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Appendix B: Management Advisory Group, Recommendations and Findings

The City of Kirkland and King County Fire District #41 conducted a Fire and Rescue Efficiency and Effectiveness Study in 2008. Prepared by MAG (Management Advisory Group, INC.), the study has 13 major findings and 12 major recommendations. ESCI reviewed and compared the findings and recommendations from 2008 with 2012 as an element of this study. For findings and recommendations that were found to still be outstanding, ESCI has called those out for discussion by City administration and KF&BD.

(1.4 Major Findings)
1. The high level of EMS responses has the unintended consequence of lowering the level of fire protection.
2. Hazardous Materials response language is vague as to the types of responses KF&BD will handle versus a regional response.
3. Rescue and extrication language is vague as to the type and level of service provided by KF&BD and subject overlaps the Marine Rescue/Firefighting standard.
4. KF&BD is totally dependent upon mutual and automatic aid response for marine rescue/firefighting.
5. Measurement of Response Time Standard is flawed and overly ambitious.

(1.5 Major Recommendations)
1. Hazardous Materials risk assessment needs to be conducted.
2. Marine rescue/firefighting risk assessment needs to be conducted.
3. Standard on Effective Response needs to be rewritten to reflect efficient use of staffing levels.
5. City Attorney should review KF&BD “standards” for added liability for the city. Recommend objectives be used instead of standards.

(Body of Work, Findings and Recommendations)
1. Reduce EMS response crew size from three to two (page 5-3).
2. Modify structure fire effective response criteria to reflect efficient use of staffing levels (page 5-5, 6, & 7).
3. Firefighter safety not compromised by staffing levels, but can be a reflection of a lack of safety-awareness by personnel (page 5-7, & 8).

89 Findings and recommendations are paraphrased.
4. Improve existing call-back system for greater efficiency (page 5-11).

5. Conduct commodity flow study for Kirkland or region\(^9\) (page 5-12).

6. Measurement of response time “from time of 9-1-1 call” is flawed (page 5-21).
   a. Five minute response for ALS not appropriate for Kirkland (page 5-21).
   b. Code Yellow responses should be reconsidered as a component of emergency medical services (page 5-21).

7. Five minute response time for four firefighters is beyond KF&BD capabilities (page 5-21).

8. “Initial arriving manpower” confusing term and conflicts with target response time objectives report. Six minutes and ten minutes are used respectively (page 5-21).

9. Recommends that response time is measured at the receipt of alarm at the fire station (page 5-22).

10. Recommends that one unit, staffed with two BLS personnel responds to medical emergencies (page 5-23).

11. KF&BD failed to meet response time standard 50 percent of the time from 2004-2007 (page 5-27).

\(^9\) Has King County conducted a commodity flow study?
## Appendix C: Summary Table of Short and Mid-Term Recommendations

