



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



## Response Time Compliance Report For 2014

March 2015

## EXECUTIVE SUMMARY

In 2014 Lacey Fire District was dispatched 11,766 times; this equates to an average of one dispatch about every 45 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. This call volume is about 10% higher than in 2013.

The average response time (alarm to arrival) for the first arriving District unit at a call (including all call types) is 7 minutes 15 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. Additionally, fire service agencies were required to evaluate their performance against their adopted standards on an annual basis based on data from each geographical area of the agency, and to 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 Districts' Emergency Response Reporting Standards. These standards and this report serve as official compliance with Chapter 52.33 RCW and set forth our performance measures.

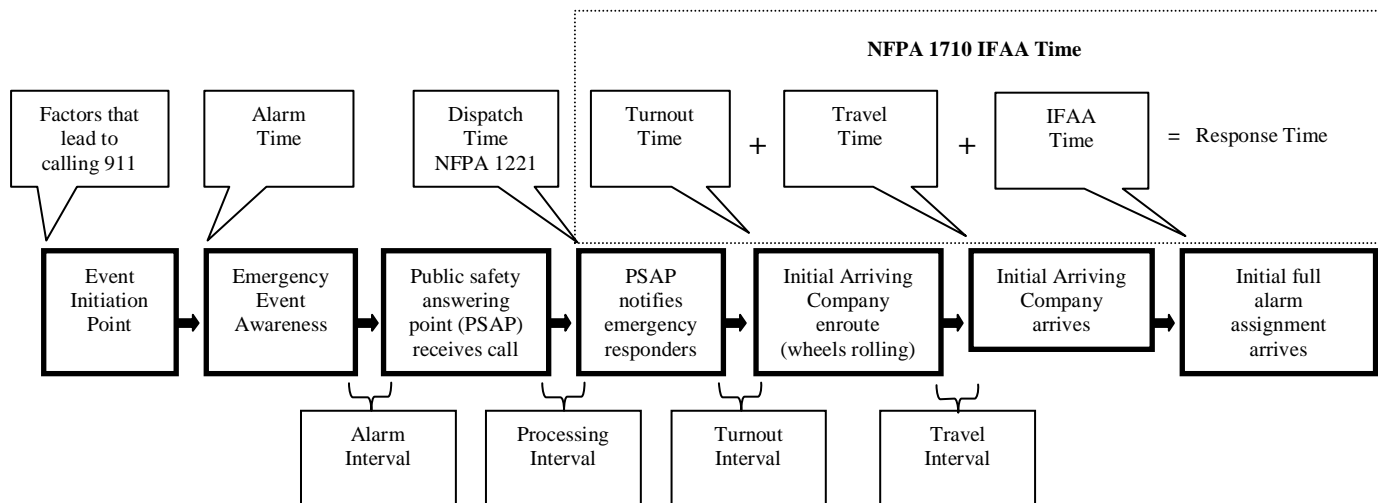


## Response Time Compliance

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)

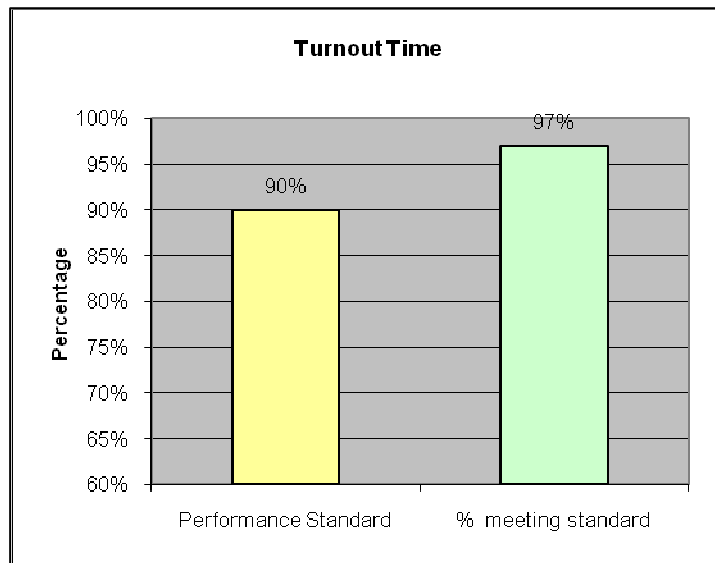
## Turnout Time

**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 2014, there were 11,766 incidents and the total number of units that responded to these incidents was 16,456.

