	16	27	20	22
Percentage compliance	100%	100%	100%	100%	92%
90% of the time, travel time is less than or equal to:	5:03 – 5:27 minutes	7:36 minutes	8:25 minutes	7:33 minutes	7:01 minutes

Station 32

Target travel time - 15 minutes

Wildland – 1 st arriving unit	2013	2014	2015	2016	2017
Total # of calls	4	4	9	6	5
# responses less than or equal to 13 minutes	3	4	6	6	4
Percentage compliance	75%	100%	66%	100%	80%
90% of the time, travel time is less than or equal to:	10:41 – 30:46 minutes	11:42 – 12:05 minutes	16:03 minutes	10:00 minutes	12:36 minutes

Wildland – 1st Arriving Unit, continued

Station 33

Target travel time - 13 minutes

Wildland – 1 st arriving unit	2013	2014	2015	2016	2017
Total # of calls	14	3	16	19	21
# responses less than or equal to 13 minutes	13	3	15	18	21
Percentage compliance	93%	100%	93%	94%	100%
90% of the time, travel time is less than or equal to:	10:04 minutes	8:15 – 9:33 minutes	9:20 minutes	7:30 minutes	7:26 minutes

Station 34

Target travel time - 13 minutes

<u>Wildland</u> – 1 st arriving unit	2013	2014	2015	2016	2017
Total # of calls	29	42	42	29	26
# responses less than or equal to 13 minutes	29	41	41	28	24
Percentage compliance	100%	97%	97%	96%	92%
90% of the time, travel time is less than or equal to:	6:51 minutes	8:38 – 8:41 minutes	8:18 – 8:45 minutes	8:56 minutes	11:14 minutes

Station 35

Target travel time - 14 minutes

Wildland – 1 st arriving unit	2013	2014	2015	2016	2017
Total # of calls	8	6	12	7	11
# responses less than or equal to 14 minutes	8	6	12	7	10
Percentage compliance	100%	100%	100%	100%	90%
90% of the time, travel time is less than or equal to:	6:02 – 8:13 minutes	6:48 minutes	6:22 minutes	7:52 minutes	10:08 minutes



Travel Time Performance, Fire Suppression responses (all fires except wildland)

Travel time for the first arriving fire engine is displayed below. All types of fires except wildland fires are included in this information. Travel time varies by station area, but the performance level of 90% applies to all areas.

2017

Fire Suppression – 1 st arriving unit	St 31 11 mins	St 32 15 mins	St 33 13 mins	St 34 13 mins	St 35 14 mins
Total # of calls	37	8	28	44	6
For reporting compliance, 90% of the time, travel time is less than or equal to:	7:02 minutes	9:43 minutes	8:32 minutes	7:52 minutes	5:58 minutes

5 Year Comparison

Station 31

Target travel time - 11 minutes

Fire Suppression – 1 st arriving unit	2013	2014	2015	2016	2017
Total # of calls	47	53	55	42	37
# responses less than or equal to 11 minutes	47	51	54	42	36
Percentage compliance	100%	96%	98%	100%	97%
90% of the time, travel time is less than or equal to:	7:30 minutes	5:59 – 6:25 minutes	6:34 – 6:37 minutes	8:19 - 8:36 minutes	7:02 minutes

Station 32

Target travel time - 15 minutes

Fire Suppression – 1 st arriving unit	2013	2014	2015	2016	2017
Total # of calls	10	8	12	5	8
# responses less than or equal to 15 minutes	10	8	10	5	7
Percentage compliance	100%	100%	83%	100%	87%
90% of the time, travel time is less than or equal to:	13:27 minutes	11:17 minutes	13:07- 16:12 minutes	13:37- 13:47 minutes	9:43 minutes

Fire Suppression – 1st Arriving Unit, continued

Station 33

Target travel time - 13 minutes

Fire Suppression – 1 st arriving unit	2013	2014	2015	2016	2017
Total # of calls	27	32	46	34	28
# responses less than or equal to 13 minutes	27	32	45	34	26
Percentage compliance	100%	100%	97%	100%	93%
90% of the time, travel time is less than or equal to:	7:44 minutes	7:19 minutes	6:39 minutes	7:07 - 7:37 minutes	8:32 minutes

Station 34

Target travel time - 13 minutes

Fire Suppression – 1 st arriving unit	2013	2014	2015	2016	2017
Total # of calls	39	25	49	58	44
# responses less than or equal to 13 minutes	38	25	49	58	44
Percentage compliance	97%	100%	100%	100%	100%
90% of the time, travel time is less than or equal to:	7:15 minutes	5:13 – 5:27 minutes	8:11 minutes	8:14 minutes	7:52 minutes

Station 35

Target travel time - 14 minutes

Fire Suppression – 1 st arriving unit	2013	2014	2015	2016	2017
Total # of calls	5	3	8	10	6
# responses less than or equal to 14 minutes	5	3	8	10	6
Percentage compliance	100%	100%	100%	100%	100%
90% of the time, travel time is less than or equal to:	6:02 – 13:15 minutes	3:46 – 4:22 minutes	4:59 minutes	6:45 minutes	5:58 minutes



Travel Time Performance, Special Operations responses

Special operations responses include rescue calls and hazardous materials responses. For these types of calls, the data reflects the first fire engine to arrive on scene; a fire engine is equipped to initiate action for special operations calls. Additional resources may be requested, but this information signifies the first arriving apparatus appropriate to the incident. In the data below, Lacey Fire District has set a performance standard for all station areas of 17 minutes for the first unit to arrive, with a reliability of 90% of the time.

