

**Kitsap County Fire District
18/Poulsbo
*2009 Annual Report
of Service Level Objectives***



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INTRODUCTION:

The Revised Code of Washington (RCW) 52.33 requires substantially career fire districts to adopt and annually report response time objectives for certain services. The purpose of this legislation is to measure the time it takes for the first emergency response unit to arrive at a fire before flashover or to an emergency medical incident to prevent brain death. This is critical to the survivability of the patient and the reduction of fire losses in the interest of public safety and welfare. It is also critical for emergency responders to arrive as fast as possible to reduce the impact of disabling injuries and disease process's from incidents like head injuries, strokes, heart attacks, or diabetic problems.

The District, through a resolution of the Board of Fire Commissioners, has adopted service level objective goals in Policy 1004. This report reviews the District's performance in achieving these goals during year 2009.

EMERGENCY RESPONSE BREAKDOWN AND TOTALS IN 2009:

The general emergency alarm information for emergency response requests in Kitsap County Fire District 18 are outlined below. This information is presented in the same format as the monthly "Operations Report" provided to the Board of Fire Commissioners.

2009 Annual Operations Incident Review

INCIDENT BREAKDOWN BY TYPE, BY STATION, TOTALS AND PERCENTAGES:

Station - 71		Station - 72		Station - 73		Station - 77		Totals	%
Fire Calls	47	Fire Calls	15	Fire Calls	14	Fire Calls	20	96	3%
EMS/Rescue	1328	EMS/Rescue	157	EMS/Rescue	125	EMS/Rescue	438	2048	64%
Hazardous Condition	46	Hazardous Condition	12	Hazardous Conditio	4	Hazardous Condition	23	85	3%
Service Call	237	Service Call	42	Service Call	35	Service Call	75	389	12%
Good Intent	173	Good Intent	44	Good Intent	35	Good Intent	110	362	11%
False Call	131	False Call	18	False Call	3	False Call	23	175	5%
Blank/Invalid/Other	15	Blank/Invalid/Other	5	Blank/Invalid/Other	12	Blank/Invalid/Other	7	39	1%
First Due:	1977 82%	First Due:	293 9%	First Due:	228 7%	First Due:	896 22%	3194	100%

STATION UNIT ACTIVITY:

Station - 71		Station - 72		Station - 73		Station - 77		Totals
Aid-71	157	Aid-72	335	Aid-73	1	Aid-77	98	591
Medic-71	1619	Medic-72	45	Brush-73	1	Medic-77	1078	2743
Engine-71	2137	Engine-72	175	Engine-73	0	Engine-77	265	2577
Tender-71	42					Tender-77	20	62
Marine-71	9							9
D/C 71	415							415
Brush 71	2							2
Totals	4381 88%	Totals	555 9%	Totals	2 0%	Totals	1461 23%	6399

TOTAL CALL BREAKDOWN EMS CALLS: PRIORITY EVENTS:

EMS Breakdown		Suburban		90% Fractal Turnout and Travel		Mutual - Aid			
BLS	776	Priority 1 & 2 Events		2:25	7:10	Central Kitsap Fire	114	16	130
ALS	1367 64%					Bainbridge Island Fire	8	59	67
Total	2143 100%					North Kitsap Fire	131	239	370
TRANSPORTS:						Navy Region NW	106	40	146
BLS	719 45%					Port Ludlow Fire	10	2	12
ALS	886 55%					Bremerton Fire	0	0	0
Total	1605 100%					SKFR	0	1	1
						Bremerton Fire	0	1	1
						Total	369	358	727
Previous Year Tx	1779						51%	49%	100%

Incident Breakdown by Type, Station, Totals, and Percentages:

Incident information is organized on the basis of a station's response area. All alarms are categorized by the type of incident found when responders arrived on the scene of an emergency. This categorization may be different than the incident type initially dispatched.

Fire- Includes fires that are extinguished before arrival and gas vapor explosions.

EMS/Rescue- Includes medical assist, emergency medical incidents, lock in, search for lost person, extrication, water and ice related rescue, standby, and other related events.

Hazardous Condition- Includes events dealing with flammable liquid spills, chemical releases, radioactive releases, electrical wiring issues, biological hazards, and explosives and bomb removal.

Service Calls- Includes events dealing with persons in distress like ring removal and locked vehicles, water problems, smoke removal, animal problems or rescue, public agency assists, unauthorized burning, and cover assignments and move ups.

Good Intent- Includes cancelled en-route, wrong locations, authorized controlled burning, steam or gas mistaken for smoke, EMS events where non-fire service agency transported, and hazmat release investigation-nothing found.