- 90% of the time the District had a turnout time of 2:20 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 20 seconds in 2014.

### Turnout Time Over 5 years

	2010	2011	2012	2013	2014
# of calls	10,796	10,653	11,225	10,793	11,766
Total # of apparatus that responded to all calls (some calls have multiple apparatus responding)	13,068	14,422	15,081	13,342	16,456
90% turnout time	2:15 minutes	2:14 – 2:15 minutes	2:15 minutes	2:18 – 2:19 minutes	2:20 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 <sup>st</sup> 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.

### 2014

EMS – 1 <sup>st</sup> 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	2937	495	2167	1701	441
For reporting compliance, 90% of the time, travel time is less than or equal to:	6:50-6:51 minutes	12:46 minutes	8:34 minutes	8:18 -8:20 minutes	8:31 minutes

## 5 Year Comparison

### Station 31

Target travel time - 11 minutes

EMS – 1 <sup>st</sup> arriving unit	2010	2011	2012	2013	2014
Total # of calls	2802	2797	2595	2674	2937
# responses less than or equal to 11 minutes	2724	2740	2529	2625	2889
Percentage compliance	97%	98%	97%	98%	98%
90% of the time, travel time is less than or equal to:	7:10 minutes	6:49 minutes	7:25 minutes	6:54 minutes	6:50-6:51 minutes

### Station 32

Target travel time - 15 minutes

EMS – 1 <sup>st</sup> arriving unit	2010	2011	2012	2013	2014
Total # of calls	445	388	433	499	495
# responses less than or equal to 15 minutes	428	376	403	487	472
Percentage compliance	96%	97%	93%	97%	95%
90% of the time, travel time is less than or equal to:	12:59 minutes	12:41 minutes	13:26 minutes	12:08 minutes	12:46 minutes

EMS – 1<sup>st</sup> Arriving Unit, continued

**Station 33**

Target travel time - 13 minutes

EMS – 1 <sup>st</sup> arriving unit	2010	2011	2012	2013	2014
Total # of calls	1657	1696	1778	1890	2167
# responses less than or equal to 13 minutes	1620	1660	1729	1843	2110
Percentage compliance	98%	98%	97%	97%	97%
90% of the time, travel time is less than or equal to:	8:29 minutes	8:27 minutes	8:52 minutes	8:37 – 8:38 minutes	8:34 minutes

**Station 34**

Target travel time - 13 minutes

EMS – 1 <sup>st</sup> arriving unit	2010	2011	2012	2013	2014
Total # of calls	1463	1575	1468	1568	1701
# responses less than or equal to 13 minutes	1423	1525	1427	1534	1658
Percentage compliance	97%	97%	97%	98%	97%
90% of the time, travel time is less than or equal to:	8:49 minutes	9:01 minutes	8:36 minutes	8:05 minutes	8:18-8:20 minutes

**Station 35**

Target travel time - 14 minutes

EMS – 1 <sup>st</sup> arriving unit	2010	2011	2012	2013	2014
Total # of calls	263	324	336	333	441
# responses less than or equal to 14 minutes	257	318	310	322	431
Percentage compliance	98%	98%	92%	97%	97%
90% of the time, travel time is less than or equal to:	8:52 minutes	9:37 minutes	12:54 minutes	10:42 – 10:54 minutes	8:31 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.

