



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



Response Time Compliance Report
For 2015

March 2016

EXECUTIVE SUMMARY

In 2015 Lacey Fire District was dispatched 12,693 times, a call volume about 8% higher than in 2014. This number of calls equates to an average of one dispatch about every 41 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 11 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.

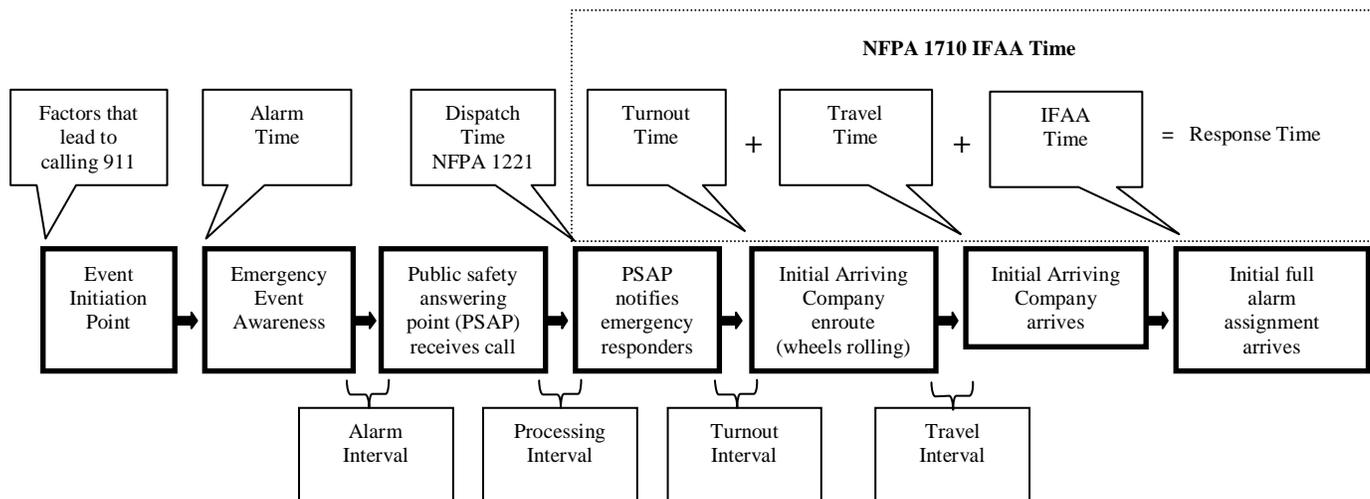


Response Time Compliance

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)

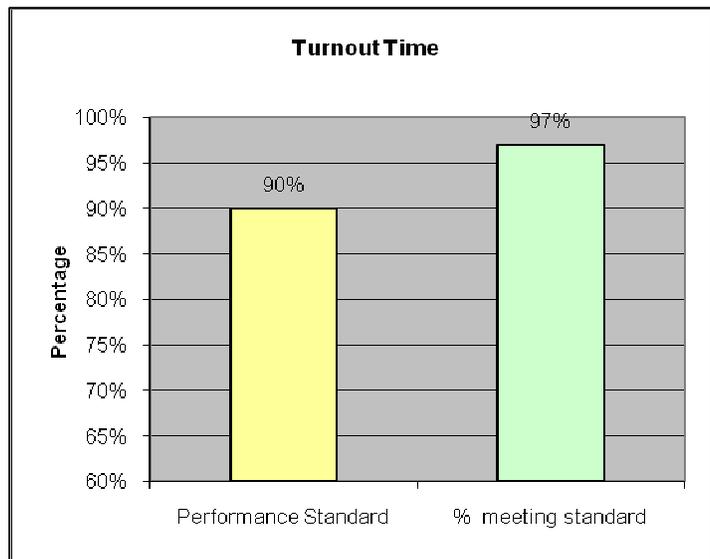
Turnout Time

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.**

In analyzing turnout times, the District looked at all units responding to all incidents. Some incidents have multiple units dispatched and responding so the total number of units with turnout times will be greater than the number of incidents. In 2015, there were 12,693 incidents and the total number of units that responded to these incidents was 16,687.