False Call- Includes fire alarm activations, bomb scares, system malfunctions, sprinkler system activation with no fire, and biohazard scare.

Other- Includes severe weather and natural disasters and citizen complaints.

Station Unit Activity:

This data reflects the activity of each unit assigned to a station regardless of the location that the event occurred.

EMS Breakdown:

Reports the number of emergency medical calls based upon the dispatch type, how many of those calls were transports and the level of medical care needed for that specific medical illness or injury.

TIME- THE CRITICAL FACTOR

For emergency response to be effective, interventions must occur within identified time frames in order to create the most opportunity to save lives and property. Generally speaking, the faster the intervention the more positive the outcome. The arrival of first

responders with automatic external defibrillator capability before the onset of brain death or the arrival of adequate fire suppression resources before flashover are time critical events during the mitigation of an emergency, which is in the best interest of the public (RCW 52.33.010). The arrival time of properly trained and equipped personnel is the single most significant factor in reducing the impact of serious emergencies.

Medical Emergencies / Cardiac arrest: According to the American Heart Association, irreversible brain death begins within four to six minutes after cardiac arrest.

Fire Suppression / Flashover: The national average for a fire to generate enough heat to ignite the contents of a room and cause flashover is approximately eight minutes. When a flashover occurs, the fire rapidly spreads into adjoining rooms which can cause occupant injury and/or deaths to increase dramatically. In addition, the property dollar-loss may increase due to the increased fire spread.

CASCADE OF EVENTS

To determine response effectiveness: the overall “Response Time” is divided into incremental categories to identify areas where performance can be enhanced. Through critical analysis evaluating the Cascade of Events, an Action Plan (Page 12) can be implemented to improve overall response times.

The following time-stamps are used to analyze the efficiency and effectiveness of the 9-1-1 dispatch center (CenCom) and Kitsap County Fire District 18/Poulsbo’s emergency response:

- The discovery of the emergency
- First ring to the 9-1-1 dispatch center
- Phone picked up by the dispatch center
- Dispatch center enters the event into the system
- Information is dispatched to a fire station via radio and/or printer
 - **Time Stamp-Turnout Time**
- Apparatus initiates response, leaving their current location to the emergency
 - **Time Stamp-Response Time**
- First-due unit arrives on the scene
- Subsequent units arrive on the scene
 - **Time Stamp-Full First Alarm Assignment Response Time**
- Emergency is declared under control and situation returned to a state of normalcy
- Units leave scene and become available for next alarm

SERVICE LEVEL RESPONSE REPORTING

This report reflects the performance of the District in relation to its service level objectives as directed in Policy 1004. All time based metrics are reported utilizing a 90% fractal measure; "N/A" indicates there were no calls of this nature in 2009.

	<u>Goal</u>	<u>Actual</u>
Turnout time.		
Priority 1 and 2 events	2 min	2:33
Fire events	2 min	2:58
Emergency Medical	1.5 min	2:26

Response time for the arrival of the **first arriving unit** for all priority 1 and 2 events.

Suburban	8 min	6:40
Rural	11 min	10:23

Response time for the arrival of the **first arriving engine company** at a fire suppression incident to include structural, wild-land, and vehicle.

Suburban	8 min	6:45
Rural	11 min	10:48

Response time for the arrival of a **full first alarm assignment** at a fire suppression incident.

Suburban	14 min	12:49
Rural	18 min	13:37

Response time for the arrival of a unit with **first responder or higher level** capability at an emergency medical incident.

Suburban	8 min	7:11
Rural	11 min	10:59

Response time for the arrival of **an advanced life support unit** at an emergency medical incident.

Suburban	8 min	7:16
Rural	11 min	10:54

Response time for the arrival of the **first arriving unit** at a **special operations incident**.

Suburban	8 min	N/A
Rural	11 min	9:18

Response time for the arrival of a **technician level team** at a **special operations incident**.

