



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



Response Time Compliance Report For 2010

February 2011

EXECUTIVE SUMMARY

In 2010 Lacey Fire District was dispatched 10,796 times equating to an average of one dispatch about every 48 minutes, every hour of every day during the whole year. Station 31, the headquarters station, experienced a “call overlap” of nearly 40%, which means that 40% of the time a second call was dispatched while the first call was still being managed. Other stations within the District are experiencing a call overlap volume from 10% to 28%.

The emergency response personnel of the District continue to execute their duties with an eye to continuing improvements, and this can be seen throughout the performance report. However, while the District has met or exceeded nearly all of the adopted performance standards, predictable outcomes and reliability of response performance are less than what is expected for an agency of our size and responsibility. Currently, with a budget-driven minimum daily staffing of 14 emergency responders, there are insufficient personnel to consistently place a 3-person staffed engine at each station, to consistently staff all units necessary for a full first alarm assignment, and to provide additional staffed units at the busiest stations to manage multiple calls. This situation impacts firefighter and citizen safety, and our ability to meet our established standards for structure fire responses.

PRIMARY AREA OF CONCERN SUMMARY

With the increasing call volume experienced by the District, the effects of a daily staffing minimum of 14 personnel and a subsequent limited number of staffed units include:

- 1) Potentially longer response times as units are pulled from their main response area to cover calls in other station areas. Predictable outcomes of longer response times include increased severity for medical emergencies and increased property damage as fires grow from a single room to an entire structure.
- 2) There are an insufficient number of personnel to consistently staff a 3-person engine at Station 35. Predictable outcomes without a 3-person engine include decreased chances of successful rescue of trapped occupants, greater property damage and increased risk for citizens and firefighters.
- 3) There are insufficient personnel to consistently staff the ladder truck, which provides critical fire and rescue functions. Predictable outcomes without a ladder truck are increased risk for civilians and firefighters, and an inability to meet our established performance standards for a full first alarm assignment. (*See page 14 for details*)
- 4) A single structure fire will require the entire daily minimum resource pool of the District and additional resources. Predictable consequences are increased reliance on mutual aid, creating longer response times and increased risk for citizens in our District and neighboring districts.
- 5) Mutual aid agreements depend on the District’s ability to return assistance when needed. Insufficient personnel, overlapping requests for assistance and increasing call volume threaten the ability of the District to provide return mutual aid and provide stability in mutual aid agreements.

Additional information on areas of concern, predictable consequences, and the plan for achieving compliance are presented at the end of this compliance report.

INTRODUCTION

In 2005 the Washington State Governor signed House Bill 1756 (HB 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 being served.

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 in a series of the Revised Code of Washington; Chapter 52.33 RCW Fire Departments – Performance Measures, applies specifically to fire protection districts.