### 2014

Wildland – 1 <sup>st</sup> 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	16	4	3	42	6
For reporting compliance, 90% of the time, travel time is less than or equal to:	7:36 minutes	11:42 – 12:05 minutes	8:15 – 9:33 minutes	8:38 – 8:41 minutes	6:48 minutes

### 5 Year Comparison

#### Station 31

Target travel time - 11 minutes

Wildland – 1 <sup>st</sup> arriving unit	2010	2011	2012	2013	2014
Total # of calls	25	18	20	15	16
# responses less than or equal to 11 minutes	25	17	19	15	16
Percentage compliance	100%	94%	95%	100%	100%
90% of the time, travel time is less than or equal to:	6:59 minutes	7:21 minutes	8:45 minutes	5:03 – 5:27 minutes	7:36 minutes

#### Station 32

Target travel time - 15 minutes

Wildland – 1 <sup>st</sup> arriving unit	2010	2011	2012	2013	2014
Total # of calls	3	5	3	4	4
# responses less than or equal to 13 minutes	3	5	3	3	4
Percentage compliance	100%	100%	100%	75%	100%
90% of the time, travel time is less than or equal to:	10:11 minutes	12:34 minutes	11:08 minutes	10:41 – 30:46 minutes	11:42 – 12:05 minutes



## Wildland – 1<sup>st</sup> Arriving Unit, continued

### Station 33

Target travel time - 13 minutes

Wildland – 1 <sup>st</sup> arriving unit	2010	2011	2012	2013	2014
Total # of calls	12	5	11	14	3
# responses less than or equal to 13 minutes	12	5	11	13	3
Percentage compliance	100%	100%	100%	93%	100%
90% of the time, travel time is less than or equal to:	7:38 minutes	8:30 minutes	8:09 minutes	10:04 minutes	8:15 – 9:33 minutes

### Station 34

Target travel time - 13 minutes

Wildland – 1 <sup>st</sup> arriving unit	2010	2011	2012	2013	2014
Total # of calls	16	25	19	29	42
# responses less than or equal to 13 minutes	16	24	19	29	41
Percentage compliance	100%	96%	100%	100%	97%
90% of the time, travel time is less than or equal to:	10:08 minutes	9:10 minutes	8:14 minutes	6:51 minutes	8:38 – 8:41 minutes

### Station 35

Target travel time - 14 minutes

Wildland – 1 <sup>st</sup> arriving unit	2010	2011	2012	2013	2014
Total # of calls	10	6	6	8	6
# responses less than or equal to 14 minutes	10	6	5	8	6
Percentage compliance	100%	100%	83%	100%	100%
90% of the time, travel time is less than or equal to:	8:46 minutes	7:40 minutes	10:58 minutes	6:02 – 8:13 minutes	6:48 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.

### 2014

Fire Suppression – 1 <sup>st</sup> 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	53	8	32	25	3
For reporting compliance, 90% of the time, travel time is less than or equal to:	5:59-6:25 minutes	11:17 minutes	7:19 minutes	5:13-5:27 minutes	3:46-4:22 minutes

### 5 Year Comparison

#### Station 31

Target travel time - 11 minutes

Fire Suppression – 1 <sup>st</sup> arriving unit	2010	2011	2012	2013	2014
Total # of calls	53	58	45	47	53
# responses less than or equal to 11 minutes	53	57	45	47	51
Percentage compliance	100%	98%	100%	100%	96%
90% of the time, travel time is less than or equal to:	7:04 minutes	7:28 minutes	6:31 minutes	7:30 minutes	5:59 – 6:25 minutes

#### Station 32

Target travel time - 15 minutes

Fire Suppression – 1 <sup>st</sup> arriving unit	2010	2011	2012	2013	2014
Total # of calls	10	23	8	10	8
# responses less than or equal to 15 minutes	9	17	7	10	8
Percentage compliance	90%	74%	87%	100%	100%
90% of the time, travel time is less than or equal to:	11:43 minutes	26:28 minutes	11:02 minutes	13:27 minutes	11:17 minutes