Suburban	2 hours	N/A
Rural	2 hours	N/A

Response time for the arrival of the **first arriving unit** at a **Marine rescue or firefighting incident.**

	<u>Goal</u>	<u>Actual</u>
Suburban	8 min	6:27
Rural	11 min	8:53

Response time for the arrival of the **first arriving unit** at an **Aircraft rescue and firefighting incident.**

Suburban	8 min	N/A
Rural	11 min	N/A

Response time for the arrival of the **first arriving unit** at a **hazardous materials incident.**

Suburban	8 min	8:19
Rural	11 min	N/A

Response time for the arrival of a **technician level team** at a **hazardous materials incident.**

Suburban	2 hours	N/A
Rural	2 hours	N/A

2009 RESPONSE DATA SUMMARY

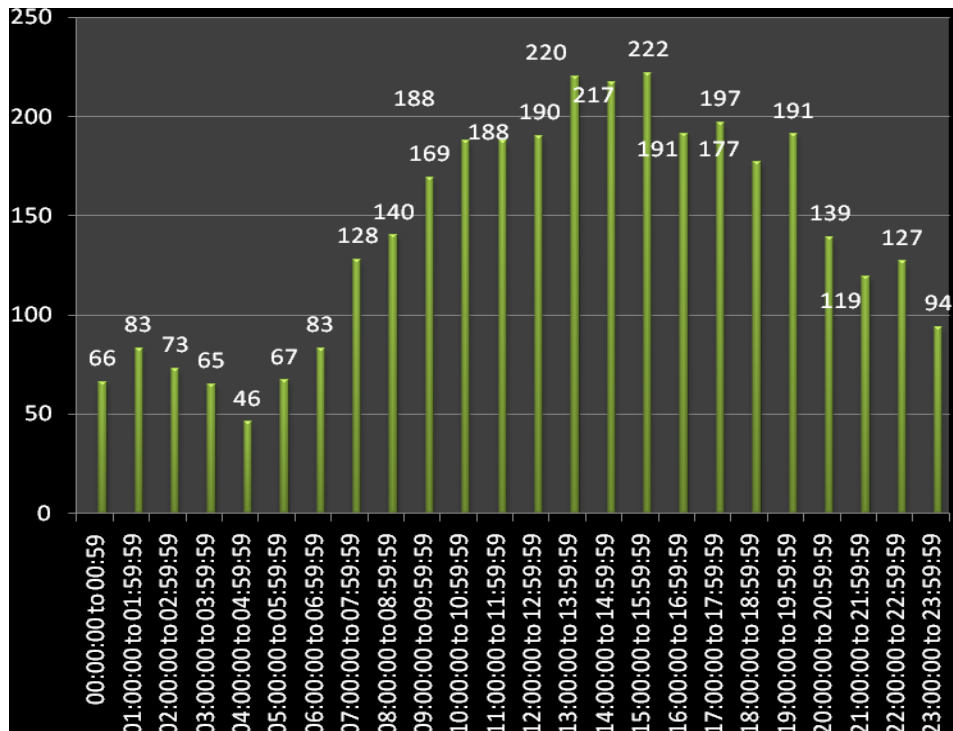
<u>Turnout Time</u>	<u>Turnout Adopted</u>	<u>Turnout Actual</u>	<u>Disposition</u>
Priority 1&2 Events	2:00	2:33	Failed
Fire	2:00	2:58	Failed
Medical	1:30	2:26	Failed

<u>Response Time</u>	<u>Turnout Adopted</u>	<u>Turnout Actual</u>	
Suburban:			
First Unit- Priority 1&2 Events	8:00	6:40	Passed
First Engine- Fire Event	8:00	6:45	Passed
Full First Alarm Assignment	14:00	12:49	Passed
BLS Unit- Medical Event	8:00	7:11	Passed
ALS Unit- Medical Event	8:00	7:16	Passed
First Unit- Special Ops	8:00	N/A	Passed
Tech. Team- Special Ops	2 hr	N/A	Passed
First Unit- Marine Event	8:00	6:27	Passed
First Unit- Aircraft Event	8:00	N/A	Passed
First Unit- Haz-Mat Event	8:00	8:19	Failed
Tech. Team- Haz-Mat	2 hrs	N/A	Passed