- 90% of the time the District had a turnout time of 2:16 or less.
- 97% of the responses achieved the stated standard of 3 minutes or less.



The average turnout time for responding units was 1 minute 18 seconds in 2015.

Turnout Time Over 5 years

	2011	2012	2013	2014	2015
# of calls	10,653	11,225	10,793	11,766	12,693
Total # of apparatus that responded to all calls (many calls have multiple apparatus responding)	14,422	15,081	13,342	16,456	16,687
90% turnout time	2:14 – 2:15 minutes	2:15 minutes	2:18 – 2:19 minutes	2:20 minutes	2:15 – 2:16 minutes

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 that can provide emergency medical care. This 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.

2015

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	3064	489	2393	1746	528
For reporting compliance, 90% of the time, travel time is less than or equal to:	7:00 – 7:01 minutes	12:53 minutes	8:20 minutes	8:29 minutes	8:22 minutes

5 Year Comparison

Station 31

Target travel time - 11 minutes

EMS – 1 st arriving unit	2011	2012	2013	2014	2015
Total # of calls	2797	2595	2674	2937	3064
# responses less than or equal to 11 minutes	2740	2529	2625	2889	3008
Percentage compliance	98%	97%	98%	98%	98%
90% of the time, travel time is less than or equal to:	6:49 minutes	7:25 minutes	6:54 minutes	6:50-6:51 minutes	7:00 – 7:01 minutes

Station 32

Target travel time - 15 minutes

EMS – 1 st arriving unit	2011	2012	2013	2014	2015
Total # of calls	388	433	499	495	489
# responses less than or equal to 15 minutes	376	403	487	472	473
Percentage compliance	97%	93%	97%	95%	96%
90% of the time, travel time is less than or equal to:	12:41 minutes	13:26 minutes	12:08 minutes	12:46 minutes	12:53 minutes

EMS – 1st Arriving Unit, continued

Station 33

Target travel time - 13 minutes

EMS – 1 st arriving unit	2011	2012	2013	2014	2015
Total # of calls	1696	1778	1890	2167	2393
# responses less than or equal to 13 minutes	1660	1729	1843	2110	2338
Percentage compliance	98%	97%	97%	97%	98%
90% of the time, travel time is less than or equal to:	8:27 minutes	8:52 minutes	8:37 – 8:38 minutes	8:34 minutes	8:20 minutes

Station 34

Target travel time - 13 minutes

EMS – 1 st arriving unit	2011	2012	2013	2014	2015
Total # of calls	1575	1468	1568	1701	1746
# responses less than or equal to 13 minutes	1525	1427	1534	1658	1691
Percentage compliance	97%	97%	98%	97%	97%
90% of the time, travel time is less than or equal to:	9:01 minutes	8:36 minutes	8:05 minutes	8:18-8:20 minutes	8:29 minutes

Station 35

Target travel time - 14 minutes

EMS – 1 st arriving unit	2011	2012	2013	2014	2015
Total # of calls	324	336	333	441	528
# responses less than or equal to 14 minutes	318	310	322	431	517
Percentage compliance	98%	92%	97%	97%	98%
90% of the time, travel time is less than or equal to:	9:37 minutes	12:54 minutes	10:42 – 10:54 minutes	8:31 minutes	8:22 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.