## Fire Suppression – 1<sup>st</sup> Arriving Unit, continued

### Station 33

Target travel time - 13 minutes

Fire Suppression – 1 <sup>st</sup> arriving unit	2010	2011	2012	2013	2014
Total # of calls	34	56	40	27	32
# responses less than or equal to 13 minutes	34	55	40	27	32
Percentage compliance	100%	98%	100%	100%	100%
90% of the time, travel time is less than or equal to:	8:23 minutes	8:28 minutes	8:54 minutes	7:44 minutes	7:19 minutes

### Station 34

Target travel time - 13 minutes

Fire Suppression – 1 <sup>st</sup> arriving unit	2010	2011	2012	2013	2014
Total # of calls	38	55	45	39	25
# responses less than or equal to 13 minutes	38	55	44	38	25
Percentage compliance	100%	100%	97%	97%	100%
90% of the time, travel time is less than or equal to:	7:20 minutes	9:13 minutes	10:57 minutes	7:15 minutes	5:13 – 5:27 minutes

### Station 35

Target travel time - 14 minutes

Fire Suppression – 1 <sup>st</sup> arriving unit	2010	2011	2012	2013	2014
Total # of calls	7	6	5	5	3
# responses less than or equal to 14 minutes	7	6	5	5	3
Percentage compliance	100%	100%	100%	100%	100%
90% of the time, travel time is less than or equal to:	10:08 minutes	13:32 minutes	11:01 minutes	6:02 – 13:15 minutes	3:46 – 4:22 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.

### 2014

Special Operations – 1 <sup>st</sup> 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	15	1	18	10	9
For reporting compliance, 90% of the time, travel time is less than or equal to:	5:43-7:06 minutes	16:17 minutes	9:07 minutes	5:07 minutes	6:24 minutes

### 5 Year Comparison

#### All station areas

Special Ops – 1 <sup>st</sup> arriving unit	2010	2011	2012	2013	2014
Total # of calls	57	49	51	57	53
# responses less than or equal to 17 minutes	57	48	51	56	53
Percentage compliance	100	98%	100%	98%	100%
90% of the time, travel time is less than or equal to:	9:30 minutes	11:14 minutes	8:01 minutes	10:26 minutes	9:07 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.

### 2014

Full 1 <sup>st</sup> alarm assignment, 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	11	1	12	10	2
# of calls that had full 1 <sup>st</sup> alarm assignment on scene within 17 minutes or less	3	0	6	3	0
Percentage compliance	27%	0%	50%	30%	0%

### 5 Year Comparison

#### All station areas

Full 1 <sup>st</sup> alarm assignment, residential structure fire	2010	2011	2012	2013	2014
Total # of structure fire responses needing full alarm assignment	28	56	33	37	36
# full first alarm assignments responses less than or equal to 17 minutes	4	3	9	12	12
Percentage compliance	14%	5%	27%	32%	33%

The above information reflects calls that are classified within National Fire Incident Reporting system 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 or did not require 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 nineteen actual fires requiring all the resources of a FFAA, the District met performance standards 52% 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 2014, 90% of the time, the first arriving engine was at a fire scene (not including wildland) within 7 minutes 19 seconds from time of dispatch, a more than 3 minute improvement from 2013 (from 10:36 to 7:19).

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.

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	2012	2013	2014
Station 31 (Franz St)	Engine 31 Ladder Truck 31 Battalion 31 Medic 3	6:00 – 7:00 minutes	6:48 minutes	6:24 minutes	6:25 minutes
Station 32 (Yelm Hiway)		9:00 – 11:00 minutes	12:18 minutes	10:57 minutes	11:03 minutes
Station 33 (Mullen Rd)	Engine 33	7:00 – 8:00 minutes	7:52 minutes	7:39 minutes	7:44 minutes
Station 34 (Steilacoom Rd)	Engine 34 Medic 6	7:00 – 8:00 minutes	7:17 minutes	6:55 minutes	7:00 minutes
Station 35 (Willamette)	Engine 35	9:00 minutes	9:56 minutes	8:21 minutes	7:06 minutes

In 2014 District was able to meet nearly 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. This can be directly attributed to daily minimum staffing below that expected for an agency of our size, staffed station locations and call volume.