Northshore Fire Department

King County Fire Protection District No.16

Standard of Response Coverage

2014 Compliance Report

Jim Torpin
Fire Chief

December 15, 2014

Table of Contents

Introduction 3

Background and Significance 3

Requirements of RCW 52.33.030 4

Definitions 5

Policy Statement and Response Time Objectives 6

Staffing 8

Organization Chart 9

2014 Compliance Report 10

Explanation of Results and Corrective Actions 11

Evaluation of Services not provided by the District 13

Appendix 'A' General Response Statistics 15

Introduction

On April 15, 2005, the Washington State Legislature passed into law HB 1756. The provisions of the HB 1756 were codified into RCW 52.33.030 for all Fire Districts and Regional Fire Authorities. RCW 52 requires fire departments in Washington State to determine and develop performance standards and report their relative compliance with the established standards on an annual basis.

The reporting requirements were derived from the National Fire Protection Association Standard 1710 *Standards for the Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Departments*. Washington State's requirement would best be described as a modified version of this national standard.

On December 4, 2007, the Northshore Fire Department Board of Commissioners took action to comply with the requirements of RCW 52.33.030 with the adoption of Board Resolution 07-20. This report shall satisfy the 2014 reporting requirements of the RCW and Board Resolution 07-20.

Background and Significance

One of the major issues the fire service has been addressing is defining levels of service relative to standards, comparable data and levels of acceptable risk for the community they serve. The Northshore Fire Department has used response times as part of its performance measures for many years. Response times have historically been reported to the Board in terms of averages rather than the more definitive methods required by RCW 52.33.030.

Response times have long been a national standard of measurement of service within the fire service. However, this data has never been used in setting standards which can be used on a comparison basis or as the basis of legal action against local government bodies.

In 2001, NFPA 1710, the first national standard for response times, was adopted. As a standard, it was not legally binding for fire departments, though it has and will carry increasingly significant weight in legal actions resulting from negligent incidents attributable to response times.

The establishment of response standards for the fire service continues to develop momentum. Increasingly, jurisdictions are being directed to establish policies in regard to the delivery of fire and EMS services. RCW 52.33.030 is Washington State's solution to addressing the issue of setting response time standards.

Requirements of RCW 52.33.030

Fundamentally, the law simply requires, through ordinance, a community to determine the level of Fire & EMS services it wishes to provide to its community, and set performance measures that will be annually reported by fire departments to their governing bodies.

The RCW requires the following:

- Board Resolution – Policy Statements
  - ✓ Existence of Fire Department
  - ✓ Services provided by the Fire Department
  - ✓ Expected number of Fire Department employees
  - ✓ Functions performed by employees

- Adopted Standards
  - ✓ Turnout Time
  - ✓ Response Time – Deployment of First Alarm Assignments at Fire Suppression Incidents
  - ✓ Response Time – First arriving unit at Fire Suppression Incidents
  - ✓ Response Time – Basic Life Support Incidents
  - ✓ Response Time – Hazardous Material Incidents
  - ✓ Response Time – Technical Rescue Incidents

- Annual Fire Department Performance Measures Reporting
  - ✓ Includes Policy Statements
  - ✓ Provides the established standard
  - ✓ Reports on Departments Performance against established standard
  - ✓ Explanation and definitions where the standard is not being met
  - ✓ Predictable consequences of any deficiencies and necessary improvements needed to correct these

Definitions

Advanced Life Support (ALS) Advanced Life Support incidents are those incidents where the involved patients have more critical or life threatening injuries and illnesses. ALS services are provided by personnel trained to the paramedic level.

Alarm Time The point of time that the public safety answering point (PSAP) receives a call with notification of an emergency incident.

Alarm Processing Time The measure of time from when a call is received at the PSAP until the appropriate units are dispatched.

Basic Life Support (BLS) Basic Life Support response is the first level of response to emergency medical incidents. BLS personnel are firefighters who are trained as Emergency Medical Technicians (EMTs).

Dispatch Time The time when the dispatcher, having selected appropriate units for response with assistance from the CAD system, initiates the notification of response units.