- **Recommendation 1:** Amend job descriptions to accurately reflect roles and expectations for administration and support staff. (Implementation Order 1)
- **Recommendation 2:** Create a budget category for administrative services for the fire and building departments. (Implementation Order 7)
- **Recommendation 3:** Increase emergency operations by adding a BLS aid unit staffed between 8:00 AM and 8:00 PM to maintain adequate personnel for a moderate risk fire event. (Implementation Order 5)
- **Recommendation 4:** Request WSRB to conduct an evaluation of the fire and suppression capabilities of KF&BD. (Implementation Order 8)
- **Recommendation 5:** Annually conduct a detailed analysis of revenue versus expenditure to validate that EMS transportation activity is meeting stated goals established by the City. (Implementation Order 6)
- **Recommendation 6:** Add a Medical Service Administrator (MSA) at the rank of division chief to manage the medical division. (Implementation Order 2)
- **Recommendation 7:** Bill for EMS transport when responding and transporting patients outside of the City of Kirkland. (Implementation Order 4)
- **Recommendation 8:** Add one FTE administrative assistant for EMS and one FTE financial analyst to administrative support functions. (Implementation Order 3)
- **Recommendation 9:** KF&BD review and validate the mission, vision, and values following completion of the 2012 strategic plan. (Implementation Order 1)
- **Recommendation 10:** Display the adopted mission, vision, and organizational values in City Hall and fire department facilities. (Implementation Order 2)
- **Recommendation 11:** Outsource development and maintenance of Administrative Rules and Standard Operating Guidelines to a third party. Development and maintenance of Administrative Rules and Standard Operating Guidelines should include involvement of the City human resource department. (Implementation Order 1)
- **Recommendation 12:** Develop a succession plan to ensure employees are recruited and developed to fill each key role within the organization. (Implementation Order 11)
- **Recommendation 13:** Prioritize media messaging. Use “Currently Kirkland” and other media outlets as a tool to leverage the reach and impact of fire department public information and education messages. (Implementation Order 2)
- **Recommendation 14:** Anticipate controversies or events which may generate media or community interest and develop a media or messaging plan in advance. (Implementation Order 7)
- **Recommendation 15:** Develop a proactive message file where the subject is not time-sensitive, but timely release may position the message to its greatest advantage. (Implementation Order 12)
- **Recommendation 16:** Develop interactive content for the fire department website: citizen training videos and downloadable documents (fire escape plans, preparedness, and self-help checklists). (Implementation Order 9)
- **Recommendation 17:** Update existing content on the fire department website and schedule regular maintenance. (Implementation Order 8)
- **Recommendation 18:** Administer a stress test at the time of hire and periodically on incumbent employees/members based on age and risk factors. (Implementation Order 5)
- **Recommendation 19:** Develop a procedure and policy for reporting and retaining all employee exposure records. (Implementation Order 4)
- **Recommendation 20:** Aggregate like item equipment purchases with a total value of $5,000 or more and include in the City’s annual budget. (Implementation Order 12)
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Recommendation 69: Conduct at a minimum two night drills per shift per year that involve all fire suppression personnel. (Implementation Order 18) ........................................ 209

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Recommendation 74: Refine and expand goals and purpose of training objectives. (Implementation Order 13) .......................................................... 210

Recommendation 75: Jointly construct and staff a new fire station with Northshore FD. The fire station should be located in an area to serve the Finn Hill neighborhood and Northshore FD. (Implementation Order 3) .......................................................... 210

Recommendation 76: Develop a comprehensive evaluation program to assess all aspects of the EMS system. (Implementation Order 12) ........................................ 210

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Recommendation 78: Participate in the King County Medic One Community Medical Technician (CMT) pilot. (Implementation Order 2) ........................................ 210

Recommendation 79: Modify the EMS response protocol of sending three responders to medical incidents. Redeploy with dedicated staffing of two-person aid units, or single person quick response unit for low priority EMS incidents. (Implementation Order 3) ........................................ 210

Recommendation 80: Expand the current partnership with the King County Sheriff's Marine Unit and the Seattle Fire Department to provide a joint, coordinated response to marine firefighting and rescue incidents. (Implementation Order 4) ........................................ 210
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Appendix D: Summary of Recent RFA (Regional Fire Authority) Legislation

SB 6470 allows cities to assess a benefit charge if it annexed part or all of a fire district from 2006 forward. Until this bill was passed, a city could not assess a benefit charge unless it was as part of an RFA. A benefit charge can be levied up to 60 percent of the operating budget of a fire agency. That is not 60 percent of its taxing authority, but 60 percent of its operating budget (excluding capital).

*SB 6470-S.E – Digest (Digest as Enacted)*

Authorizes certain cities and towns to fix and impose a benefit charge, for enhancement of fire protection services, on personal property and improvements to real property.

HB 1854 allows an RFA to annex another fire jurisdiction. I didn’t know much about this one, but reading the bill through, it appears to allow an RFA to annex other agencies without going through another RFA formation process (establish a plan, public hearings, etc.).

*HB 1854-S – Digest (Digest as Enacted)*

Establishes a process through which a fire protection jurisdiction may be annexed by a fire service protection authority. Authorizes the transfer of certain fire protection and emergency services from annexed fire protection jurisdictions to annexing regional authorities. Reduces the property tax levy authority of a fire protection district, city, town, Indian tribe, or port district that is annexed into a RFA (regional fire protection service authority).

HB 1731 allows an RFA to establish RFA commissioners (as opposed to using the commissioners and council members from the previously separate agencies) or a combination of the two. It has to be addressed in the RFA Plan. Also authorizes the RFA to establish RFA commissioner districts, roughly equal in population.

