

**Kitsap County Fire District  
18/Poulsbo  
*2013 Annual Report  
of Service Level Objectives***



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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 processes 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 2013.

### **DEFINITIONS**

**"Advanced life support"**- functional provision of advanced airway management, including intubation, advanced cardiac monitoring, manual defibrillation, establishment and maintenance of intravenous access, and drug therapy.

**"Aircraft rescue and firefighting"** - the firefighting actions taken to rescue persons and to control or extinguish fire involving or adjacent to aircraft on the ground.

**"Area Classification-Suburban"**- refers to an incorporated or unincorporated area with a population density of 1,000 to 2,000 people per square mile. In Growth Management Areas, this designation includes areas classified as urban and urban growth areas.

**"Area Classification-Rural"**- refers to an incorporated or unincorporated area with a population density of less than 1,000 people per square mile.

**"Brain death"**- defined by the American Heart Association as the irreversible death of brain cells that begins four to six minutes after cardiac arrest.

**"Fire department"**- a fire protection district responsible for firefighting actions, emergency medical services, and other special operations in a specified geographic area.

**"Fire suppression"**- the activities involved in controlling and extinguishing fires.

**"First responder"**- the provision of initial assessment and basic first-aid intervention, including cardiac pulmonary resuscitation and automatic external defibrillator capability.

**"Flash-over"**- defined by the National Institute of Standards and Technology as when all combustibles in a room burst into flame and the fire spreads rapidly.

**"Full First Alarm Assignment"**- The total number and type of response units and personnel assigned to mitigate an emergency. The number and types of units is determined by the probable size and complexity of occurrence and a task analysis of the needed resources to mitigate the emergency.

**"Marine rescue and firefighting"**- the firefighting actions taken to prevent, control, or extinguish fire involved in or adjacent to a marine vessel and the rescue actions for occupants using normal and emergency routes for egress.

**"Response time"**- the time immediately following the turnout time that begins when units are en route to the emergency incident and ends when units arrive at the scene.

**"Special operations"**- those emergency incidents to which the fire department responds that require specific and advanced training and specialized tools and equipment.

**"Turnout time"**- the time beginning when units receive notification of the emergency to the beginning point of response time.