Emergency Response A response to an incident where an imminent threat to life or property exists or is believed to exist. Units responding to emergency incidents respond with lights and sirens activated.

Fire Suppression Incident An incident where property or life is threatened or believed to be threatened by fire.

Full Alarm Assignment The number of apparatus and personnel that is required to establish an effective firefighting force at an incipient stage structure fire. Full alarm assignment has been established by the District as a minimum of three (3) Engines, one (1) additional Engine or Ladder and one (1) Battalion Chief.

Operations Level Responder Personnel who are trained at a basic level in specialized fields such as hazardous materials and technical rescue. Operations level training provides personnel with the knowledge and ability to mitigate smaller incidents and the awareness to request personnel with a higher level of training when appropriate.

Response Time The combined measure of time from the point at which units are notified of an alarm and their arrival on scene (turnout and travel time).

Turnout Time The measure of time from the point at which units are notified of an alarm until the point of time when the response is initiated (wheels rolling).

Travel Time The measure of time from the point at which units initiate their response until they arrive on scene.

Policy Statement and Response Time Objectives

WHEREAS, King County Fire Protection District No. 16 was organized in the year 1942, and therefore the Board of Fire Commissioners intends to declare it as being heretofore "established"; and

WHEREAS, the Washington State Legislature adopted House Bill 1756 during 2005, and such bill is codified as chapter 52.33 of the Revised Code of Washington; and

WHEREAS, such statute requires that each substantially career fire department be declared "established", that the services provided by the district or department be listed, and among other requirements, that standards for service be adopted locally; and

WHEREAS, such statute also requires that an annual report be prepared each year, describing compliance with the local standards and otherwise reporting to the public; and

WHEREAS, such statute also requires compliance with the locally established response time standards 90% of the time; and

WHEREAS, the purpose and intent of this resolution is to provide policies and standards so as to comply with the intent of the new legislation;

NOW THEREFORE BE IT HEREBY RESOLVED AS FOLLOWS:

Section 1. Since the King County Fire Protection District No. 16 was formed in 1942 and thereafter a substantially career fire department has been established, the Board of Fire Commissioners officially declares the fire department to be established.

Section 2. The public services provided by the District, in accordance with the mission and statutes that govern fire protection districts and fire departments, are as follows:

- Fire suppression
- Emergency Medical Services (EMS), Basic Life Support (BLS)
- Hazardous Materials Response-Operations Level
- Technical Rescue/Special Operations
- Fire Code Inspections
- Public Education

Section 3. The organizational structure of the fire department is best understood by reference to the attached organizational chart for the department, which is hereby officially adopted by the Board, and incorporated, herein by reference. However, the organization is generally described as managed overall by the elected policy-making and governing body, the Board of Fire Commissioners, whose policies are implemented on a day-to-day basis by the appointed Fire Chief.

The Board and the Chief are aided in accomplishing the mission of the department by an appointed District Secretary, whose primary duties are administrative, including maintaining Board meeting minutes and records. Various fire service officers, firefighters, emergency medical technicians (EMTs), and other staff personnel round out the district's work force and accomplish the delivery of vital services to the public.

Section 4. The fire protection district hereby establishes the following service delivery objectives, including specific response time objectives for the following major service components, as applicable:

A. Turnout time (All Emergency Incidents):

Two (2) minutes;

B. Fire Suppression:

(1) Response time, first arriving engine company: Six (6) minutes;

(2) Response time, full first alarm assignment: Fourteen (14) minutes;

C. EMS:

Response time, BLS, first unit staffed with EMTs: Six (6) minutes;

D. Hazardous Materials Response-Operations Level:

Response time, Hazardous Materials Response, first unit with "Operations Level Responder" or higher: Six (6) minutes;

E. Technical Rescue/Special Operations:

Response time, Technical Rescue/Special Operations, first unit with "Operations Level Responder" or higher: Six (6) minutes.