2015

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	27	9	16	42	12
For reporting compliance, 90% of the time, travel time is less than or equal to:	8:25 minutes	16:03 minutes	9:20 minutes	8:18 – 8:45 minutes	6:22 minutes

5 Year Comparison

Station 31

Target travel time - 11 minutes

Wildland – 1 st arriving unit	2011	2012	2013	2014	2015
Total # of calls	18	20	15	16	27
# responses less than or equal to 11 minutes	17	19	15	16	27
Percentage compliance	94%	95%	100%	100%	100%
90% of the time, travel time is less than or equal to:	7:21 minutes	8:45 minutes	5:03 – 5:27 minutes	7:36 minutes	8:25 minutes

Station 32

Target travel time - 15 minutes

Wildland – 1 st arriving unit	2011	2012	2013	2014	2015
Total # of calls	5	3	4	4	9
# responses less than or equal to 13 minutes	5	3	3	4	6
Percentage compliance	100%	100%	75%	100%	66%
90% of the time, travel time is less than or equal to:	12:34 minutes	11:08 minutes	10:41 – 30:46 minutes	11:42 – 12:05 minutes	16:03 minutes

Wildland – 1st Arriving Unit, continued

Station 33

Target travel time - 13 minutes

Wildland – 1 st arriving unit	2011	2012	2013	2014	2015
Total # of calls	5	11	14	3	16
# responses less than or equal to 13 minutes	5	11	13	3	15
Percentage compliance	100%	100%	93%	100%	93%
90% of the time, travel time is less than or equal to:	8:30 minutes	8:09 minutes	10:04 minutes	8:15 – 9:33 minutes	9:20 minutes

Station 34

Target travel time - 13 minutes

Wildland – 1 st arriving unit	2011	2012	2013	2014	2015
Total # of calls	25	19	29	42	42
# responses less than or equal to 13 minutes	24	19	29	41	41
Percentage compliance	96%	100%	100%	97%	97%
90% of the time, travel time is less than or equal to:	9:10 minutes	8:14 minutes	6:51 minutes	8:38 – 8:41 minutes	8:18 – 8:45 minutes

Station 35

Target travel time - 14 minutes

Wildland – 1 st arriving unit	2011	2012	2013	2014	2015
Total # of calls	6	6	8	6	12
# responses less than or equal to 14 minutes	6	5	8	6	12
Percentage compliance	100%	83%	100%	100%	100%
90% of the time, travel time is less than or equal to:	7:40 minutes	10:58 minutes	6:02 – 8:13 minutes	6:48 minutes	6:22 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.

2015

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	55	12	46	49	8
For reporting compliance, 90% of the time, travel time is less than or equal to:	6:34 – 6:37 minutes	13:07- 16:12 minutes	6:39 minutes	8:11 minutes	4:59 minutes

5 Year Comparison

Station 31

Target travel time - 11 minutes

Fire Suppression – 1 st arriving unit	2011	2012	2013	2014	2015
Total # of calls	58	45	47	53	55
# responses less than or equal to 11 minutes	57	45	47	51	54
Percentage compliance	98%	100%	100%	96%	98%
90% of the time, travel time is less than or equal to:	7:28 minutes	6:31 minutes	7:30 minutes	5:59 – 6:25 minutes	6:34 – 6:37 minutes

Station 32

Target travel time - 15 minutes

Fire Suppression – 1 st arriving unit	2011	2012	2013	2014	2015
Total # of calls	23	8	10	8	12
# responses less than or equal to 15 minutes	17	7	10	8	10
Percentage compliance	74%	87%	100%	100%	83%
90% of the time, travel time is less than or equal to:	26:28 minutes	11:02 minutes	13:27 minutes	11:17 minutes	13:07- 16:12 minutes

Fire Suppression – 1st Arriving Unit, continued

Station 33

Target travel time - 13 minutes

Fire Suppression – 1 st arriving unit	2011	2012	2013	2014	2015
Total # of calls	56	40	27	32	46
# responses less than or equal to 13 minutes	55	40	27	32	45
Percentage compliance	98%	100%	100%	100%	97%
90% of the time, travel time is less than or equal to:	8:28 minutes	8:54 minutes	7:44 minutes	7:19 minutes	6:39 minutes

Station 34

Target travel time - 13 minutes

Fire Suppression – 1 st arriving unit	2011	2012	2013	2014	2015
Total # of calls	55	45	39	25	49
# responses less than or equal to 13 minutes	55	44	38	25	49
Percentage compliance	100%	97%	97%	100%	100%
90% of the time, travel time is less than or equal to:	9:13 minutes	10:57 minutes	7:15 minutes	5:13 – 5:27 minutes	8:11 minutes