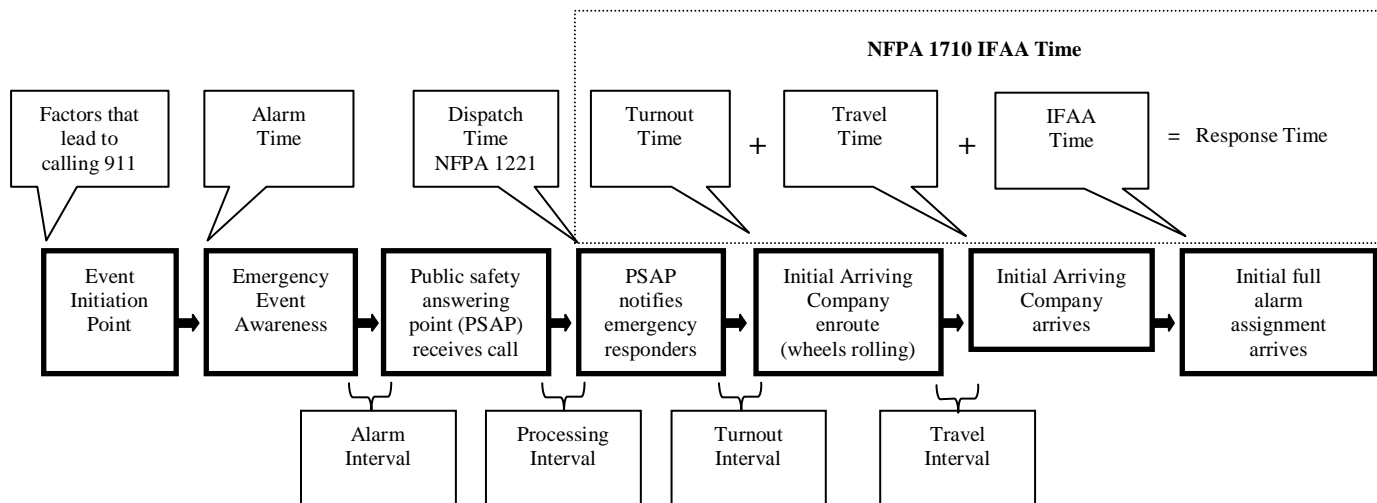
On November 1, 2007, the Lacey Fire District Board of Fire Commissioners adopted Resolution Number 783-11-07, which established the Districts' Emergency Response Reporting Standards. These standards and this report serve as official compliance with Chapter 52.33 RCW and set forth our performance measures.

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)

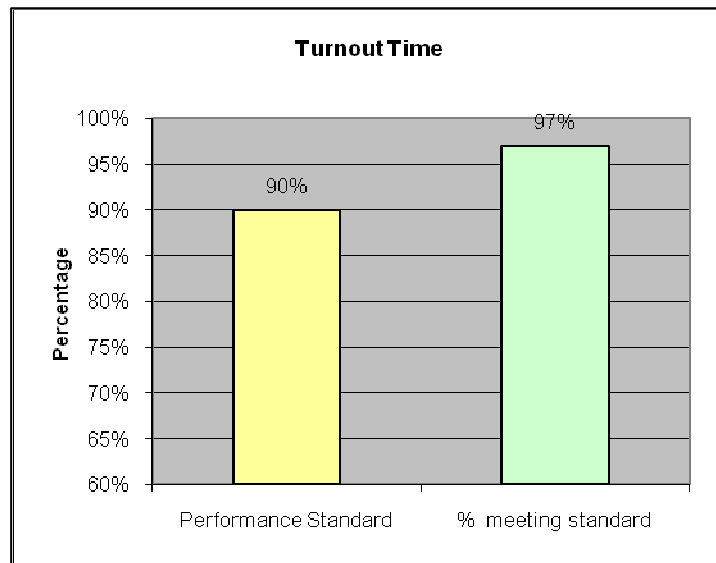
Turnout Time

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

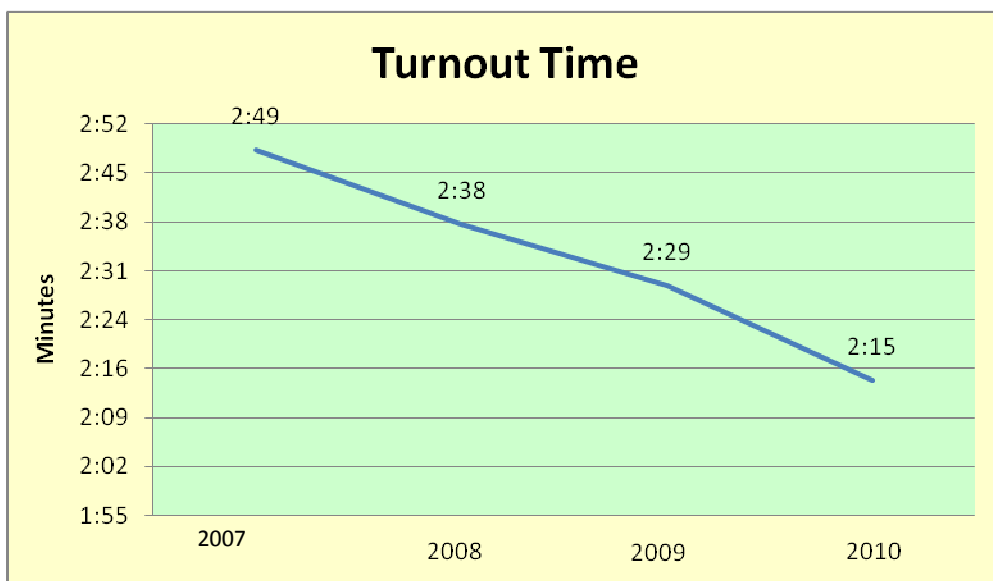
Turnout time has no geographical significance, therefore, the District set the same standard for all stations and all units. **The Turnout Time performance standard for Lacey Fire District is 3 minutes, 90% of the time.**