*HB 1731-S.E – Digest (Digest as Enacted)*

Addresses the formation, operation, and governance of regional fire protection service authorities.
Appendix E: History and Formation of the Kirkland Fire Department

(The formation and chronological history of the Kirkland Fire Department was drafted from information graciously provided to ESCI by KF&BD Captain Bill Hoover. ESCI thanks Captain Hoover for his valuable assistance.)

Humble Beginnings

On June 6, 1889 at approximately 2:30 p.m., a worker in a cabinet shop in Seattle was heating glue over a gasoline fire when the glue boiled over and ignited. The fire spread to the wood chips and turpentine covering the floor. The resulting fire was visible from Kirkland. Alarmed at the sudden realization they were at risk, business owners in Kirkland purchased fire buckets and organized a fire brigade. This confederation of businesses established an agreed upon method of fighting fires in 1890, and the first organized firefighting effort in Kirkland was born.

In 1909, the City of Kirkland spent $95 to purchase a hand pulled firefighting hose cart. A siren was also purchased and installed on the bank building, which was set off by the telephone operator to notify fire brigade members of a fire. A “fire shed” was located next to a livery stable and the first brigade member to arrive would attach a horse to the hose cart.

In 1916, the Kirkland Hotel caught fire. Armed with only the hose cart, the brigade members fought valiantly, but the large wooden structure was quickly consumed. They did manage to prevent the fire from spreading to adjacent buildings.

Kirkland Fire Department’s Official Formation

On June 21, 1923, Kirkland’s first official volunteer fire department was formed. Dr. R.R. Ruffin was named Kirkland’s first fire chief. At the urging of the insurance officials at the Washington Surveying and Rating Bureau, Chief Ruffin had fire hydrants installed to improve the insurance rates for the community. That same year, a garage fire occurred at McIntyre Buick. A previously damaged vehicle parked in the garage caught fire. Kirkland firefighters responded and had the fire out in 15 minutes, limiting the damage to $3,000.

Sometime thereafter, Seattle sold a converted 1924 Packard truck to the Kirkland Fire Department, which became Kirkland’s first motorized “fire engine.” It held two 60-gallon chemical tanks, 100 feet of attack hose, 500 feet of hydrant hose, and ladders. It was not until 1929, however, that Kirkland obtained its first commercially designed and built fire engine, a 1929 GMC pumper. The unit is still owned by Kirkland as an antique pumper and is housed at Fire Station No. 22 in Houghton.
Kirkland Neighbors Form, then Join
On September 2, 1949, residents north of the city voted 235 in favor and 54 against the formation of King County Fire District #41. Kirkland Fire Chief Leonard Paulson supported the formation since Kirkland Fire Department was routinely responding out of the City, but there was no funding to support such activities. Bob Gollofon was selected to be the new districts’ first fire chief. The districts’ first fire engine was acquired shortly thereafter from an eastern Washington fire department and housed in a garage loaned to the district. Located at 13000 84 Ave NE, the building still stands at that location today.

South of the City of Kirkland, the town of Houghton appointed Harold Mehrer fire chief in 1962. In 1968, Houghton tried but failed to annex Kirkland. The following year, Kirkland annexed Houghton and Chief Mehrer stepped down. Also in 1969, Chief Paulson was replaced by Bob Ely, the first paid employee and first paid fire chief of the Kirkland Fire Department. A year later, King County Fire District #41 contracted for fire protection from the City of Kirkland. In 1970, all three fire agencies were operating as one department, referred to as the “Greater Kirkland Fire Department”.

Kirkland Fire Department Today
On May 1, 2009, Kevin Nalder was appointed Director of the Kirkland Fire and Building Department. On June 1, 2011, the remainder of King County Fire District #41 and portions of King County Fire District #34 (Redmond) and King County Fire District #36 (Woodinville) were annexed into the city. These annexations were collectively referred to as the Finn Hill – Juanita – Kingsgate annexation. Over 30,000 new residents were added to the city population in that annexation, bringing the population of the service area to approximately 80,505 citizens spread over almost 18 square miles. The department employs 101.5 firefighters, administrators and support staff.

