III. RISK AND DEMAND

A city's risk of fire and other emergencies is affected by a variety of factors, including the built environment, climate, geography, and population. Portland's 144.9 square miles encompass a diverse geographic range and multiple development types. There are many areas of high risk throughout the city, but also some areas with few or no major fire or emergency risks. This chapter reviews the major risks in Portland, their impact on Portland Fire and Rescue (PF&R), past demand, and projected demand.

RISKS

Airport – Portland International Airport (PDX) is a 3,200-acre airport located on the northern side of Portland about five miles from downtown. Airport grounds include parking lots, maintenance hangers, general aviation facilities, and a recreational area. The airport serves over thirteen million passengers and handles nearly three hundred thousand tons of freight a year. Portland's airport also is home to several units of the Oregon Air National Guard.

The FAA designates PDX as an Index E facility, the highest category. This means the airport is able to provide fire and rescue support to aircraft over 200 feet in length and up to 23 feet in width.

PF&R provides primary fire and EMS service to PDX facilities and support to aircraft emergencies. Currently, PDX maintains a fire department primarily for crash rescue. This station is staffed with 10 personnel 24 hours a day, seven days a week. The station includes four airport rescue firefighting (ARFF) trucks, one structural pumper (fire engine), an advanced life support unit, and a water-rescue boat.

Port – The Port of Portland is the second largest export point on the West Coast. It is the largest export point of wheat in the United States and the third largest export point of grain in the world. It serves also as a key import point for limestone, steel, oil, and automobiles. The Port handled over $12 billion in trade value in 2004.

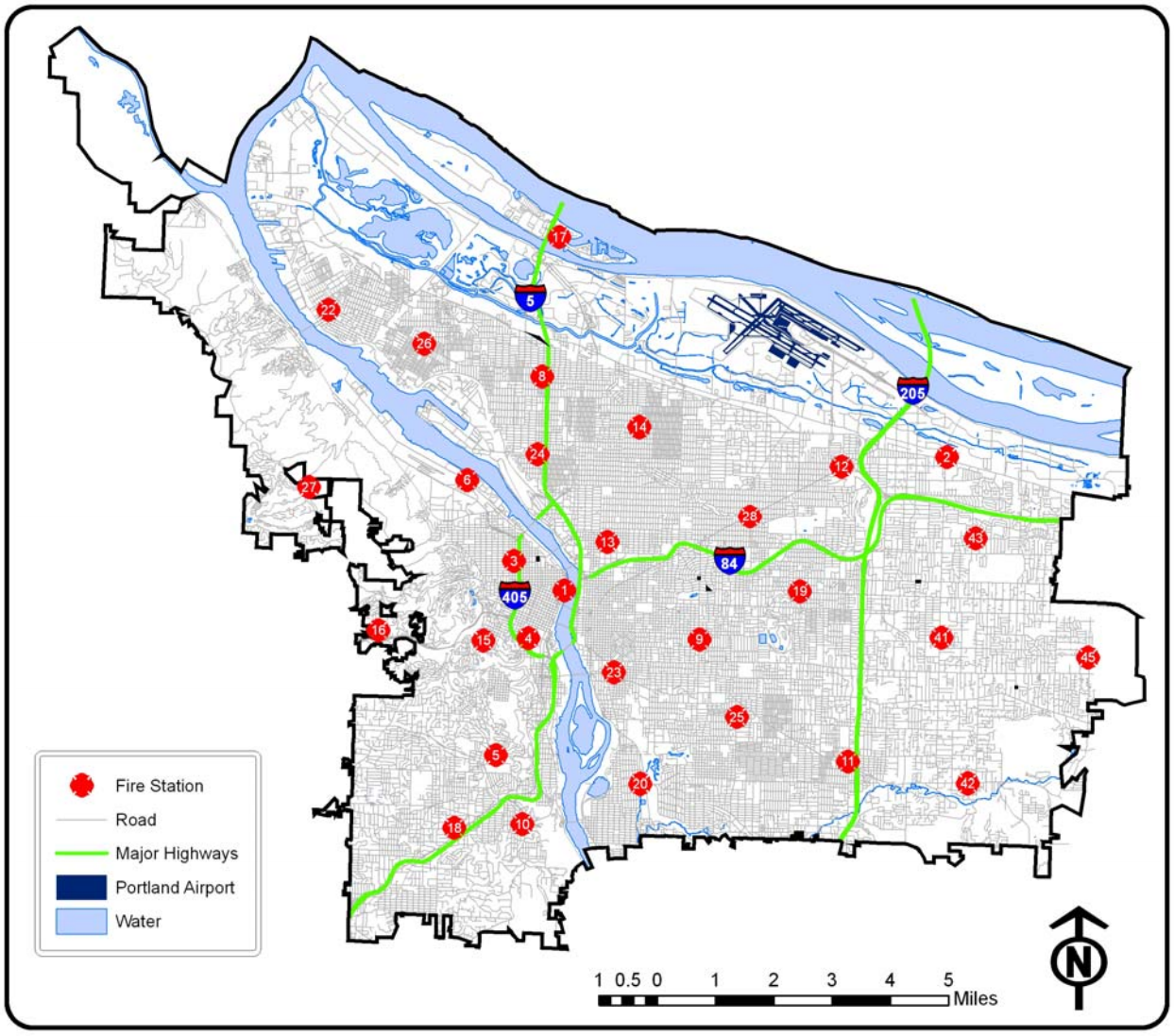
The Port operates from four terminals, T2, T4, T5 and T6 located in Fire Management Area (FMA) 6, 22, and 17 respectively. The terminals occupy more than 600 acres of land. Terminal 6 is the primary terminal for ocean container ships on the Columbia River. The high volume of shipping along the rivers presents increased potential for an emergency incident involving the port facilities.

High-Rises – High-rise firefighting is labor intensive even if a fire is contained by a sprinkler system. High-rise fires often require at least a second alarm assignment, even for minor fires. The logistics of high-rise firefighting include the need for personnel to use stairways to transport equipment, handle logistics, and provide relief for other firefighters.

Road Network – The street network in Portland ranges from straight, grid patterned city roads to winding mountain roads and limited access, high-speed interstates (Map 1). This presents the department with a wide range of vehicular risks and travel speeds.

Emergency vehicle response times are affected by traffic congestion, the type of roads being driven, and a number of measures taken by communities to control and reduce traffic in residential neighborhoods. Narrow streets, one-way streets, and traffic calming measures all can negatively affect emergency response times. The impact of traffic calming is discussed in Chapter IV, Determining Resource Needs.

Map 1: Major Road Network and Fire Stations



The major highways include Interstates 5, 405, 84, and 205, and Highway 26. Interstate 5 (I-5) is a major north-south highway that runs the entire length of the West Coast from Southern California to the border of Canada. In Portland, I-5 runs through downtown on the eastern side of