In analyzing turnout times, the District looked at all units responding to all incidents; some incidents have multiple units dispatched so there would be more than one turnout time associated with that incident. In 2010, there were 10,796 incidents and the total number of units that responded to these incidents was 13,068.

- 90% of the time the District had a turnout time of 2:15 or less.
- 97% of the responses had a turnout time of 3 minutes or less (11,749 / 13,068).



When turnout times for Lacey Fire District are reviewed over the last 4 years, the trend is a steady downward direction – the turnout time is decreasing - reflecting ongoing efforts by members to improve overall response times.



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 that 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 for the first arriving unit varies by station area, but the performance level of 90% applies to all areas.

2010

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	2802	445	1657	1463	263
# less than or equal to travel time target	2724	428	1620	1423	257
Percentage compliance	97%	96%	98%	97%	98%
90% of the time, travel time is less than or equal to:	7:10 minutes	12:59 minutes	8:29 minutes	8:49 minutes	8:52 minutes

4 Year Comparison

Station 31

Target travel time - 11 minutes

EMS – 1 st arriving unit	2007	2008	2009	2010
Total # of calls	2790	2776	2764	2802
# responses less than or equal to 11 minutes	2607	2674	2676	2724
Percentage compliance	93%	96%	96%	97%
90% of the time, travel time is less than or equal to:	8:48 minutes	7:52 minutes	7:21 minutes	7:10 minutes

Station 32

Target travel time - 15 minutes

EMS – 1 st arriving unit	2007	2008	2009	2010
Total # of calls	160	268	357	445
# responses less than or equal to 15 minutes	151	243	338	428
Percentage compliance	94%	90%	95%	96%
90% of the time, travel time is less than or equal to:	12:53 minutes	14:45 minutes	12:51 minutes	12:59 minutes

EMS – 1st Arriving Unit, continued

Station 33

Target travel time - 13 minutes

EMS – 1 st arriving unit	2007	2008	2009	2010
Total # of calls	1368	1355	1518	1657
# responses less than or equal to 13 minutes	1317	1313	1484	1620
Percentage compliance	96%	97%	98%	98%
90% of the time, travel time is less than or equal to:	9:32 minutes	9:16 minutes	8:16 minutes	8:29 minutes

Station 34

Target travel time - 13 minutes

EMS – 1 st arriving unit	2007	2008	2009	2010
Total # of calls	1359	1397	1387	1463
# responses less than or equal to 13 minutes	1290	1340	1339	1423
Percentage compliance	95%	96%	96%	97%
90% of the time, travel time is less than or equal to:	10:27 minutes	10:08 minutes	8:45 minutes	8:49 minutes

Station 35

Target travel time - 14 minutes

EMS – 1 st arriving unit	2007	2008	2009	2010
Total # of calls	217	301	271	263
# responses less than or equal to 14 minutes	211	282	263	257
Percentage compliance	97%	94%	97%	98%
90% of the time, travel time is less than or equal to:	10:04 minutes	11:52 minutes	10:05 minutes	8:52 minutes

Firefighters move a backboarded patient



Travel Time Performance, Wildland Fire responses

Travel time for the first arriving unit varies by station area, but the performance level of 90% applies to all areas.