The department serves its residents from five active fire stations and one station staffed at night with volunteers for medical responses only. The stations have a total of 19 firefighters on duty minimum, operating and cross-staffing five fire engines, six medical aid units and one ladder truck. The department handled 7,380 responses in the last full year of data collection ending August, 2011.
Appendix F: Comparable Providers

In order to illustrate a relative comparison of deployment assets, ESCI surveyed five other Washington emergency service providers: Bellingham, Everett, Redmond, and Yakima fire departments, and Kent Fire Department RFA (Regional Fire Authority). Each of the surveyed agencies provides services to communities of similar size and demographics as those served by KF&BD. The following figures provide a comparison of the number of fire stations, engines, and ladder (aerial) trucks (per 1,000 population) provided by each fire agency (In this and other similar benchmarks, Kirkland is compared with other cities serving between 50,000 and 99,999 residents).

A word of caution is appropriate: each comparable by itself is only informative and should be viewed individually as an interesting fact. The collected data begins to tell the story of how KF&BD compares with other fire and EMS providers in the area.

We begin the comparison with basic statistical information about each fire agency.

Population Served

The following figure is a side-by-side comparison of the population served by each fire department in the survey. The population served by KF&BD is approximately 80,505. The average population served by the six comparable fire departments is 85,146.

![Figure 111: Population Served by Agency](image-url)
Staffing

Figure 112 compares the number of emergency operation (firefighters and EMS) personnel serving each of the communities per 1,000 population. This comparison is considered to be an interesting statistic but it is important to remember that the services provided by each fire department are variable.

![Figure 112: Firefighters per 1,000 Population](image)

There are 1.09 suppression and EMS personnel per 1,000 for the population served by KF&BD, 73.2 percent of the average comparable communities for fire departments serving similar populations.

The following figure compares the total number of personnel, administrative, support, and prevention staff, operational personnel, and minimum on-duty staffing by six fire departments.

![Figure 113: Breakdown of Personnel and Minimum Staffing Levels](image)
The following figure compares the percent of administrative and support personnel to the total number of personnel on each department.

![Figure 114: Percentage of Administrative and Support Personnel to Department Total](image)

KF&B has 13.5 FTE administrative and support positions, equaling 13.04 percent, as compared to the total number of employees in the Department. The ratio is slightly higher than found in Kent and Everett, and 2.25 percent above the average for all agencies.

**Services Provided**

The table below lists the type and level of service provided by each of the departments.

![Figure 115: Services and Level Provided by Agency](image)
Resource Comparison

The following figures compare the number of fire stations, engines, and ladder (aerial) trucks (per 1,000 population) provided by each fire agency.

Kirkland FD maintains slightly fewer fire stations per 1,000 residents (97.7 percent) than the average of comparable regional communities and 85.7 percent of the national median\(^{91}\) for fire departments serving similar populations.

Figure 117 compares the number and average fire engines (pumpers) per 1,000 population for the six fire departments.

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\(^{91}\) NFPA U.S Fire Department Profile, Fire Analysis and Research Division, 2010.
There are 0.62 pumpers per 1,000 for the population served by KF&BD, 81.9 percent of the average regional comparison communities and 71.4 percent of the national median of 0.87 per 1,000 for fire departments serving similar populations.

ESCI next compared the number and average ladder trucks (aerials) per 1,000 population for the six fire departments.

There are 0.012 ladder trucks per 1,000 for the population served by KF&BD, 75.7 percent of the average regional comparison communities, and 50.0 percent of the national median for fire
departments serving similar populations. The national median for fire departments serving between 50,000 and 99,999 populations is 0.030 per 1,000 (two ladder trucks).

*Emergency Response Activity*

The following chart compares the total emergency responses per 1,000 population in 2011. This illustration gives the reader a sense of the relative number of responses between the area emergency response agencies.

![Figure 119: Total Emergency Responses per 1,000 Population](image)

As Figure 119 shows, requests for service occur at a lesser rate per 1,000 population in Kirkland than in the comparable communities. Factors that will affect the incident rate include the fact that the fire departments provide differing levels of service and differences in the service area demographics for each community. Record keeping practices may also affect the comparison.