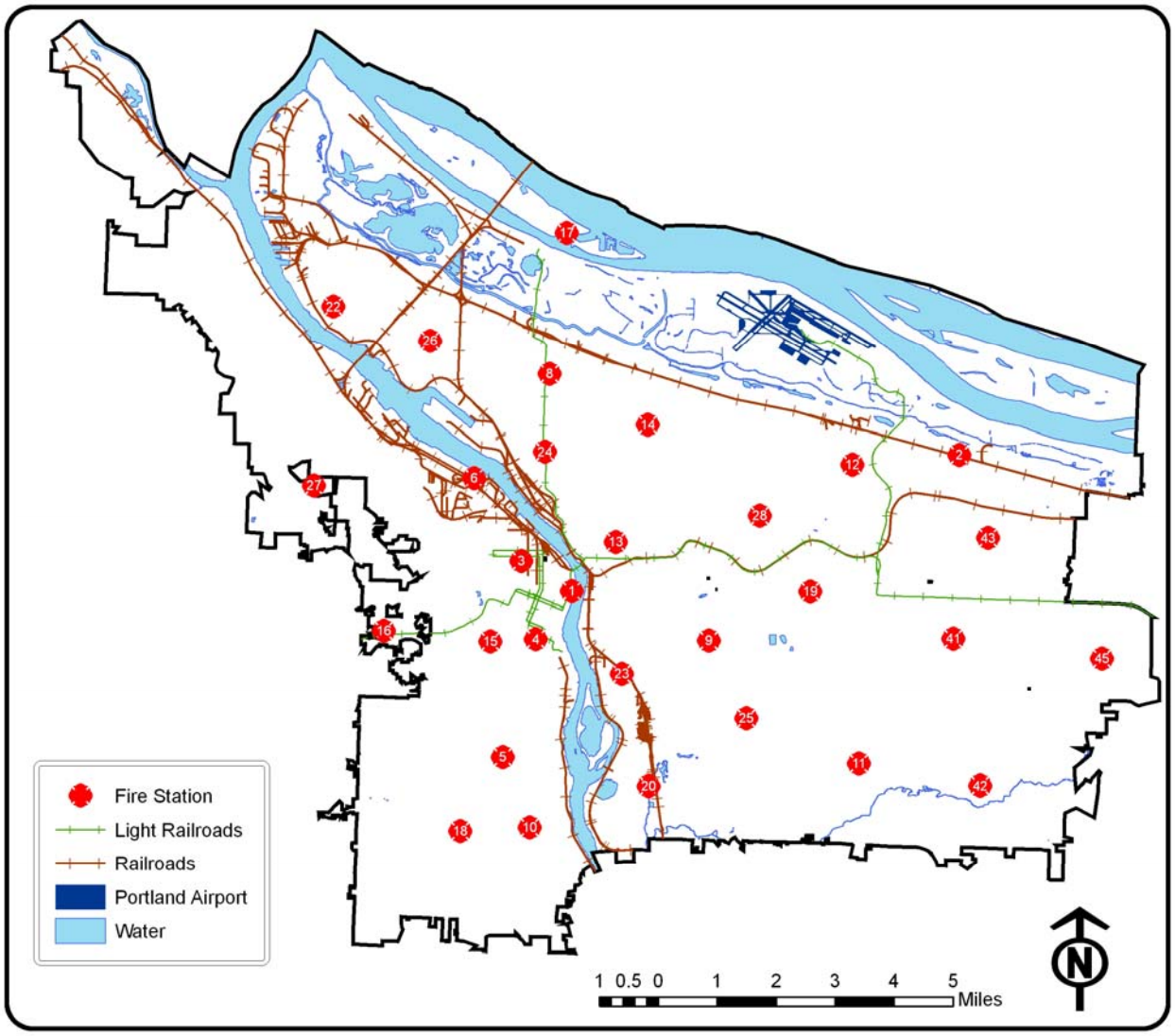
the Willamette River. Interstate 405 connects the western portion of downtown to I-5. Interstate 84 runs east from its downtown interchange with I-5 generally along the path of the Oregon Trail. It goes east out of the city and terminates in Utah. Interstate 205 serves as a bypass of I-5 around the eastern side of Portland.

There is a high incidence of vehicle crashes, which include entrapment, car fires, and multiple injury accidents (4,132) with PF&R response in FY05. This creates the potential for major emergency incidents from hazardous payloads.

Highways present a two-fold risk operationally: a higher chance for accidents while driving at higher speeds in more traffic and a higher risk of being hit by other drivers while at the scene of an incident.

Railway – There are several major rail lines operating throughout Portland. Union Pacific operates some of the largest lines and has a major switching station and locomotive service facility in the area. The rail lines serve as a major connection for the freight coming into and going out of the port terminals. Rail lines present risks in the types of cargo carried as well as challenges to emergency response because they often cross roadways slowing response times and increasing the chance for a collision between a train and an automobile.

Map 2: Rail Lines in Portland



Earthquakes – There are several faults running through the Portland area. The Oatfield Fault is 30 miles long and runs just outside the western edge of the city. The East Bank Fault is 30 miles long and runs through the Portland basin on the east side of the Willamette River. The East Bank Fault runs from FMA 25 northwest to FMA 22 and passes near some of the densest parts of the city. The longest fault is the 50 mile long Portland Hills Fault which runs northwest through the central core of the city and along the Tualatin Mountains.[5]

There have been several earthquakes near Portland around magnitude 5.5 since the recording of earthquakes began. There have also been several smaller (2–3 magnitude) earthquakes in the region over the past 15 years.[6] Portland has also felt the effects of major

[5] http://earthquake.usgs.gov/qfaults/or/van.html

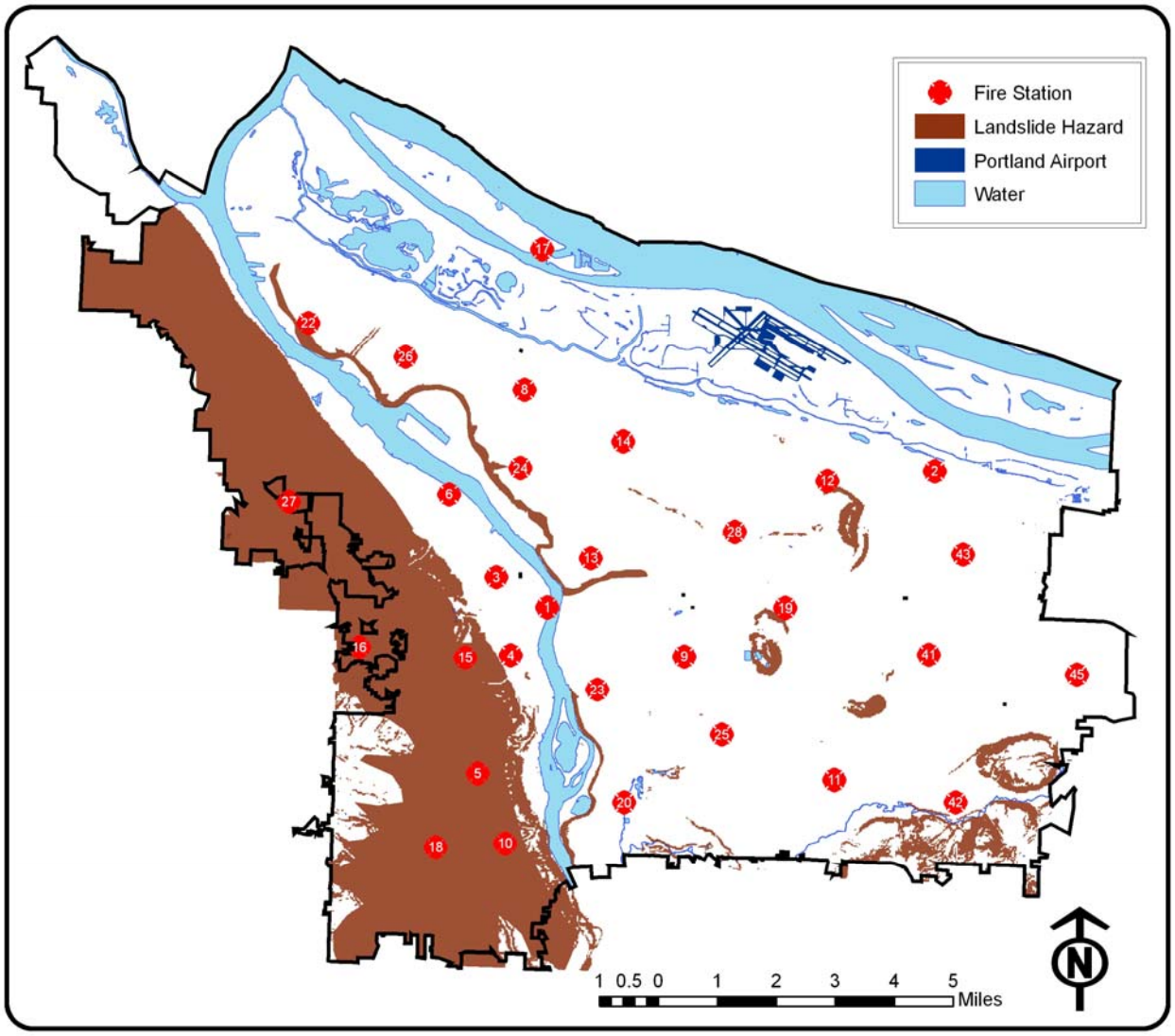
[6] http://neic.usgs.gov/neis/epic/epic_circ.html

earthquakes that occurred in the Puget Sound region, such as the 1949 magnitude 7.1 earthquake near Olympia, WA, and the 1965 magnitude 6.5 quake located between Seattle and Tacoma.[7] Because of the threat of a major earthquake impacting Portland, the city has been in the process of retrofitting PF&R's stations. At the time of this study, only four of the stations had not been retrofitted, but all were scheduled to be completed in the near future.