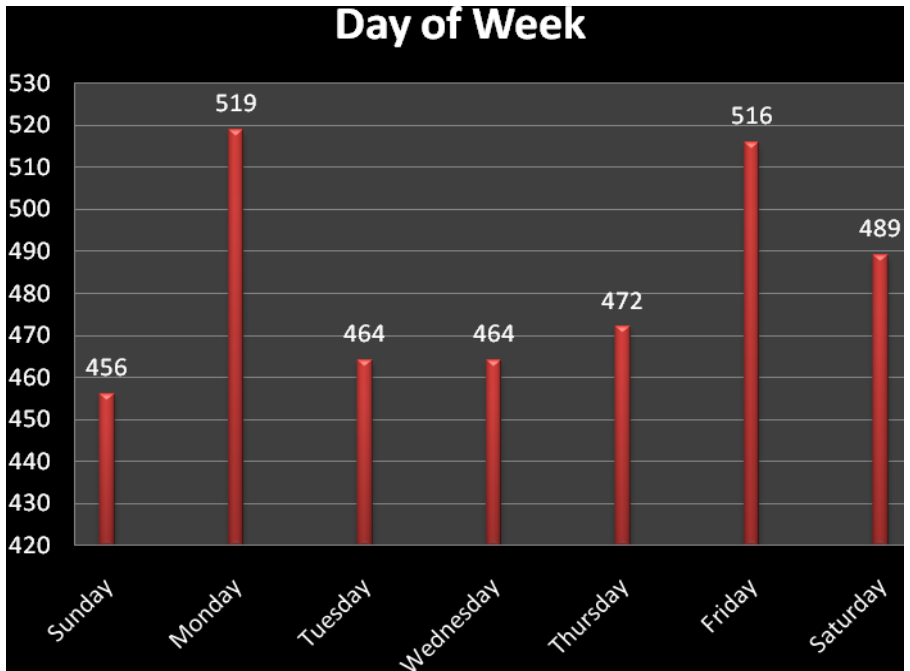
Rural:			
First Unit- Priority 1&2 Events	11:00	10:23	Passed
First Engine- Fire Event	11:00	10:48	Passed
Full First Alarm Assignment	18:00	13:37	Passed
BLS Unit- Medical Event	11:00	10:59	Passed
ALS Unit- Medical Event	11:00	10:54	Passed
First Unit- Special Ops	11:00	9:18	Passed
Tech. Team- Special Ops	2 Hrs	N/A	Passed
First Unit- Marine Event	11:00	8:53	Passed
First Unit- Aircraft Event	11:00	N/A	Passed
First Unit at a Haz-Mat	11:00	N/A	Passed
Tech.Team- Haz-Mat	2 Hrs	N/A	Passed

EMERGENCY EVENT INFORMATION: TIME OF DAY, DAY OF WEEK, MONTH OF YEAR, AND STATION RESPONSE TIMES:

TIME OF DAY

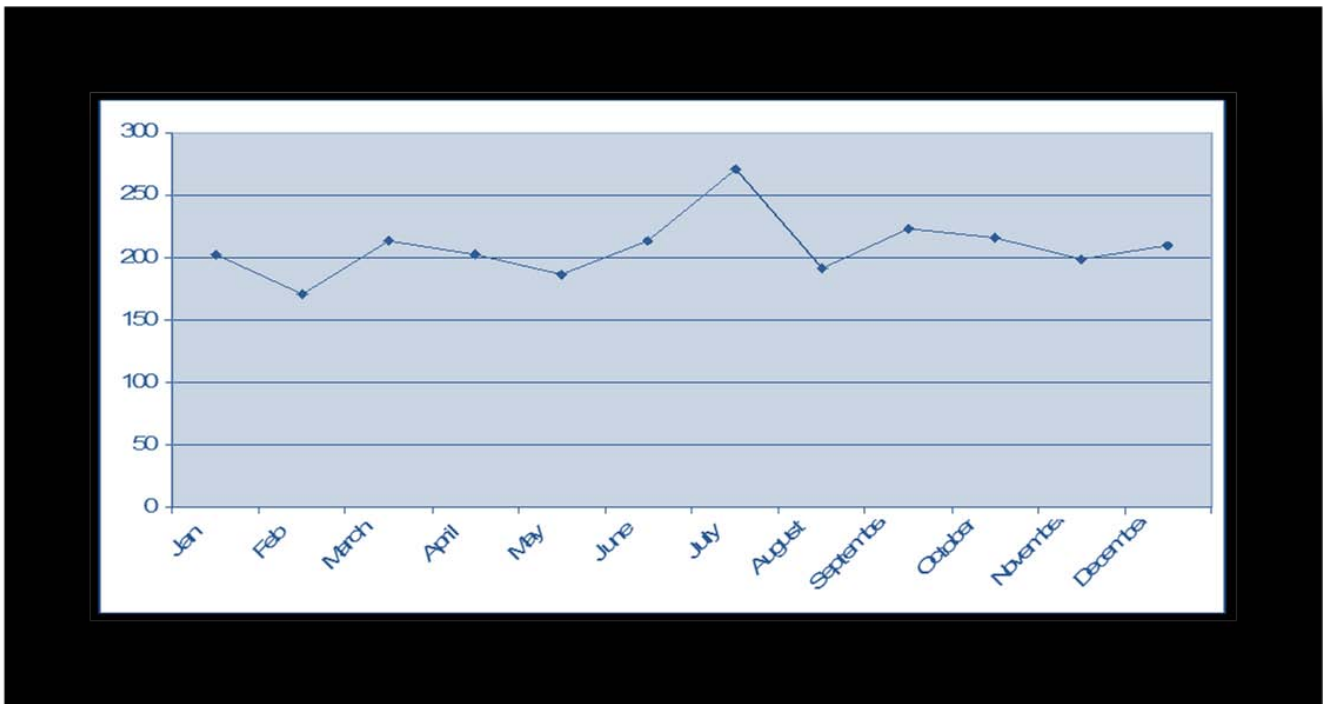


The analysis of time of day produces results similar to most fire agencies in the United States. Within the 12-hour period from 08:00 to 19:59, a total of 2110 alarms occurred resulting in 67.52% of all requests for service. Correspondingly, only 32.48% of events occur between 20:00 and 07:59.



Day of week identifies Friday at 15.2%, Saturday 14.4% and Monday 15.35% all having the largest percentage of call activity above a probability of 14.28%.

MONTH OF YEAR



Month of year reflects an even distribution with a slight increase in July.

Station Response Times Rural and Suburban-Priority 1&2 Events		
Station	Rural	Suburban
Station 71	8:49	6:05
Station 72	10:47	N/A
Station 73	12:32	N/A
Station 77	9:12	N/A

Individual Station data reflects what is expected except in the Station 73 response area. With Navy Base Kitsap Fire providing first response for priority 1 and 2 events, the response time should be shorter than reported.

PREDICTABLE CONSEQUENCES

The arrival of first responders with automatic external defibrillator capability before the onset of brain death and the arrival of adequate fire suppression resources before flashover are both time critical events during the mitigation of an emergency, and are in the best interest of the public (RCW 52.33.010).

Response analysis and literature suggests that the arrival time of properly trained and equipped personnel is the single most significant factor in reducing the impact of serious emergencies.

From an analysis of the District’s annual reporting, the service levels and initial unit response times are beyond the six minutes for brain death and the eight minutes for flashover when utilizing the 90% fractal method. A conclusion may be drawn that a percentage of these alarms are not meeting national response recommendations. The data also reflects an extended time for a full first-alarm assignment to arrive at structure fires within recommended guidelines.

For those events with extended response times, there is an increased risk to life and property loss. Both fire and emergency medical response time deficiencies in the wrong circumstance could lead to the following results:

- *An increased risk to life safety for both the citizens and firefighters.*
- *Inability to intervene with Basic Life Support (BLS) and/or Advanced Life Support (ALS) measures prior to brain death.*
- *Inability to safely perform rescue and interior fire attack / suppression at industrial, commercial and residential structure fires prior to flashover.*
- *Potentially larger loss for industrial, commercial and residential structure fires.*

The District’s chief officers and elected officials are reviewing methods to improve factors that reduce all stages of the Cascade of Events such as:

- *Analyzing trends for high call-volume areas.*

- *Reduced times for call answering and information gathering at the 9-1-1 dispatch center through cooperation with 9-1-1 officials at CenCom.*
- *Automatic mutual-aid agreements with local jurisdictions.*
- *Reduced turnout times for firefighters.*
- *Analyzing trends for locations of emergencies.*
- *Review of community growth patterns for future station locations.*

ACTION PLAN-2010

- *Continued work with 9-1-1 (CenCom) officials to reduce call answering and information gathering times.*
- *Conduct an analysis of how to safely reduce turnout times.*
- *Conduct an analysis of all the components and steps needed to assure that every event is properly documented in the Records Management System.*
- *Add to the 2010 report the **percentage of calls meeting the national recommendations of initial unit response** time at 6 minutes for cardiac arrest and 8 minutes for structure fires.*
- *Add to the 2010 report the **percentage of use for all emergency response units.***
- *Review Station 73 response times. Determine if there are methods to reduce.*
- *Work with state and local officials regarding roads and access issues.*
- *Reduce ambulance turnaround times when at hospitals.*
- *Develop higher reliability for the Tough Books so reports can be completed at any point during care and transport. Try to reduce the amount of time spent at the hospital after patient transfer. **Benchmark total out of service time and time out of service at the hospital in the 2010 report.***

CLOSING STATEMENT

This report is intended to keep the Board of Fire Commissioners and the citizens informed of the District's ability to meet its identified service level delivery objectives as well as to identify limitations for fire and EMS responses.

This annual report will be used to facilitate improvements within the confines of the revenue given to us by the public. We are committed to provide accurate and revealing data to keep both the Board of Commissioners and citizens we serve informed.

Respectfully submitted,

Daniel Olson, Fire Chief
Kitsap County Fire District 18/Poulsbo