Section 5. The foregoing objectives shall be achieved at least 90% of the time in accordance with the statute. Annually, commencing in 2007, the department shall evaluate its levels of service, deployment, and the achievement of each response time objective throughout the district. The annual report shall define any geographic areas and circumstances in which the requirements of these standards are not being met. The annual report shall explain the predictable consequences of any deficiencies and address the steps that are necessary to achieve the objectives.

Section 7. All terms used herein, such as "turnout time", "response time", "basic life support" and "fire suppression", shall be as defined in RCW 52.33.

Staffing

In 2014, the Northshore Fire Department employed forty-seven and a half (47.5) full time employees (FTE).

*Two (2) Chief Officers

Three and a half (3.5) Administrative Staff Employees

Forty (39) Career Suppression Personnel

Two (2) Fire Prevention Staff

One (1) Training Captain

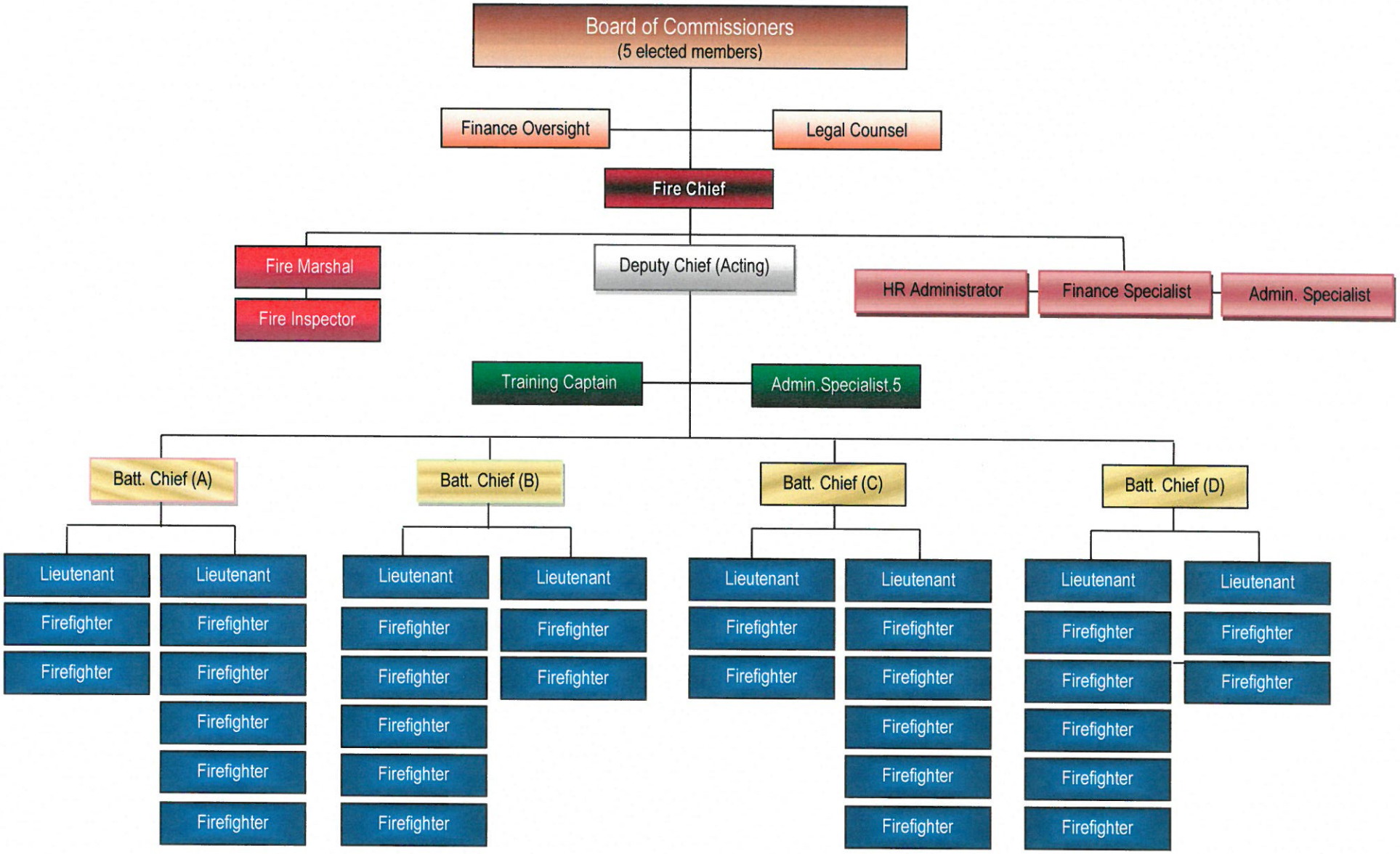
Total 2014 staffing of forty six and half (47.5) FTEs