Landslides – The Federal Emergency Management Agency (FEMA) estimates that landslides nationally cause up to $2 billion in damages a year. Landslides are common on the western side of Portland in the Tualatin Mountains/Forest Park area. There are some areas, however, east of the Willamette River that have also experienced landslides. This is especially prominent during the winter months when periods of heavy rain are very likely. Map 3 shows areas prone to landslides in Portland.

7 http://neic.usgs.gov/neis/states/oregon/oregon_history.html

Map 3: Landslide Prone Areas in Portland

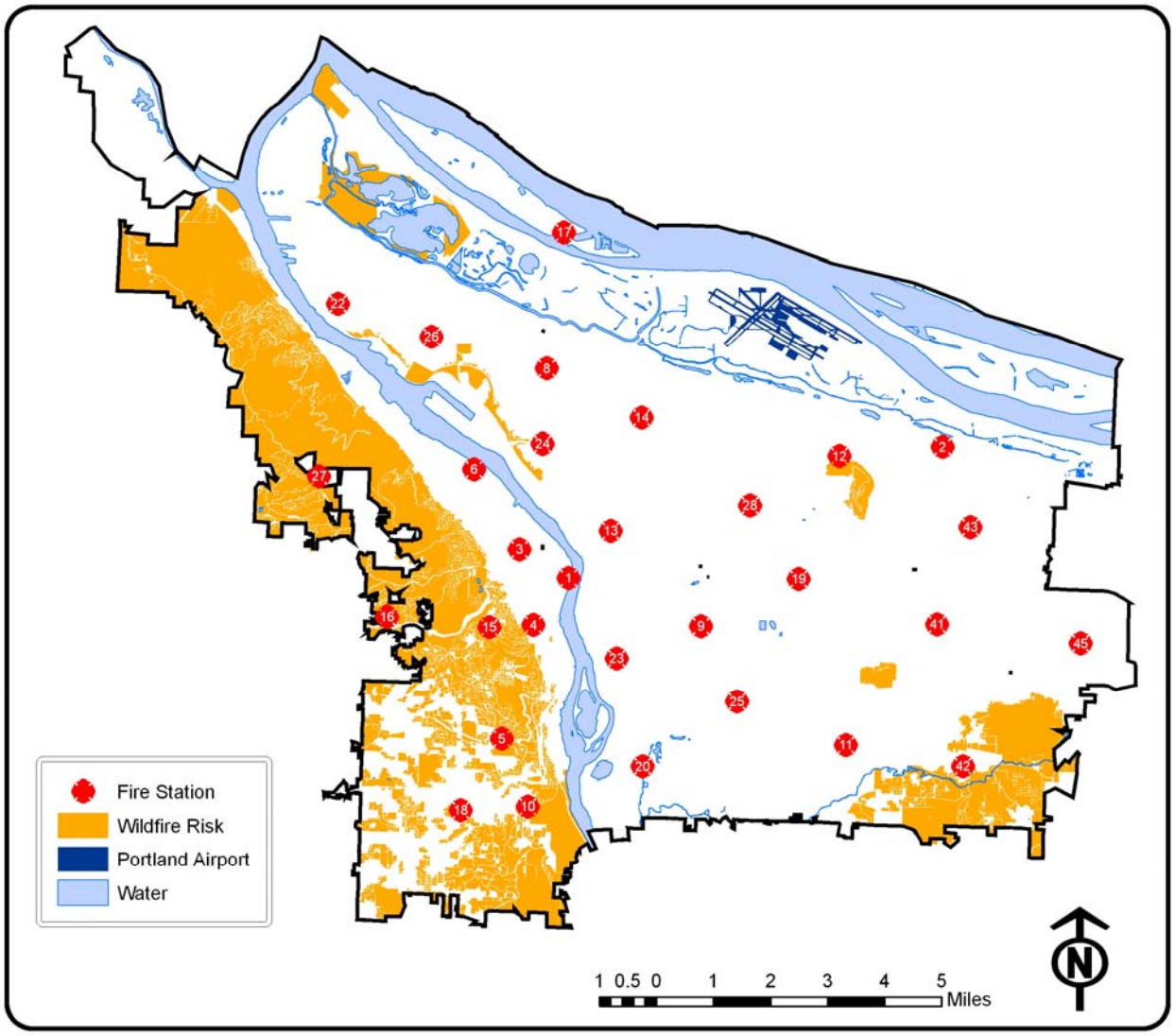


Wildfires – Wildfire risks are generally defined in terms of wildland-urban interface areas, which come in multiple forms. Occluded interface areas are completely surrounded by urban development such as city parks. Mixed interface areas are covered predominantly by vegetation but have some homes and other structures. Finally, there are the classic interface areas where homes abut wildland vegetation along a broad front.

According to the Oregon Department of Forestry, the state averages slightly over 1,000 wildfires a season (May through December). This comes at the cost of 22,000 acres of land.[8] In Portland, many of the areas prone to landslides also present a wildfire risk, as shown in Map 4. This means that once a wildfire begins it is difficult to combat due to the topography.

[8] http://www.odf.state.or.us/DIVISIONS/protection/fire_protection/stats/firecharts.asp?id=3070105