2017

Special Operations – 1 st arriving unit	St 31 17 mins	St 32 17 mins	St 33 17 mins	St 34 17 mins	St 35 17 mins
Total # of calls	14	2	13	20	13
For reporting compliance, 90% of the time, travel time is less than or equal to:	7:22 minutes	14:45 minutes	9:19 minutes	10:32 minutes	8:14 minutes

5 Year Comparison

All station areas

Special Ops – 1 st arriving unit	2013	2014	2015	2016	2017
Total # of calls	57	53	57	85	62
# responses less than or equal to 17 minutes	56	53	55	85	62
Percentage compliance	98%	100%	96%	100%	100%
90% of the time, travel time is less than or equal to:	10:26 minutes	9:07 minutes	10:07 – 10:20 minutes	9:43 – 9:48 minutes	10:17 minutes



Travel Time Performance, Structure Fire responses, Full First Alarm Assignment

The District has defined a full first alarm assignment for a residential structure fire as 3 engines, a ladder truck, a Battalion Chief, an EMS vehicle, and a Chief Officer. The performance standard for a full first alarm assignment is that all units required for a full first alarm assignment arrive within 17 minutes, 90% of the time. This applies to all station areas.

2017

Full 1 st alarm assignment, for a structure fire	St 31 17 mins	St 32 17 mins	St 33 17 mins	St 34 17 mins	St 35 17 mins
Total # of calls to residential structure fires	12	3	12	12	0
# of calls that had full 1 st alarm assignment on scene within 17 minutes or less	4	0	5	3	
Percentage compliance	33%	0%	41%	25%	NA

5 Year Comparison

All station areas

Full 1 st alarm assignment, for a structure fire	2013	2014	2015	2016	2017
Total # of calls to residential structure fires	37	36	56	47	39
# full first alarm assignments responses less than or equal to 17 minutes	12	12	21	21	12
Percentage compliance	32%	33%	37%	44%	31%

This information reflects calls that are classified within the National Fire Incident Reporting System (NFIRS) as “structure fires,” however the NFIRS system requires fires that are out on arrival and very minor fires such as one involving only siding to be classified as “structure” fires. Using this system provides consistency, however it also creates a situation where the numbers reported appear to show that Lacey Fire is below expected performance. The actuality is that when Lacey Fire responds to one of these more minor calls and discovers that a full first alarm is not needed, resources are turned back; artificially creating less-than-expected performance numbers. There are an additional 12 calls where one or more units was cancelled, thus a full first alarm assignment did not arrive.

Predictable Consequences

Extended time and insufficient resources are the enemies of successful outcomes on emergency responses. A critical point for emergency incidents is around 6-8 minutes from the time of dispatch. In heart attacks, brain death occurs around 4-6 minutes. In a structure fire a condition called flashover - where survivability drops to nearly zero and fire spreads explosively throughout the structure - occurs around 8 minutes.

In 2017, 90% of the time, the first arriving engine was at a fire scene (not including wildland) within 10 minutes 32 seconds from time of dispatch (turnout time and travel time combined).

Predictable consequences for a fire, as time passes without intervention, are fire growth that leads to decreased survivability and increased fire damage and property loss. For a medical call, predictable outcomes of later intervention include decreased likelihood of successful resuscitation; increased risk of death from bleeding, strokes, or serious medical problems; decreased survivability from major trauma such as in a motor vehicle accident; and the possibility of prolonged recovery and rehabilitation should the patient survive the medical emergency.



Plan for Achieving Compliance

Fundamentally, significant improvements in response times are gained through an increased number of staffed units readily available to respond and/or the strategic distribution of fire stations within geographic areas. As call volume has continued to increase (nearly 10% since 2015), the number of immediately available staffed units has been increasingly challenged by overlapping responses.

In 2012 the District implemented an Operational Plan with strategic distribution of resources based on call volume, insurance rating requirements and District needs. This plan identified average response time goals for all calls in station areas. This operational plan remains in effect and performance related to this plan is shown below.

Operational Response Plan goals - Average Response Time (alarm to arrival), for all Calls in District area						
	Apparatus staffed	Time Goal	2014	2015	2016	2017
Station 31 (Franz St)	<ul style="list-style-type: none"> ▪ Engine 31 ▪ Ladder Truck 31 ▪ Battalion 31 ▪ Medic 3 	6:00 – 7:00 minutes	6:25 minutes	6:19 minutes	6:24 minutes	6:16 minutes
Station 32 (Yelm Highway)		9:00 – 11:00 minutes	11:03 minutes	10:58 minutes	10:39 minutes	11:05 minutes
Station 33 (Mullen Rd)	<ul style="list-style-type: none"> ▪ Engine 33 ▪ Aid Unit 33 (peak hours) 	7:00 – 8:00 minutes	7:44 minutes	7:40 minutes	7:35 minutes	7:34 minutes
Station 34 (Steilacoom Rd)	<ul style="list-style-type: none"> ▪ Engine 34 ▪ Medic 6 	7:00 – 8:00 minutes	7:00 minutes	7:04 minutes	6:48 minutes	6:57 minutes
Station 35 (Willamette)	<ul style="list-style-type: none"> ▪ Engine 35 	9:00 minutes	7:06 minutes	7:12 minutes	6:53 minutes	6:55 minutes

The addition of a peak time Aid Unit in 2017 allowed the District to continue to meet nearly all response time goals set forth in the Operational Plan despite an increase in call volume of approximately 75 calls per month. Adopted performance standards were also met and exceeded in most cases.