The chart on the following page reflects the 2014 organizational structure.

*Note: The Deputy Chief position was filled with a Battalion Chief from the suppression personnel. Other personnel were moved up accordingly to fill vacancies in other ranks created by this acting assignement.

Northshore Fire Department

2014 Organizational Chart



January 1, 2014

2014 Compliance Report

Data retrieved from the District's fire records management system was used to compare the fire department's performance against the established objectives. Only emergency responses, where the first dispatched unit arrived on scene were used for this comparison; information from non-emergent incidents, reduced emergency responses and responses that were canceled while the unit was in route were culled from the sample set. The following section provides the benchmark objective followed by the fire department's actual performance.

A. Turnout Time

Turnout Time Objective: The Northshore Fire Department has adopted a turnout time objective of two (2) minutes, ninety percent (90%) of the time.

Actual Department Comparison for the Year 2014: The Northshore Fire Department met the turnout time objective eighty-nine percent (89%) of the time.

B. Arrival of 1st Arriving Engine Company at Fire Suppression Incident

Response Time Objective: The Northshore Fire Department has adopted a response time objective of six (6) minutes for the first fire engine to arrive when responding to a fire suppression incident ninety percent (90%) of the time.

Actual Department Comparison for the Year 2014: The Northshore Fire Department met the first arriving engine response time objective fifty-eight percent (58%) of the time.

C. Arrival of Full Alarm Assignment at Fire Suppression Incident

Response Time Objective: The Northshore Fire Department has adopted a response time objective of fourteen (14) minutes for the arrival of a full alarm assignment at fire suppression incidents ninety percent (90%) of the time.

Actual Department Comparison for the Year 2014: The Northshore Fire Department met the Full Alarm Assignment response time objective one-hundred percent (100%) of the time.

D. Arrival of 1st Arriving BLS Unit at Emergency Medical Incidents

Response Time Objective: The Northshore Fire Department has adopted a response time objective of six (6) minutes for the first BLS unit to arrive when responding to an EMS incident ninety percent (90%) of the time.

Actual Department Comparison for the Year 2014: The Northshore Fire Department met the first arriving BLS unit response time objective eighty-one percent (81%) of the time.

E. Arrival of 1st Arriving Unit with "Operations Level Responder" for a Hazardous Material and Technical Rescue Responses.

Response Time Objective: The Northshore Fire Department has adopted a response time objective of six (6) minutes for the first unit to arrive with "Operations Level Responders" when responding to a Hazardous Material and Technical Rescue incidents ninety percent (90%) of the time.

Actual Department Comparison for the Year 2014: There were no occurrences of Hazardous Materials or Technical Rescue Responses in 2014.

Explanation of Results and Corrective Actions

Turnout Time

Turnout time is the one element of response time that the fire department can influence. A wide array of factors affect turnout time including: station design and layout, paging and alerting technology, the use of Mobile Data Computers (MDC), non-emergency tasks conducted by responders (training, inspections, physical fitness, etc.), responders required to jump to a different apparatus (Jump Crews), awareness of performance and the established culture.

Turnout time was evaluated for all emergency responses and not reported separately by incident type. Turnout time for fire suppression incidents is higher than for EMS responses. Responders are required to don personal protective equipment when responding to suppression incidents which adds substantial time to the response.