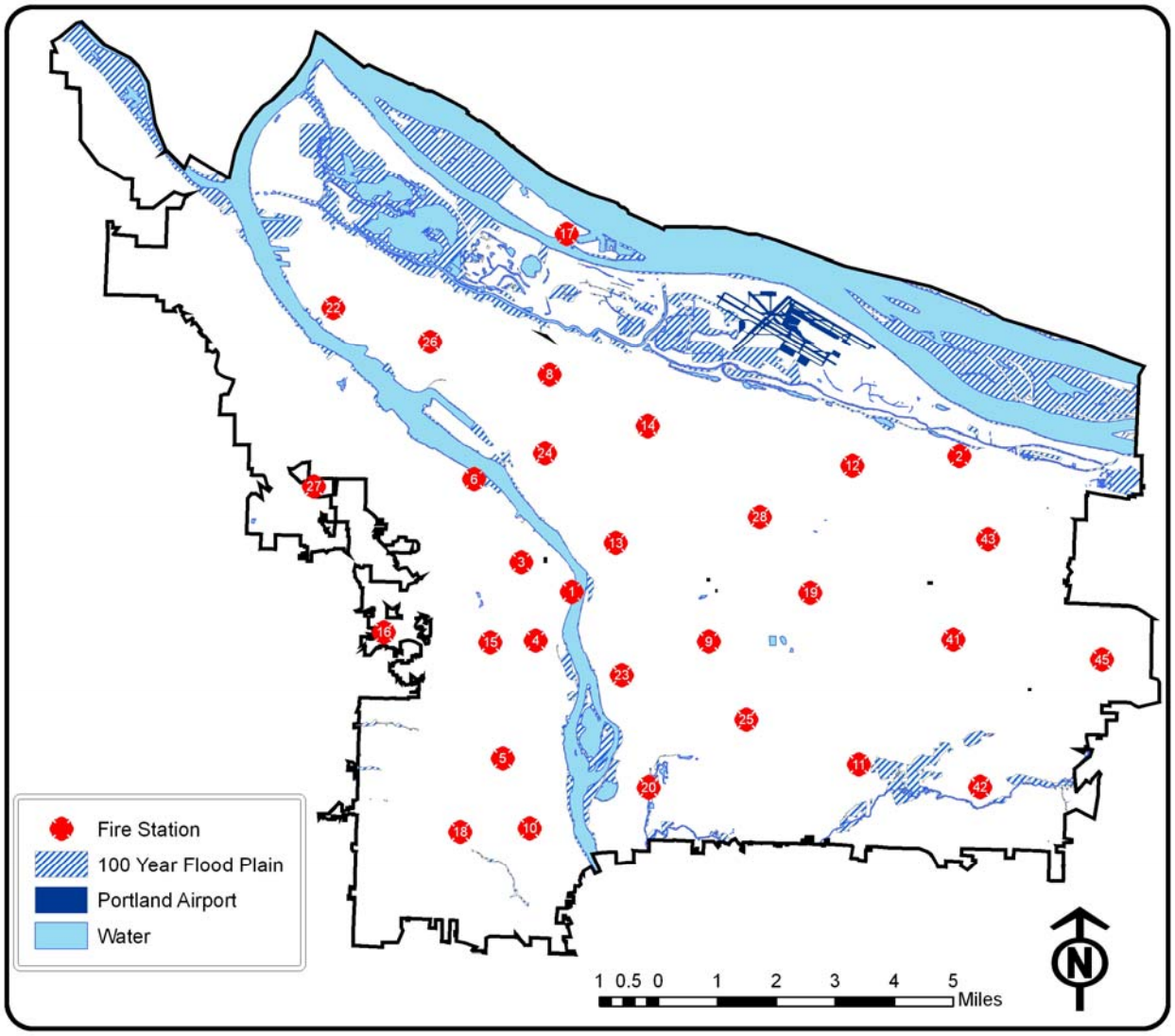
Map 4: Wildfire Risk Areas in Portland



Floods – Portland is located near the confluence of the Willamette River and the Columbia River. The Willamette River flows through the downtown area, and the Columbia River flows along the northern border with Washington State (Map 5).

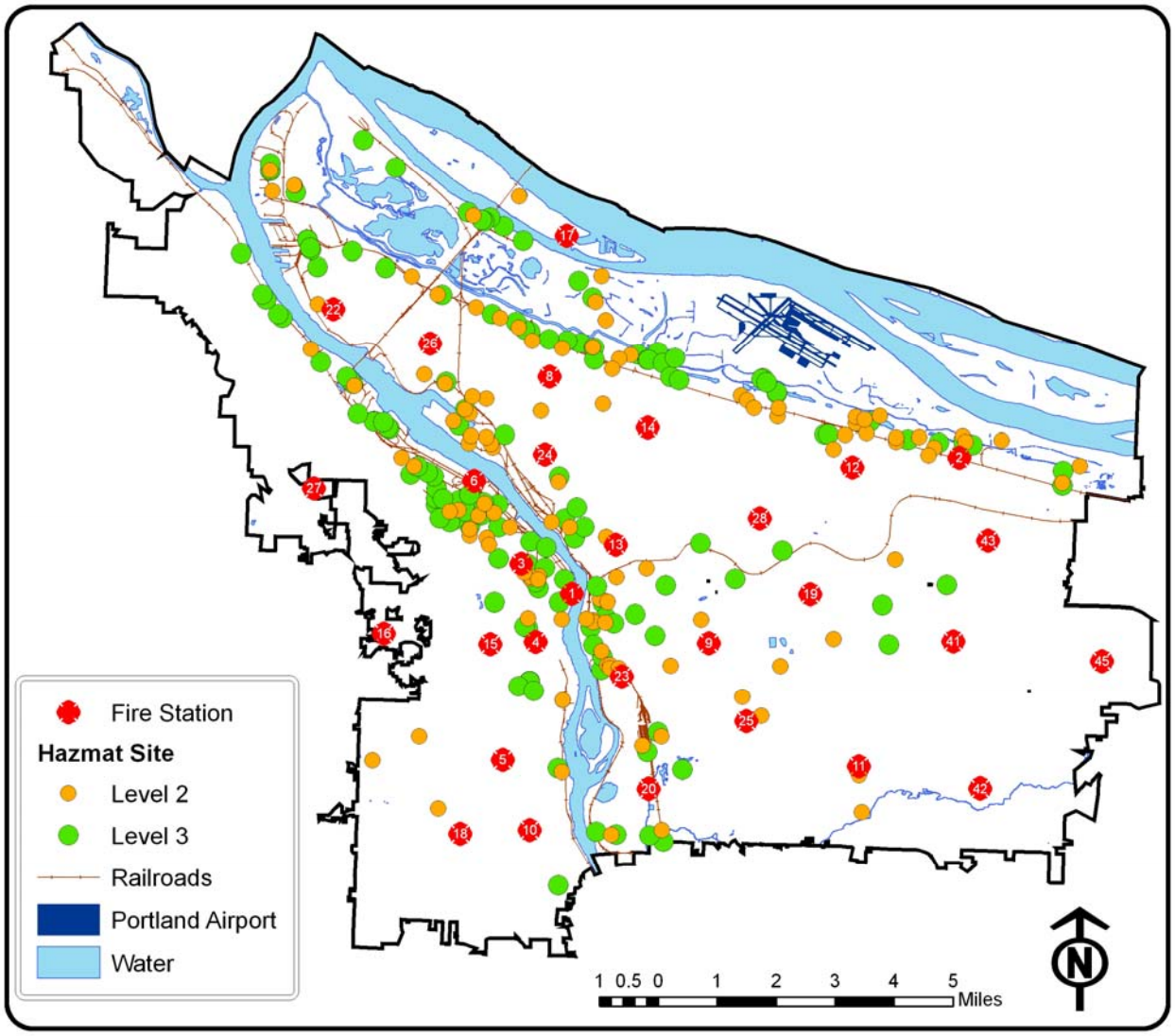
Floods can damage fire protection systems, delay response times of emergency responders and disrupt water distribution systems. All of these factors lead to increased dangers from fire and decreasing firefighter capabilities.

Map 5: Portland's 100-Year Floodplain



Hazardous Materials (Hazmat) – Hazardous materials risks arise in manufacturing facilities, transportation networks, and many other places. In Portland, there is a Hazmat risk on the interstates, railroad system, port terminals, and industrial areas. Chemical plants, foundries, and tank farms located throughout the city present additional Hazmat risk. The majority of permitted Hazmat sites are located near heavy freight rail lines and along the rivers, as seen in Map 6. In FY05, there were 2,669 Hazmat related incidents in Portland.

Map 6: Portland Hazmat Locations



Additional sites with Hazmat permits include drycleaners, paint shops, and mechanics who store chemicals on-site. Portland utilizes three risk levels to categorize Hazmat risks. Risk level 2 and 3 are the higher risk, and are less frequently subject to emergency incidents.

Age Demographics – Studies have shown the elderly create a disproportionate level of demand for fire departments; a high percentage of most departments' medical workload comes from the population aged 65 and older. Data from the 1990 and 2000 censuses and the change in percent of the population by age range is shown in Table 5.

Table 5: Population Age Demographics, 1990 and 2000[9]

	1990		2000		Change in Percent	
Year	Number	Percent	Number	Percent	Net	Growth
Under 20 years	107,106	24.5	125,931	23.8	-0.7	-3%
20 to 34 years	115,672	26.5	137,042	25.9	-0.6	-2%
35 to 54 years	118,202	27.0	165,086	31.2	4.2	15%
55 to 64	32,682	7.5	40,213	7.6	0.1	2%
65 and over	63,657	14.6	60,849	11.5	-3.1	-21%
Total	**437,319**	**100.0**	**529,121**	**100.0**		
Average Age	36.4		36.4		–	

The average age of the population did not change during the time period; in contrast, the median age of the United States and Oregon increased 2.3 and 1.7 years, respectively.[10] While the youngest portion of the population grew less than 18 percent, the portion aged 35 to 54 years grew nearly 40 percent. This increased the average age, but declines in the 65 and older population—those with highest fire and EMS risk countered this trend.

The largest increase was in the 35 to 54 year old age group. This generation has not reached the age at which they are expected to use a disproportionate amount of emergency medical services, but will move into the elderly segment of the population over the next 25 years. This aging is a reason to expect high per capita increases in emergency medical incidents in about a decade. On the other hand, the population aged 65 and older has been affecting per capita demand totals in the recent past (1994–2005). This is the only segment of the population that decreased between the past two censuses, and occupied a lower proportion of the population than is expected in the near future. The proportion of departmental workload coming from the elderly was much lower than can be expected in the future. In summary, the elderly population declined during 1990–2000, and the result was a lowering of demand for EMS services; this ratio will reverse in the immediate future and an increase in per capita EMS incidents will likely follow.