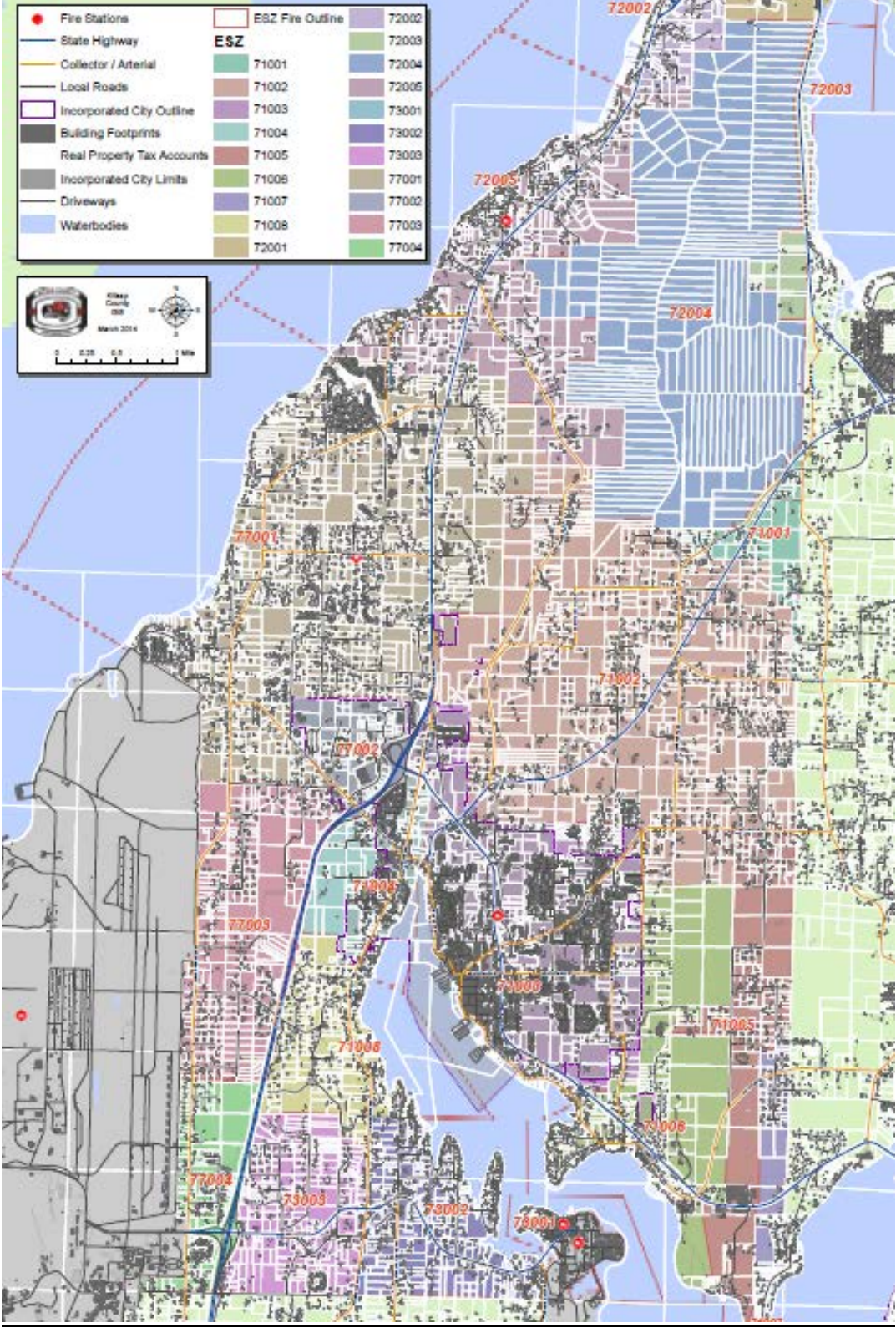
**District Description:**

Kitsap County Fire District 18/Poulsbo covers approximately 54 square miles located in the Northwestern portion of Kitsap County on the Kitsap Peninsula. Within the jurisdictional boundaries and response areas, the District provides fire and emergency medical services to approximately 25,000 citizens. The District is bordered by Port Gamble Bay on a portion of the eastern border, the Hood Canal on the north and west boundaries; the southwest is bordered by Liberty Bay and Port Orchard Bay. The District includes approximately 18 miles of tidal waterfront and the City of Poulsbo.