The department utilizes Mobile Data Computers (MDC) for its front line apparatus. The MDCs increase the amount of information available to responders from the dispatch center. The MDCs provide Automated Vehicle Locator (AVL) technology which facilitates the closest unit being dispatched to incidents. Sometime in the near future, upgrades to the MDC will provide responders with live mapping that will reduce the time required to identify incident location and the quickest routes. These devices provide more accurate response data that improves the analysis process.

The District continues to internally publish turnout time results for each shift by station in an effort to raise awareness of turnout time performance. Publishing the results and an increased focus on improving turnout times has had a positive impact on performance.

The objective for turnout time was established at two (2) minutes. This objective has not been met since the inception of this reporting requirement; however, there has been improvement in turnout time since the inception of the RCW 52.33 response time reporting. In 2014 the goal was only missed by one percent, this is the best performance recorded since the inception of this reporting in 2007.

Travel Time

Travel time is the duration of time from the point responders initiate a response (wheels rolling) until they arrive on scene. Except for adding fire stations or increasing the number of staffed apparatus the fire department is limited in its ability to impact travel time. This is due to the fact that travel time is directly related to the distance apparatus is required to travel to the scene of an incident. Several other factors can impact travel time such as: topography, traffic, traffic calming devices, road construction, weather and road conditions, ease of access to response destination and the out of service status of a first-due apparatus that necessitates a response from a more distant unit.

The area served by the District is very unique in terms of geography and topography. The jurisdiction wraps around the northern portion of Lake Washington. Lake Forest Park was constructed on numerous rolling hills and deep ravines with several small stream drainages throughout. The construction of roads and streets in Lake Forest Park was done in a manner that was designed not to disturb the natural setting of the area. The City of Kenmore is divided by the Sammamish River and has its share of topographical challenges. The geographical aspects of the jurisdiction have a significant impact on apparatus travel time.

The Sammamish River has only one public bridge suitable for emergency response apparatus. The bridge located at 68th Avenue NE does not facilitate a direct route response for incidents that occur south of the river. Additionally, the 68th Avenue Bridge is frequently congested with traffic during peak commute hours.

Over the last few years there has been a dramatic increase in peak time congestion on Bothell Way. Tolls on the Evergreen Floating Bridge and I-405 are encouraging more commuters to use Bothell Way to get around the north end of Lake Washington. This congestion has impacted travel speeds of emergency apparatus responding to incidents that occur during peak times.

There are two areas of the District where the computer calculated travel time exceeds 4 minutes. Those areas are the southern Moorlands area in Kenmore and the Horizon View area of Lake Forest Park. The actual travel times to these two areas have historically exceeded the four minute goal.

With the turnout time objective established at two (2) minutes and an overall response time objective of six (6) minutes, apparatus must be able to travel the distance to the scene of an incident in four (4) minutes or less to meet the established standard.

Response Time

Response time referenced in this report is the combined measurement of time from the point responders are notified of an emergency until they arrive on scene of the incident. Simply said, response time equals turnout time plus travel time.

The distribution of all emergency incidents between the two cities referenced in this report is as follows: Kenmore 65% and Lake Forest Park 35%.

In 2014, the data revealed that the District met its response time objectives eighty percent (80%) of the time for all emergency responses that occurred within the boundary of the District. The responses that fell outside of the established threshold were equally distributed throughout the fringe areas of the District where the distance from fire stations are the greatest.

As previously mention, two specific areas that have the greatest concentration of non-compliance calls are the southern most areas of Kenmore and areas near Horizon View Park. Responses to areas served south of the Sammamish Slough in Kenmore are funneled across the bridge on 68th Ave NE which eliminates direct routes to many addresses in this area. Access to the neighborhoods in the Horizon View area of Lake Forest Park requires apparatus to ascend and descend through numerous steep hills and encounter frequent stops and sharp corners. These obstacles have a significant impact on the heavy apparatus' ability to maintain proper speeds while in-route to incidents.

In 2014, there were 71 incidents coded as fire suppression. The compliance rate for the initial arriving unit for these incidents was 58%. The compliance rate was affected by the fact that many of the fire related incidents in 2014 were located farther away from the fire stations as in previous years.