Station 35

Target travel time - 14 minutes

Fire Suppression – 1 st arriving unit	2011	2012	2013	2014	2015
Total # of calls	6	5	5	3	8
# responses less than or equal to 14 minutes	6	5	5	3	8
Percentage compliance	100%	100%	100%	100%	100%
90% of the time, travel time is less than or equal to:	13:32 minutes	11:01 minutes	6:02 – 13:15 minutes	3:46 – 4:22 minutes	4:59 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 engine. 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.

2015

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	13	3	13	23	5
For reporting compliance, 90% of the time, travel time is less than or equal to:	6:37 – 6:50 minutes	17:57 minutes	5:25 – 5:29 minutes	10:20 minutes	5:27 minutes

5 Year Comparison

All station areas

Special Ops – 1 st arriving unit	2011	2012	2013	2014	2015
Total # of calls	49	51	57	53	57
# responses less than or equal to 17 minutes	48	51	56	53	55
Percentage compliance	98%	100%	98%	100%	96%
90% of the time, travel time is less than or equal to:	11:14 minutes	8:01 minutes	10:26 minutes	9:07 minutes	10:07 – 10:20 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.

2015

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	20	5	17	12	2
# of calls that had full 1 st alarm assignment on scene within 17 minutes or less	4	2	8	6	1
Percentage compliance	20%	40%	47%	50%	50%

5 Year Comparison

All station areas

Full 1 st alarm assignment, for a structure fire	2011	2012	2013	2014	2015
Total # of calls to residential structure fires	56	33	37	36	56
# full first alarm assignments responses less than or equal to 17 minutes	3	9	12	12	21
Percentage compliance	5%	27%	32%	33%	37%

The above information reflects calls that are classified within the National Fire Incident Reporting System (NFIRS) as “structure fires,” but the reporting system is arranged in such a way that requires coding fires out on arrival and very minor fires such as a fire involving only siding as “structure” fires. This has the impact of including many more fires into the performance report that were really not active fires nor required all the resources of a full first alarm assignment (FFAA).

While not dismissing the impact to a homeowner of even a small kitchen fire out on arrival, of the 37 actual fires where District personnel extinguished a structure fire, the District met performance standards 51% of the time.

Predictable Consequences

Time and competent 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 2015, 90% of the time, the first arriving engine was at a fire scene (not including wildland) within 8 minutes 8 seconds from time of dispatch.

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 (10% in 2014 and another 8% in 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.

Average Response Time (alarm to arrival), All Calls in District area					
	Apparatus staffed	Time Goal	2013	2014	2015
Station 31 (Franz St)	<ul style="list-style-type: none"> • Engine 31 • Ladder Truck 31 • Battalion 31 • Medic 3 	6:00 – 7:00 minutes	6:24 minutes	6:25 minutes	6:19 minutes
Station 32 (Yelm Highway)		9:00 – 11:00 minutes	10:57 minutes	11:03 minutes	10:58 minutes
Station 33 (Mullen Rd)	<ul style="list-style-type: none"> • Engine 33 	7:00 – 8:00 minutes	7:39 minutes	7:44 minutes	7:40 minutes
Station 34 (Steilacoom Rd)	<ul style="list-style-type: none"> • Engine 34 • Medic 6 	7:00 – 8:00 minutes	6:55 minutes	7:00 minutes	7:04 minutes
Station 35 (Willamette)	<ul style="list-style-type: none"> • Engine 35 	9:00 minutes	8:21 minutes	7:06 minutes	7:12 minutes

In 2015, the District was able to meet all response time goals set forth in the Operational Plan, as well as meet nearly all of the adopted Performance Standards. Areas of the District without a staffed station in the response area, and full first alarm assignment fires continue to experience response time performance below that expected for an agency of our size. The District anticipates reviewing the full first alarm assignment requirements in 2016.