2010

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	25	3	12	16	10
# less than or equal to travel time target	25	3	12	16	10
Percentage compliance	100%	100%	100%	100%	100%
90% of the time, travel time is less than or equal to:	6:59 minutes	10:11 minutes	7:38 minutes	10:08 minutes	8:46 minutes

4 Year Comparison

Station 31

Target travel time - 11 minutes

Wildland – 1 st arriving unit	2007	2008	2009	2010
Total # of calls	14	19	20	25
# responses less than or equal to 11 minutes	14	18	20	25
Percentage compliance	100%	95%	100%	100%
90% of the time, travel time is less than or equal to:	6:55 minutes	8:06 minutes	6:34 minutes	6:59 minutes

Station 32

Target travel time - 15 minutes

Wildland – 1 st arriving unit	2007	2008	2009	2010
Total # of calls	3	2	17	3
# responses less than or equal to 13 minutes	3	2	17	3
Percentage compliance	100%	100%	100%	100%
90% of the time, travel time is less than or equal to:	14:52 minutes	11:02 minutes	12:33 minutes	10:11 minutes

Wildland – 1st Arriving Unit, continued

Station 33

Target travel time - 13 minutes

Wildland – 1 st arriving unit	2007	2008	2009	2010
Total # of calls	9	24	21	12
# responses less than or equal to 13 minutes	9	22	19	12
Percentage compliance	100%	92%	90%	100%
90% of the time, travel time is less than or equal to:	7:12 minutes	9:26 minutes	9:41 minutes	7:38 minutes

Station 34

Target travel time - 13 minutes

Wildland – 1 st arriving unit	2007	2008	2009	2010
Total # of calls	19	35	26	16
# responses less than or equal to 13 minutes	19	29	26	16
Percentage compliance	100%	83%	100%	100%
90% of the time, travel time is less than or equal to:	11:36 minutes	19:21 minutes	6:28 minutes	10:08 minutes

Station 35

Target travel time - 14 minutes

Wildland – 1 st arriving unit	2007	2008	2009	2010
Total # of calls	7	2	6	10
# responses less than or equal to 14 minutes	7	2	6	10
Percentage compliance	100%	100%	100%	100%
90% of the time, travel time is less than or equal to:	6:33 minutes	6:20 minutes	11:34 minutes	8:46 minutes

Brush fire in Lk St Clair area



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

Travel time for the first arriving unit varies by station area, but the performance level of 90% applies to all areas.

2010

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	53	10	34	38	7
# less than or equal to travel time target	53	9	34	38	7
Percentage compliance	100%	90%	100%	100%	100%
90% of the time, travel time is less than or equal to (minutes):	7:04 minutes	11:43 minutes	8:23 minutes	7:20 minutes	10:08 minutes

4 Year Comparison

Station 31

Target travel time - 11 minutes

Fire Suppression – 1 st arriving unit	2007	2008	2009	2010
Total # of calls	84	45	50	53
# responses less than or equal to 11 minutes	77	44	49	53
Percentage compliance	91%	98%	98%	100%
90% of the time, travel time is less than or equal to:	10:31 minutes	7:27 minutes	6:40 minutes	7:04 minutes

Station 32

Target travel time - 15 minutes

Fire Suppression – 1 st arriving unit	2007	2008	2009	2010
Total # of calls	5	10	11	10
# responses less than or equal to 15 minutes	5	9	10	9
Percentage compliance	100%	90%	91%	90%
90% of the time, travel time is less than or equal to:	8:07 minutes	12:10 minutes	14:43 minutes	11:43 minutes