The small fire response sample set coupled with the location of the majority of the incidents in 2014 are factors in the reduced compliance rate. The traditionally small sample set can cause for deviations from year to year in the fire response compliance rate while the EMS sample set is much larger and has a much more consistent compliance rate.

In 2014, there were five (5) incidents where a full alarm assignment was dispatched and all units arrived on scene. The response time objective was met for one hundred percent (100%) of these incidents.

Responses to Hazardous Material and Technical Rescue incidents are very rare. In 2014, there were no incidents involving Hazardous Materials or Technical Rescue reported.

Evaluation of Services not provided by the District

RCW 52.30.030 does not require Fire Districts to report on services that are not directly provided. Two critical services, alarm processing and advanced life support, are provided by outside agencies. The performance of these agencies is worthy of mention due to the interdependence their performance has on our success.

Alarm Processing

The alarm processing interval is a critical component of our overall response time. In 2014 the alarm processing service is provided by the North East King County Regional Public Safety Communication Agency (NORCOM). NORCOM has adopted an Alarm Processing time objective of ninety (90) seconds for call received to call dispatched,

ninety percent (90%) of the time. Norcom met this objective eighty-eight percent (88%) of the time.

Advanced Life Support

Advanced Life Support (ALS) services are provided to the District through King County Emergency Medical Services (KCEMS). The Shoreline Fire Department, through KCEMS, is the primary provider of ALS services. The District houses Medic 65 at Station 57 in Lake Forest Park. The Shoreline Fire Department publishes Medic 65 response standard and performance independent of this report.

Northshore Fire Department
Response Statistics

2014 ANNUAL REPORT

HISTORICAL CALL VOLUME	
2014	3525
2013	3474
2012	3375
2011	3095
2010	3248

AVERAGE RESPONSE TIMES				
By Response Area	51S	51N	57	ALL
TURN OUT TIME	1:17		1:21	1:20
FIRE RESPONSE TIME	7:18	4:23	N/A	6:06
EMS RESPONSE TIME	5:32	3:52	4:51	4:32
ALL PRIORITY RESPONSES	5:40	3:54	4:56	4:37

INCIDENT TYPES	TOTAL	51	57	%
FALSE CALL	246	171	75	7.0%
EMS/RESCUE	2666	1729	937	75.6%
GOOD INTENT	383	223	160	10.9%
PUBLIC ASSIST	91	64	27	2.6%
FIRE	71	46	25	2.0%
HAZARDOUS MATERIAL	51	27	24	1.4%
RUPTURE/EXPLOSION	7	7	0	0.2%
WEATHER	6	6	0	0.2%
OTHER	4	2	2	0.1%
TOTAL CALLS	3525	2275	1250	
AVERAGE / DAY	9.66	6.23	3.42	

STANDARD OF COVERAGE BENCHMARKS		COMPLIANCE
CALL PROCESSING TIME GOAL:	90% ≤ 90 Seconds	88%
TURN OUT TIME GOAL:	90% ≤ 2 Minutes	89%
BLS RESPONSE TIME GOAL:	90% ≤ 6 Minutes	81%
FIRE RESPONSE TIME GOAL:	90% ≤ 6 Minutes	58%
FULL ALARM ASSIGNMENT GOAL:	90% ≤ 14 Minutes	100%
SPECIAL OPERATIONS GOAL:	90% ≤ 6 Minutes	N/A

STANDARD OF COVERAGE BENCHMARKS		COMPLIANCE	
By Response Area		51	57
BLS RESPONSE TIME GOAL:	90% ≤ 6 Minutes	80%	84%
FIRE RESPONSE TIME GOAL:	90% ≤ 6 Minutes	57%	67%

AUTOMATIC AID	Provided	Received
SHORELINE FD	348	178
BOTHELL FD	209	38
KIRKLAND FD	50	20
OTHER AGENCIES	16	11
TOTAL	623	247

LOSS DUE TO FIRE	Occurrences	Loss
2014	69	$97,150
2013	23	$413,140
2012	19	$726,910
2011	36	$1,178,050

INCIDENT BY TYPE