Recommendation 11: The city should continue to monitor age demographics. A population's demographics can change over time. Portland has had an unusual change and may have a large shift upwards in coming years, following other cities. Anticipating these changes allows a provider to address the need for changes in protocol, station location, and deployment.

POPULATION

Portland, the largest city in Oregon, is primarily located in Multnomah County; less than one percent of the city's population is located in Clackamas County and Washington County.

[9] Source: 1990 and 2000 Census 100 Percent Data

[10] Average ages were approximated using 1990 and 2000 Decennial Censuses and median ages are from Age 2000: Census 2000 Brief.

The city's 2004 population was estimated at 550,560 (as of July 1). This is more than three times the size of the next largest city in Oregon; as so really has no comparison peers in the state.[11]

Population estimates for fiscal years (FY) 1994 through 2004 were supplied by the city. These estimates were used to project the population through FY25. Several methods were considered including average yearly increase, geometric mean of yearly increases, and linear regression with a least squares fit. An annual growth rate slightly above 1.0 percent was chosen and applied to produce the projected population through 2025.[12] This rate is somewhat above the projected annual growth of Multnomah County (0.6 percent).[13] A higher proportion of young adults between the ages of 20 and 34 and higher rates of migration into the city are major reasons for this slightly higher growth rate.[14] This can be described as low to moderate growth. Table 6 shows the estimated population of Portland between FY95 and FY25.

Table 6: City Population, FY95 – Projected FY25

	Year	Population (July 1)
Actual	FY95	497,600
	FY00	531,600
	FY05	556,202
Projected	FY10	585,294
	FY15	615,907
	FY20	648,122
	FY25	682,021

These totals are shown graphically in Figure 10. The population is expected to exceed 600,000 by 2013. This is a net increase of 5,909 persons per year over an eight-year period. Increases of a similar magnitude are projected to continue, bringing totals above 682,000 in 2025. These population increases will undoubtedly increase the department's demand in the future.

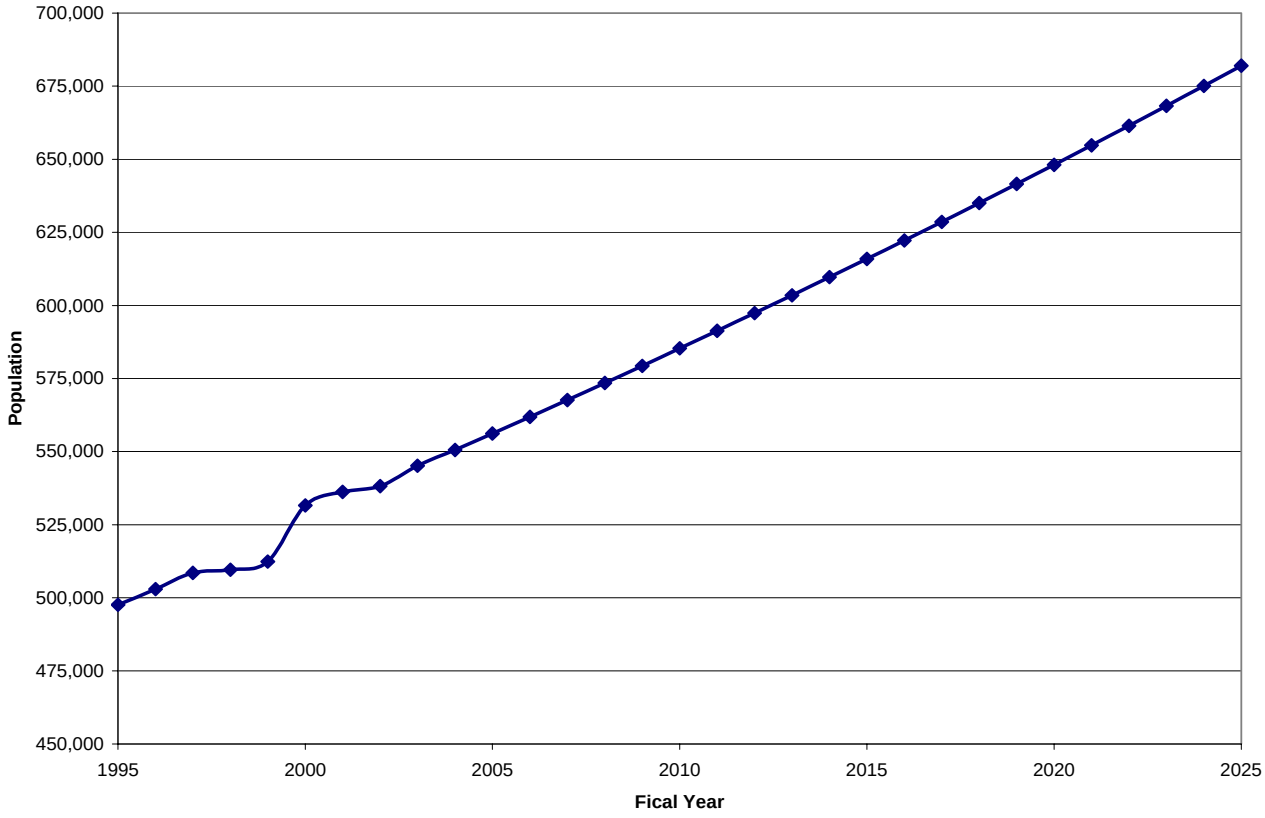
[11] Source: 2004 Oregon Population Report, July 1, 2004 Estimates.

[12] A linear regression with least squares fit was chosen and the R-coefficient squared was above 0.96.

[13] Source: Office of Economic Analysis, Department of Administrative Services, State of Oregon (July 2004). Immigration data is also found in this document.

[14] Source: 2000 Decennial Census (age data)

Figure 10: Portland Population, FY95–FY25



DEMAND

As noted before, PF&R's long-term needs depend in a large part on the expected future demand for services and workloads of individual units. Demand is the number and types of calls for service—services provided by the entire fire department. Analysis of demand indicates which times of day and where different types of service are used the most. Results of demand analysis then allow decision-makers to determine the appropriate number and placement of resources and staffing methodologies (e.g. staffing extra units during peak demand times) for their community.

Demand for service varies between communities for a number of reasons. For example, the degree of urbanization, community income level, and overall age and health of the population impact demand. Demand also is affected by the degree to which fire and EMS services are publicized and to which the public is encouraged to call for service. Citizens will typically call for 911 service disproportionately more in a city than in rural areas with suburban communities somewhere in between.

In FY05, PF&R responded to just over 59,600 incidents with 70,167 unit responses. The number of incidents is not to be confused with the number of unit responses. An emergency call may require the response of more than one unit, but only one incident number is generated. For

example, for a residential fire, PF&R dispatches four engines, one truck, and two Battalion Chiefs to a first alarm; this is one incident with seven unit responses.

Methodology – The project team used two models to forecast future demand. This projection procedure was developed over the past 24 years of conducting fire department studies. The number of incidents in a given year can be predicted to fall between the two projections with a fairly high degree of likelihood. The first method assumes that per capita demand will remain *constant*; as a result, demand will grow at the same rate as the population. Since population growth is predicted to be positive, this method produces increasing call totals for Portland.

However, per capita demand has often been shown to increase over time, leveling out at some point. This increase in demand is often termed increased utilization of services. The growth is often attributed to aging of the population or an increase in the community's confidence in (or awareness of) fire/EMS service. Increased cell phone usage and many patients' preference to be admitted via emergency rooms instead of traditional hospital visits are also possible causes for increases in per capita demand on the EMS side. Therefore, the estimated demand produced by holding per capita demand constant is often lower than actual demand. Thus, the second method assumes that per capita demand will continue to *grow* as it has in recent years for the foreseeable future. Although growth can be negative, this method is called the increased utilization or increased demand model. This method tends to overestimate the number of future incidents, because demand per capita is likely to level out at some point if not decrease.