In Figure 120, costs of fire protection based on the 2012 operating budget and are compared on a per-capita basis:
The cost per capita of fire and emergency services in Kirkland was $222 in 2011, slightly less than the average of $244 for the six fire departments.
## Appendix G: Summary Table of Stakeholder Interviews

<table>
<thead>
<tr>
<th>Person</th>
<th>Date</th>
<th>Affiliation or Group</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Internal</strong></td>
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</tr>
<tr>
<td>1. Bob Sternoff</td>
<td>January 3, 2012</td>
<td>City of Kirkland City Councilor</td>
</tr>
<tr>
<td>2. Penny Sweet</td>
<td>January 3, 2012</td>
<td>City of Kirkland Deputy Mayor</td>
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<tr>
<td>3. Toby Nixon</td>
<td>January 3, 2012</td>
<td>City of Kirkland City Councilor</td>
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<tr>
<td>4. Kurt Triplett</td>
<td>January 3, 2012</td>
<td>City of Kirkland City Manager</td>
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<tr>
<td>5. Amy Walen</td>
<td>January 3, 2012</td>
<td>City of Kirkland City Councilor</td>
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<tr>
<td>6. E-Board</td>
<td>January 4, 2012</td>
<td>IAFF Executive Board</td>
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<tr>
<td>7. Joan McBride</td>
<td>January 4, 2012</td>
<td>City of Kirkland City Councilor</td>
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<tr>
<td>8. Doreen Marchione</td>
<td>January 4, 2012</td>
<td>City of Kirkland City Councilor</td>
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<tr>
<td>9. Dave Asher</td>
<td>January 4, 2012</td>
<td>City of Kirkland City Councilor</td>
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<tr>
<td>12. Mark Jung</td>
<td>January 5, 2012</td>
<td>Kirkland Fire &amp; Building Department EMS Officer</td>
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<tr>
<td>13. C-Shift crew members</td>
<td>January 5, 2012</td>
<td>Kirkland Fire &amp; Building Department C-Shift</td>
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<td>14. Tracey Dunlap</td>
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<td>City of Kirkland, Director of Finance and Administration</td>
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<td>15. James Lopez</td>
<td>January 19, 2012</td>
<td>City of Kirkland, Director of Human Resources &amp; Performance Management</td>
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<td>16. Bill Hoover</td>
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<td>Kirkland Fire &amp; Building Department Captain</td>
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<td>17. A-Shift crew members</td>
<td>January 3, 2012</td>
<td>Kirkland Fire &amp; Building Department A-Shift, Station 26</td>
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<td>18. Dave Walker</td>
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<td>Kirkland Fire &amp; Building Department Assistant Fire Marshal</td>
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<td>20. Paul Stewart</td>
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<td>Kirkland Fire &amp; Building Department Deputy Planning Director</td>
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<td>21. Desirre Goble</td>
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<td>Kirkland Fire &amp; Building Department Planner</td>
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<td>22. Teri Wallace</td>
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<td>23. Audrey Martin</td>
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<td>24. Katharine Durish</td>
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<td>25. Helen Ahrens-Byington</td>
<td>January 4, 2012</td>
<td>Kirkland Fire &amp; Building Department Deputy Fire Chief</td>
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<td>26. Battalion Chiefs</td>
<td>January 5, 2012</td>
<td>Kirkland Fire &amp; Building Department</td>
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<td>27. B-Shift crew members</td>
<td>January 4, 2012</td>
<td>Kirkland Fire &amp; Building Department B-Shift</td>
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<td>28. Marie Stake</td>
<td>January 5, 2012</td>
<td>Kirkland Fire &amp; Building Department</td>
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<tr>
<td></td>
<td></td>
<td>Communications Specialist</td>
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<tr>
<td><strong>2. External</strong></td>
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<tr>
<td>1. Kevin Donnelly</td>
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<td>Redmond Fire Department Fire Chief</td>
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<tr>
<td>2. Michael Eisner</td>
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<td>Bellevue Fire Department Fire Chief</td>
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<tr>
<td>3. Mark Risen</td>
<td>January 5, 2012</td>
<td>Bellevue Fire Department Deputy Chief</td>
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<tr>
<td>5. Jim Torpin</td>
<td>January 5, 2012</td>
<td>Northshore Fire Department Fire Chief</td>
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<td>6. Metro Fire Training Group</td>
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<td>East Metro Training Group</td>
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<tr>
<td>7. Kim Bullen</td>
<td>January 3, 2012</td>
<td>King County County Administrator</td>
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<tr>
<td>8. Bob Van Horne</td>
<td>January 5, 2012</td>
<td>Bothell Fire Department Fire Chief</td>
</tr>
</tbody>
</table>
Appendix H: Dashboard View Examples

Figure 121: Internal Customer Dashboard View

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Figure 122: External Customer Dashboard View

City website, City of Adrian, Michigan, retrieved August 17, 2012.