Fire Suppression – 1st Arriving Unit, continued

Station 33

Target travel time - 13 minutes

Fire Suppression – 1 st arriving unit	2007	2008	2009	2010
Total # of calls	54	27	26	34
# responses less than or equal to 13 minutes	52	25	26	34
Percentage compliance	96%	92%	100%	100%
90% of the time, travel time is less than or equal to:	9:48 minutes	9:22 minutes	6:06 minutes	8:23 minutes

Station 34

Target travel time - 13 minutes

Fire Suppression – 1 st arriving unit	2007	2008	2009	2010
Total # of calls	62	47	53	38
# responses less than or equal to 13 minutes	60	46	52	38
Percentage compliance	97%	98%	98%	100%
90% of the time, travel time is less than or equal to:	10:55 minutes	8:06 minutes	7:27 minutes	7:20 minutes

Station 35

Target travel time - 14 minutes

Fire Suppression – 1 st arriving unit	2007	2008	2009	2010
Total # of calls	12	10	4	7
# responses less than or equal to 14 minutes	12	9	4	7
Percentage compliance	100%	90%	100%	100%
90% of the time, travel time is less than or equal to:	9:12 minutes	11:53 minutes	9:29 minutes	10:08 minutes

A firefighter extinguishes a car fire



Travel Time Performance, Special Operations responses

Special operations responses include rescue calls and hazardous materials responses. Lacey Fire District has set a performance standard for all station areas of 17 minutes for the first unit to arrive, 90% of the time.

2010

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	26	5	6	18	2
# less than or equal to travel time target	26	5	6	18	2
Percentage compliance	100%	100%	100%	100%	100%
90% of the time, travel time is less than or equal to (minutes):	7:38 minutes	14:16 minutes	9:10 minutes	8:16 minutes	4:35 minutes

4 Year Comparison

All station areas

Special Ops – 1 st arriving unit	2007	2008	2009	2010
Total # of calls	70	81	40	57
# responses less than or equal to 17 minutes	70	80	39	57
Percentage compliance	100%	99%	97%	100
90% of the time, travel time is less than or equal to:	8:29 minutes	9:36 minutes	10:16 minutes	9:30 minutes

Firefighters train in ice rescue techniques by rescuing a dog that (unwisely) ventured onto the ice



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.

2010

Full 1 st 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	9	2	6	8	3
# of calls that had full 1 st alarm assignment apparatus on scene	2	0	1	0	1
Percentage compliance	22%	0%	17%	0%	33%
Of the number that had full 1 st alarm assignment on scene, 90% of the time, travel time is less than or equal to (minutes):	9:04 minutes	NA	14:49 minutes	NA	15:40 minutes

4 Year Comparison

All station areas

Full 1 st alarm assignment, residential structure fire	2007	2008	2009	2010
Total # of structure fire responses needing full alarm assignment	31	17	24	28
# full first alarm assignments responses less than or equal to 17 minutes	8	2	7	4
Percentage compliance	26%	12%	29%	14%

As can be seen, in the previous pages (7-13), Lacey Fire District meets or exceeds the performance standard in every response category except for the full first alarm assignment (above). This deficiency is fundamentally a function of budget constraints and the minimum daily staffing of 14 personnel; when only 14 personnel are on duty, there are insufficient personnel to staff the ladder truck without unstaffing another response unit, and overlapping calls find units are more often committed to a previous call and cannot respond to the concurrent fire call.

Predictable Consequences

Time is an enemy 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. Our current response capabilities equate to a total response time (turnout plus travel) between 9:14 and 15:14 minutes from dispatch. Additional time may be needed for a full first alarm assignment for a structure fire.

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. Budgeting constraints currently prevent much movement toward these solutions.

Recognizing ongoing limitations in funding, in 2009 the District applied for and received a federal Staffing Assistance for Emergency Response (SAFER) grant. This grant, which will provide funding for the next four years, must be specifically directed towards recruiting and retaining volunteer emergency responders. In this way the District continues to look for and implement those improvements possible within resources available to us.