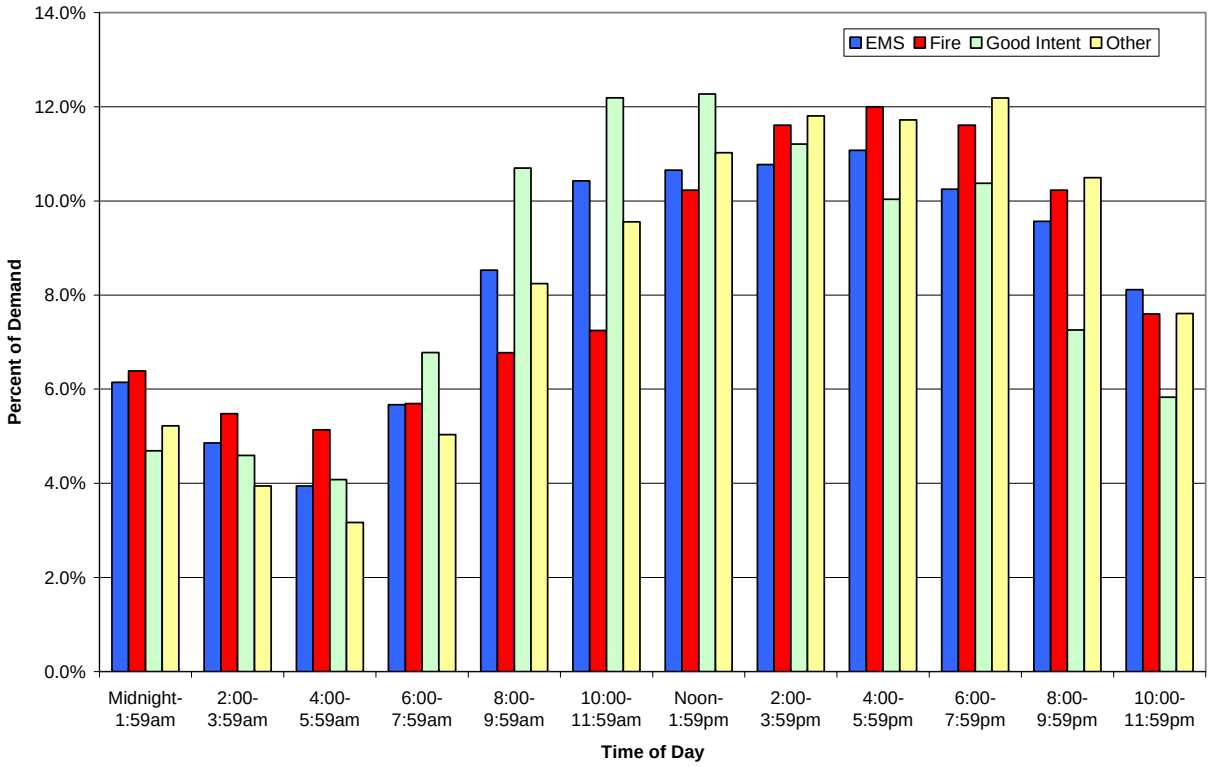
Each of these models represents an extreme case: best and worst case scenarios, which are referred to throughout this report as low and high demand projections.

The aggressive totals produced by the increased utilization of services model are the result of per capita demand undergoing exponential growth. When this growth rate is slowed, a less aggressive upper bound is established.[15]

Current Demand – Demand is distributed across the system (among stations and units) and varies by hour (Figure 11), day (Figure 12), and month (Figure 13). Differences in activity result from the characteristics of the community. Some of these characteristics include where people live, traffic patterns, and outdoor events and activities during the summer. Severe storms, high heat, droughts, average age of the population, and education are also factors that affect demand.

[15] Positive growth rates were slowed by a factor of one-half after seven years, and negative growth rates were slowed by a factor of one-half after five years. This is because demand is unlikely to continue to grow or fall at the observed rate for the entire 20-year period.

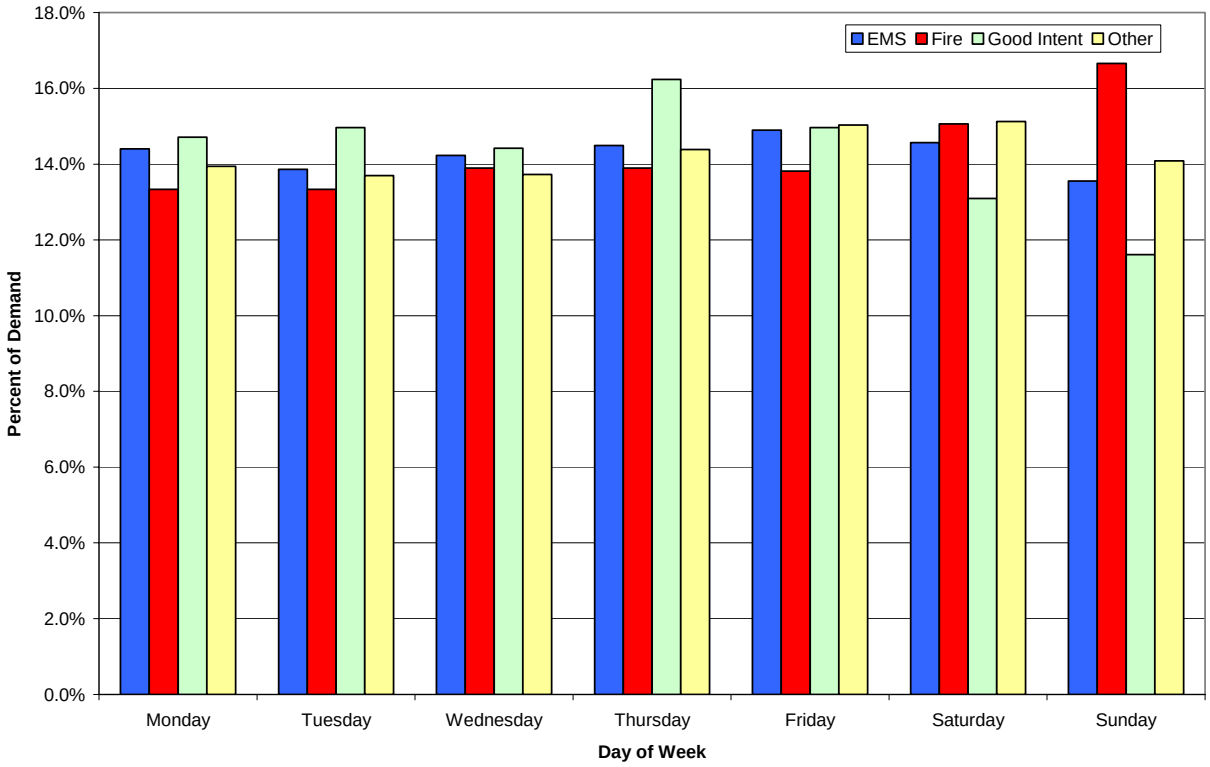
Figure 11: PF&R Demand by Time of Day, FY2005*



*Good Intent encompasses all incidents where an actual fire was not discovered. These include incidents like automatic alarms, good intent calls, false alarms, and others not in the Fire and EMS category.