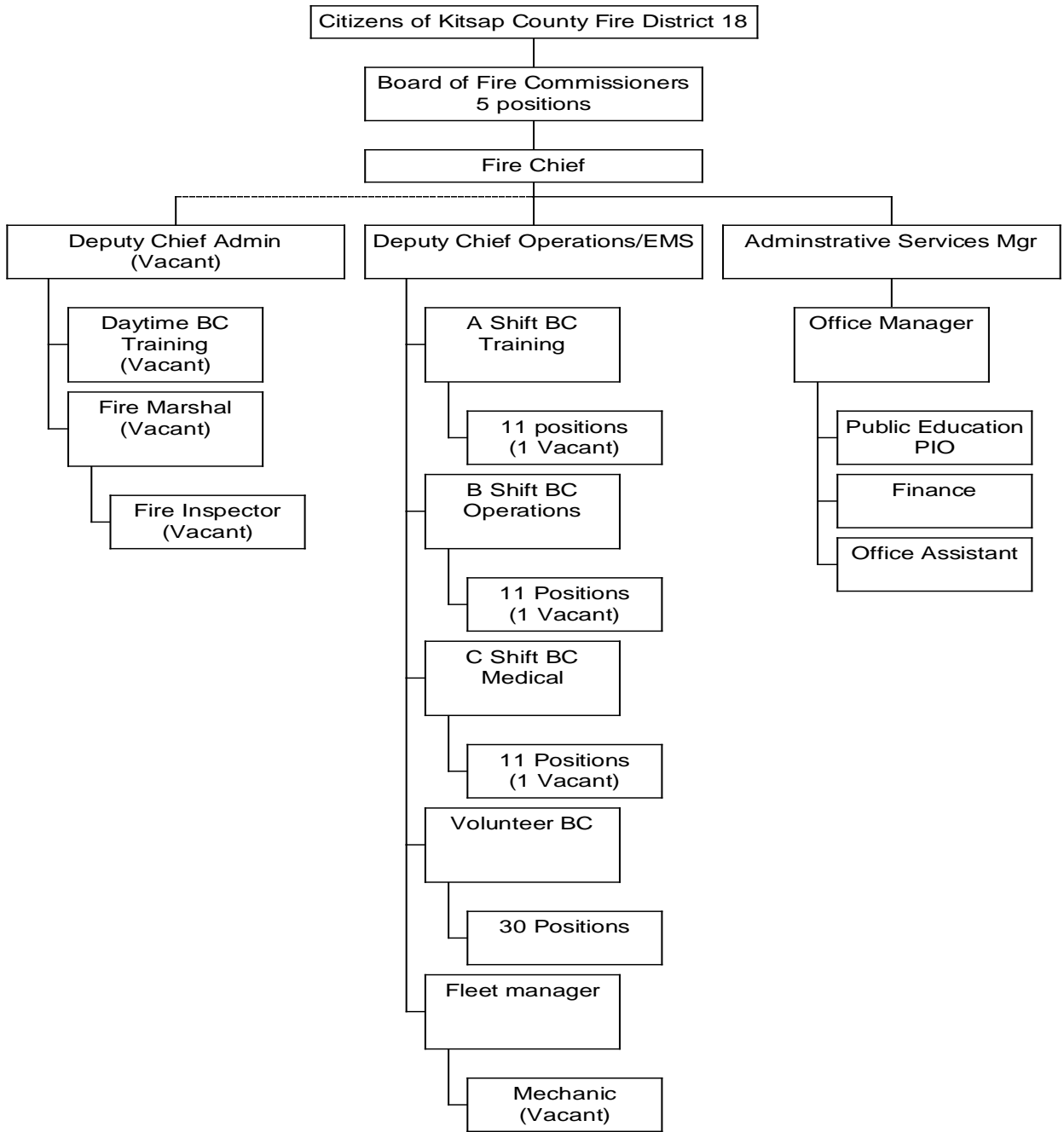
**Legal existence of the fire district:**

The fire district operates under RCW 52 which specifies governance, taxation authority, and other laws of fire district operations. Fire district business is governed by a Board of Commissioners that delegates the management and operations of the district to an appointed Fire Chief (Policy 1002). The Fire Chief receives policy direction from the Board of Fire Commissioners implementing this direction through a chain of command and the positions authorized by the Board of Commissioners. The location of the administrative offices for the fire district is 911 NE Liberty Road, Poulsbo WA.

# ESZs for FD18: 2014



The 2013 organizational structure of the fire department:



**Note:** Kitsap County Fire District 18/Poulsbo Fire is authorized for a total of 49 career positions and is currently operating with a total of 41 career positions.

### **Services provided by the Fire District:**

The Fire District is an all hazards response agency which includes ALS and BLS response and transport.

### **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 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-Dispatch Time**
- Apparatus initiates response, leaving their current location to the emergency
  - **Time Stamp-Turnout Time**
- First-due unit arrives on the scene
  - **Time Stamp-Response Time**
- 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 2013.

### **Turnout Time:**

	Goal	Average	90 % Fractal
<b>All calls (includes non-priority)</b>			
Suburban	2:00	1:24	2:20
Rural	2:00	1:33	2:26
<b>Priority 1&amp;2</b>			
Suburban	2:00	1:25	2:18
Rural	2:00	1:45	2:27
<b>ALS</b>			
Suburban	1:30	1:14	2:08
Rural	1:30	1:15	2:03
<b>BLS</b>			
Suburban	1:30	1:12	2:08
Rural	1:30	1:24	2:18
<b>Fire</b>			
Suburban	2:00	1:15	2:12
Rural	2:00	1:25	2:25
<b>Special Ops*</b>			
Suburban	2:00	1:23	2:12
Rural	2:00	1:16	2:25
<b>Marine</b>			
Suburban	2:00	1:37	3:13
Rural	2:00	N/A	N/A
<b>Wildland</b>			
Suburban	2:00	N/A	N/A
Rural	2:00	N/A	N/A
<b>Aircraft</b>			
Suburban	2:00	N/A	N/A
Rural	2:00	N/A	N/A

\*Special operations include hazmat, technical rescue and swift water rescue.

### **Travel Time:**



Goal Average 90% Fractal

**All calls (includes non-priority)**

Suburban	6:00	5:43	9:46
Rural	10:00	8:54	14:32

**Priority 1&2**

Suburban	6:00	3:45	6:17
Rural	10:00	6:18	9:41

**ALS**

Suburban	6:30	4:25	8:03
Rural	10:30	7:27	11:48

**BLS**

Suburban	6:30	3:52	6:35
Rural	10:30	6:24	10:26

**Fire (First unit on scene)**

Suburban	6:00	3:55	6:17
Rural	10:00	7:42	11:48

**Special Ops\***

Suburban	6:00	4:26	6:17
Rural	10:00	8:43	11:24

**Marine**

Suburban	6:00	6:18	6:18
Rural	10:00	N/A	N/A

**Wildland**

Suburban	6:00	N/A	N/A
Rural	10:00	N/A	N/A

**Aircraft**

Suburban	6:00	N/A	N/A
Rural	10:00	N/A	N/A

\*Special operations include hazmat, technical rescue and swift water rescue.

**Response Time: (Turnout + Travel)**

Goal Average 90% Fractal

**All calls (includes non-priority)**

Suburban	8:00	7:07	12:06
Rural	12:00	10:27	16:58

**Priority 1&2**

Suburban	8:00	5:10	8:35
Rural	12:00	8:03	13:08

**ALS**

Suburban	8:00	5:39	10:11
Rural	12:00	8:42	13:51

**BLS**

Suburban	8:00	5:04	8:43
Rural	12:00	7:48	12:44

**Fire (First unit on scene)**

Suburban	8:00	5:10	8:29
Rural	12:00	9:07	13:49

**Fire (full alarm assignment)**

Suburban	14:00	10:53	10:33
Rural	18:00	12:18	15:54

**Special Ops\***

Suburban	8:00	5:49	8:29
Rural	12:00	9:59	13:49

**Marine**

Suburban	8:00	6:18	6:18
Rural	12:00	N/A	N/A

**Wildland**

Suburban	8:00	N/A	N/A
Rural	12:00	N/A	N/A

**Aircraft**

Suburban	8:00	N/A	N/A
Rural	12:00	N/A	N/A

\*Special operations include hazmat, technical rescue and swift water rescue.

**Note:** Improvements to our run cards and redefining our Emergency Service Zones (ESZ) has improved our data from last year's report; however, CENCOM has identified several problems with the data that we receive from them and they are actively working on making the necessary changes.

## **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 for 2013**

- *Rebuild the reporting collection database(s) to reflect current Fire Department response, staffing and dispatch.*  
*Completed as part of the ESZ update, switchover occurred on 1-1-2014.*
- *Redefine the geographic boundaries into Suburban, Rural and Wilderness areas that reflect the current population densities of the fire district.*  
*Completed as part of the ESZ update, switchover occurred on 1-1-2014.*
- *Rebuild Emergency Response Zones (ESZ) with the goal of closest unit response and to simplify updates and data collection.*  
*Completed as part of the ESZ update, switchover occurred on 1-1-2014.*
- *Continued work with 9-1-1 (CenCom) officials to reduce call answering and information gathering times.*  
*Ongoing*
- *Work with state and local officials regarding roads and access issues.*  
*Ongoing*
- *Conduct an analysis of station response areas reflecting the closest station to respond to an incident with a focus on the border of Station 71 and 77 to ensure reliability data is accurately portrayed.*  
*Completed as part of the ESZ update, switchover occurred on 1-1-2014.*

#### **ACTION PLAN for 2014**

- Work with our records management reporting system (Emergency Reporting Corporation) to refine analytical reporting software portion of the program.
- Work with CenCom to improve the data that is downloaded to our records management system.
- Work with state and local officials regarding roads and access issues.
- Work with the response crews to improve turn out time to all priority one and two calls

#### **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 providing accurate and relevant data to keep both the Board of Commissioners and citizens we serve informed.

Respectfully submitted,

Jeffery Griffin, Fire Chief  
Kitsap County Fire District 18/Poulsbo