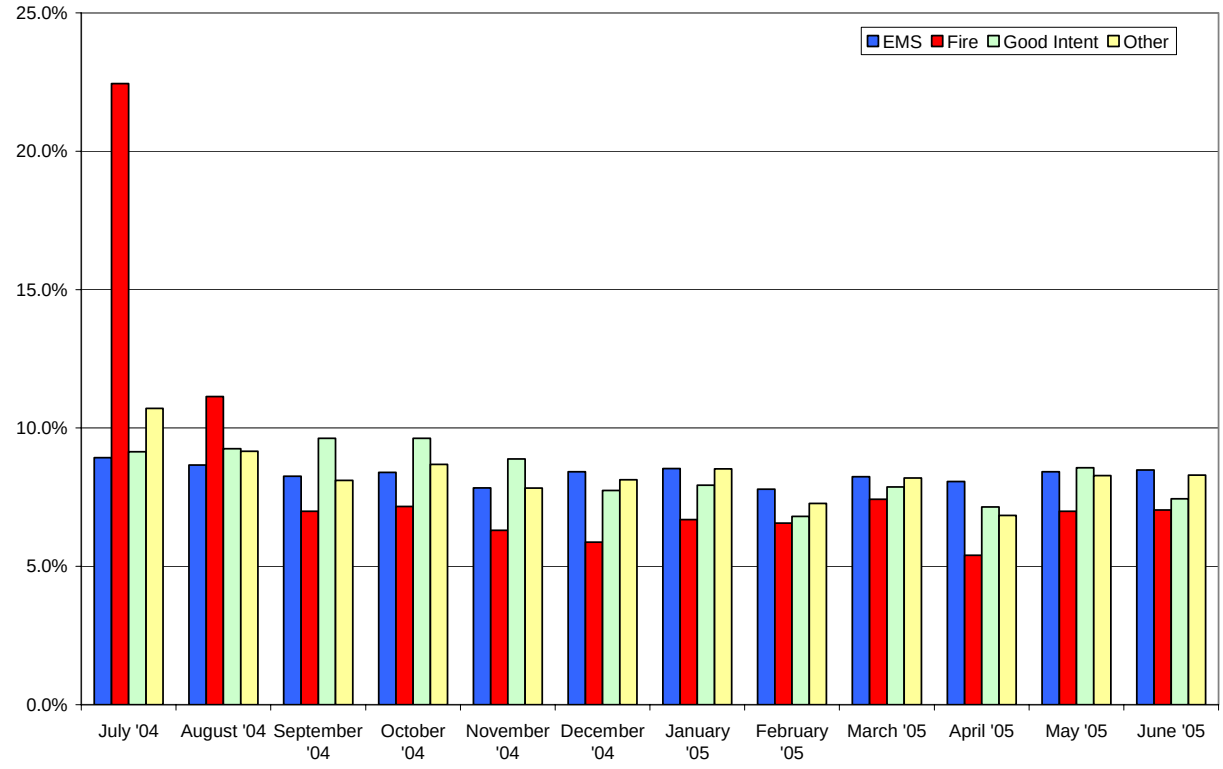
In FY05, 72.2 percent of overall demand for service in Portland occurred between the hours of 8 A.M. and 10 P.M. Demand was lowest in the early morning between 4 A.M. and 6 A.M., which is consistent with trends observed in other jurisdictions. Demand was relatively steady throughout the week, with fires having a higher demand during the weekends. Demand peaked in July and August. Analysis showed that the spike in fire demands in July was due to an increase in the number of grass, bark dust, and tree fires. Many of the fires are possibly the result of Fourth of July related celebrations as 25-30 percent of fires in July occurred on the fourth and fifth.

Figure 12: PF&R Demand by Day of Week, FY2005*



*Good Intent encompasses all incidents where an actual fire was not discovered. These include incidents like automatic alarms, good intent calls, false alarms, and others not in the Fire and EMS category.

Figure 13: PF&R Demand by Month, FY2005*



*Good Intent encompasses all incidents where an actual fire was not discovered. These include incidents like automatic alarms, good intent calls, false alarms, and others not in the Fire and EMS category.

On average, PF&R responds to over 57,000 incidents a year, of which nearly 70 percent are EMS in nature. Fires and other incidents comprise the other 30 percent of incident totals. Finally, demand is sometimes affected by response protocols. The number of incidents is not to be confused with the number of unit responses, which will be discussed shortly. An emergency call may require the response of more than one unit, but only one incident number is generated. For example, PF&R dispatches four engines and a truck; this is one incident with five unit responses.

Past Demand –Table 7 shows demand for services divided into three categories: fires, EMS, and other calls. Total incidents displayed an upward trend overall, increasing seven times and exceeding the average for the time period each year since FY00. The majority of this increase is from the EMS category, which is typical nationally. Incidents in this category exceeded the 10-year average each of the last five years, reaching a high point in 2005. On the other hand, fires saw a high of 3,203 in FY95 and decreased during the time period. The final category, other incidents, displayed the largest amount of variability. When the entire time period

is viewed, a trend appears difficult to isolate; however, the final half of the period showed incidents of this type to be approaching a level slightly below the 10-year average.

Table 7: Portland Fire and Rescue Incidents, FY95–FY05

Year	Fire	EMS	Other	Total
1995	3,203	35,011	11,967	50,181
1996	2,860	29,441	22,826	55,127
1997	2,738	24,630	28,568	55,936
1998	2,527	27,880	27,076	57,483
1999	2,654	31,968	20,691	55,313
2000	2,853	33,709	21,034	57,596
2001	2,790	36,210	20,663	59,663
2002	2,549	39,677	18,162	60,388
2003	2,706	38,707	17,526	58,939
2004	2,528	38,929	19,215	60,672
2005	2,204	39,769	17,723	59,707

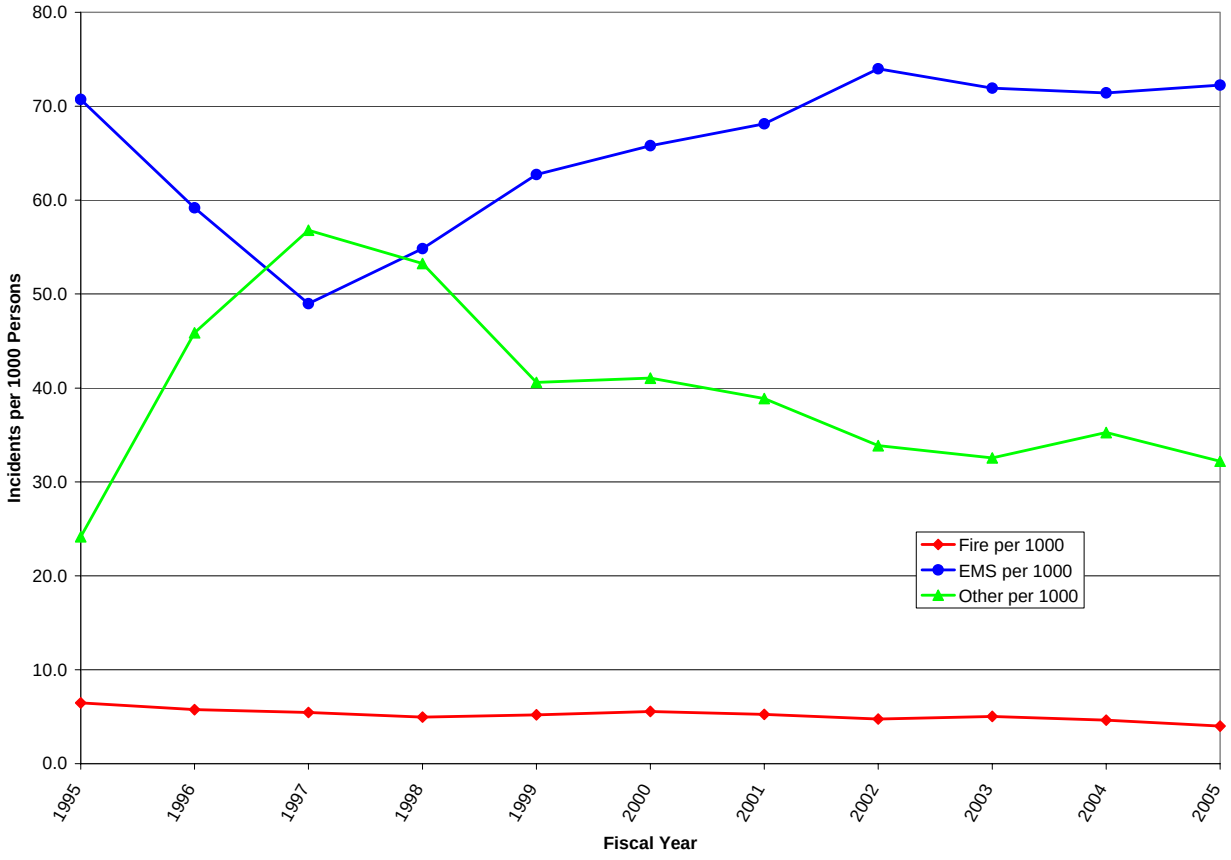
Each of the incident categories is further analyzed below. Incident totals tell half the story of a department's demand. The next step is to normalize incident totals by population totals to analyze per capita demand for services.

Per Capita Demand – The size and relative age of the population along with past demand are essential elements required to project a department's demand for services. The logical way to combine both population and demand is demand per capita—simply put, the number of incidents divided by the size of the population yields the number of incidents per person. Demand for PF&R services since FY95 was analyzed in order to predict future demand. Per capita demand for services is shown in Table 8 and depicted graphically in Figure 14. (Note per capita demand has been multiplied by one thousand for ease of observation in each of the incident categories.)

Table 8: PF&R per 1,000 Population Demand, FY95–FY05

Year	Fire	EMS	Other	Total
1995	6.5	70.7	24.2	101.4
1996	5.7	59.2	45.9	110.8
1997	5.4	49.0	56.8	111.2
1998	5.0	54.8	53.2	113.0
1999	5.2	62.7	40.6	108.5
2000	5.6	65.8	41.1	112.4
2001	5.2	68.1	38.9	112.2
2002	4.8	74.0	33.9	112.6
2003	5.0	71.9	32.6	109.5
2004	4.6	71.4	35.2	111.3
2005	4.0	72.2	32.2	108.4

Figure 14: PF&R per Capita Demand, FY95–FY05



Two trends are readily apparent. Fires saw steady decreases; although slight, the trend in this category is towards negative growth. This could be the result of prevention efforts. At any rate, the decrease in fires echoes the national trend. On the other hand, EMS incidents experienced strong positive growth. The final category, other incidents, displayed more complicated behavior.[16] The slight downward trend from 1999 through 2004 is believed to reflect the true nature of future demand. These trends, discussed qualitatively, will be measured quantitatively in the next section and applied to determine future demand.

Recommendation 12: Monitor yearly per capita demand by category and analyze data every five years. This is an important step in targeting prevention efforts. Sustained movement against defined trends should be identified and analyzed for cause and eventual effect on workload.

INTERJURISDICTIONAL COMPARISONS: While the trends in Portland are most pertinent to the PF&R, it can also be important to see where the PF&R stand in comparison to other departments in terms of per capita demand and mix of calls. A review of what other departments in similar areas are experiencing can shed light on what future trends might be in Portland.

[16] Source: fire department data, 1999-2005.

Comparison with other departments also gives the PF&R an idea of which departments are most similar in terms of demand and services, which provides a better basis for comparison of number of stations, number and type of units, staffing, etc.

Calls per capita, or in this case per 1,000 population, is an important measure of demand (and is used below for demand projections). The PF&R is below the average for the comparison group at 107 calls per 1,000 population—the lowest of the comparison group. The number of calls per 1,000 population, as seen in Table 9, varied from the low in Portland to a high of 191 in Cincinnati.

Table 9: Calls per 1,000 Population

Jurisdictions	Total Incidents	Fire Calls*	EMS Calls	Fire Calls/1000 Pop	EMS Calls/1000 Pop	All Calls/1000 Pop
Cincinnati, OH	63,017	11,948	51,069	36	155	191
Denver, CO	78,333	26,893	51,440	48	92	141
Sacramento, CA	63,902	19,840	44,062	43	95	138
Seattle, WA	75,839	15,215	60,624	27	108	135
Long Beach, CA	56,919	19,317	37,602	41	79	120
Charlotte, NC	70,000	20,000	50,000	33	83	117
Kansas City, MO	50,000	20,000	30,000	45	68	113
Portland, OR	**59,707**	**19,932**	**39,775**	**36**	**72**	**107**
Average	**64,715**	**19,143**	**45,572**	**38**	**91**	**130**

*Fire calls includes all non medical-related or EMS calls (i.e., fires, false alarms, automatic aid)

The PF&R and Cincinnati each have 36 fire calls per 1,000 population. The major difference in call volume is within the EMS category. It is important to note that Cincinnati provides EMS transport, which may contribute somewhat to the higher EMS call volume. There may be other reasons too, such as the difference in the demographic mix, economic base, etc.

PF&R's EMS demand is the second lowest in the comparison group. Even compared to other departments that are not responsible for EMS transport, it still ranks the second lowest. This is good news.

Table 10 shows the division of calls by type for the comparison group. EMS calls constitute the largest percentage of the calls in most departments, which is common across the nation.

Table 10: Mix of Calls

Jurisdictions	Provides EMS Transport	Percent Fire	Percent EMS
Cincinnati, OH	Yes	19%	81%
Seattle, WA	Yes	20%	80%
Charlotte, NC	No	29%	71%
Sacramento, CA	Yes	31%	69%
Portland, OR	**No**	**33%**	**67%**
Denver, CO	No	34%	66%
Long Beach, CA	Yes	34%	66%
Kansas City, MO	No	40%	60%
Average		**30%**	**70%**

The PF&R experiences about 67 percent of its demand in EMS, which is slightly below the average for the group. Again, this can be attributed to not providing EMS transport or differences in dispatch protocols. That is, Portland is dispatched only on the most important or serious medical emergencies.

Observed Growth – After calculating past demand for each category, the trend was analyzed to determine the expected trend in the future. Several mathematical measures were considered for each incident category. These measures include the mean of yearly per capita increases, the geometric mean of yearly per capita increases, and a least squares fit linear regression model applied to per capita demand. For fires, per capita demand from FY94 through FY03 was used and FY03 demand will be used as the baseline for projections.[17] For EMS, per capita demand from FY99 through FY05 was used with a baseline from FY05.[18]

Each incident category was individually analyzed to determine which measure best describes the observed growth rate to use in projecting future incidents. This figure, representing growth trend quantified, will be called the observed growth rate. These rates are shown in Table 11.

Table 11: Observed Growth Rates

Fire	EMS	Other
-2.9	2.4	-2.5

[17] The small number of fires in 2004 is believed to be an outlying value; therefore this low value was not used for trend analysis.

[18] The first four years of the time period moved contrary to the overall trend and were eliminated.

Both fires and other incidents decreased during the observed period while EMS incidents increased. Each of these rates can be described as moderate in magnitude. Each of these rates will be applied in the demand projections.

Demand Projections – Using population projections supplied by the city and the observed per capita demand growth rates discussed above, low and high demand projections through FY25 were created. Table 12 shows the projections by incident category. The low demand projection grows only as a result of projected population increases but has been supplemented by a one-time increase, which reflects the unlikelihood of zero growth in per capita demand. The best-case scenario projects department incident totals to remain below 70,000 through FY25. On the other hand, high demand could produce incident totals above 70,000 as soon as FY12.

Figure 15 illustrates the low and high demand projections for total incidents.

Table 12: Low and High Demand, FY06–FY25

Fiscal Year	Fire		EMS		Other		Total	
	Low	High	Low	High	Low	High	Low	High
FY06	2,330	2,367	41,167	42,176	17,457	17,681	60,954	62,223
FY07	2,456	2,530	42,106	43,137	17,187	17,634	61,748	63,301
FY08	2,409	2,556	43,044	44,099	16,923	17,815	62,376	64,469
FY09	2,362	2,582	43,486	45,642	16,662	17,998	62,510	66,222
FY10	2,317	2,608	43,931	47,240	16,406	18,182	62,654	68,030
FY11	2,306	2,635	44,381	48,893	16,364	18,368	63,052	69,896
FY12	2,296	2,662	44,836	50,604	16,322	18,557	63,454	71,823
FY13	2,286	2,689	45,296	51,749	16,280	18,747	63,862	73,185
FY14	2,275	2,717	45,760	52,920	16,238	18,939	64,274	74,575
FY15	2,265	2,745	46,229	54,117	16,197	19,133	64,691	75,994
FY16	2,255	2,773	46,703	55,341	16,155	19,329	65,113	77,443
FY17	2,245	2,801	47,181	56,593	16,114	19,527	65,540	78,921
FY18	2,235	2,830	47,665	57,873	16,072	19,727	65,972	80,430
FY19	2,225	2,859	48,153	59,183	16,031	19,929	66,409	81,971
FY20	2,215	2,888	48,647	60,521	15,990	20,134	66,852	83,543
FY21	2,205	2,918	49,146	61,891	15,949	20,340	67,299	85,148
FY22	2,195	2,948	49,649	63,291	15,908	20,549	67,752	86,787
FY23	2,185	2,978	50,158	64,723	15,867	20,759	68,210	88,460
FY24	2,175	3,008	50,672	66,187	15,826	20,972	68,674	90,167
FY25	2,165	3,039	51,191	67,684	15,786	21,187	69,143	91,910

Figure 15: Low and High Demand, FY95–FY25