

*Benson Fire Department
Clontarf Fire Department
Danvers Fire Department
DeGraff Fire Department
Minnesota*

Feasibility Study Shared or
Cooperative Fire and Emergency Services

October 2011



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DeGraff Fire Department**
Minnesota

**Feasibility Study for
Shared or Cooperative Fire and
Emergency Services**

Summer 2011

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Emergency Services Consulting
International

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Officers and Members of Benson Fire Department

City of Clontarf/Clontarf Fire Department

Officers and members of Clontarf Fire Department

City of Danvers/Danvers Fire Department

Officer and Members of Danvers Fire Department

City of DeGraff/DeGraff Fire Department

Officers and members of DeGraff Fire Department

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Executive Summary

Emergency Services Consulting International (ESCI) was engaged by the City of Benson to conduct a Feasibility Study for Shared or Cooperative Fire and Emergency Services for the fire departments serving the cities of Benson, Clontarf, Danvers, and DeGraff and their primary response areas. This report details the analysis of the data and information collected throughout the project and provides the reader with a description of each organization, an evaluation of the current conditions that exist throughout the communities involved regarding emergency services, and provides recommendations for future service delivery through a more cooperative model. This executive summary serves as a synopsis of the information contained throughout the body of this document.

The first section of the report provides a comprehensive evaluation of each of the study organizations. Each department is discussed separately and a summary is provided that illustrates the comparison of current operations.

The Benson Fire Department (BFD) is a direct operating department of the City of Benson. The department provides fire protection services to a jurisdiction that encompasses all of the governmental boundaries of the community, along with additional contractual service areas. The jurisdiction is located in Swift County, approximately 130 miles west of the Minneapolis metropolitan area. The response area includes urban residential and commercial, rural residential, and agricultural land and has been experiencing light to moderate growth. The department first began providing services in 1881 and services are provided by 33 personnel utilizing nine apparatus for a population of 4,878 in an area of 262 square miles.

Clontarf Fire Department (CFD) is a direct operating department of the City of Clontarf. The department provides fire protection services to a jurisdiction that encompasses all of the governmental boundaries of the community along with additional contractual service areas. The jurisdiction is located in Swift County, approximately six miles north of the City of Benson. The department provides services from a single fire station containing four apparatus utilized by 12 personnel for a population of 326 in an area of 62 square miles.

Danvers Fire Department (DFD) is a direct operating department of the City of Danvers. The department provides fire protection services to a jurisdiction that encompasses all of the governmental boundaries of the community, along with additional contractual service areas. The jurisdiction is located in Swift

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County, approximately eight miles southwest of Benson. The response area includes rural residential and agricultural land and has been experiencing very limited growth. The department first began providing services in 1976; currently services are provided by 12 personnel utilizing four units for a population of 410 in an area of 92 square miles.

DeGraff Fire Department (DFD) is a direct operating department of the City of DeGraff. The department provides fire protection services to a jurisdiction that duplicates the governmental boundaries of the community. It is the only department involved in this study that does not have contractual service area outside its municipal boundaries. The jurisdiction is located in Swift County, approximately seven miles southeast of Benson. The department provides service from a single facility with 14 personnel utilizing four units for a population of 115 in an area of 0.8 square miles.

The following table provides a summary of the general overview of each organization.

	Stations	Personnel	Apparatus	Population	Area
Benson FD	1	33	10	4,878	262.0
Clontarf FD	1	12	4	326	62.0
Danvers FD	1	12	4	410	92.0
DeGraff FD	1	14	4	115	0.8
Total	4	71	22	5,729	416.8

In addition to the information reported above, ESCI examined each department in regards to Governance and Lines of Authority, Foundational Policy Documents, Organizational Design, Reporting and Recordkeeping, Internal and External Communications and Information Technology Systems. Within these subsections, ESCI provides four recommendations for improved efficiency and operations within the departments. These recommendations are:

- Danvers and Clontarf should correct their lack of foundational policy documents. A basic set of administrative and operating policies and procedures could be developed using model documents available from industry organizations.
- Each department needs to ensure that both administrative and operational policies are kept updated and written in a complete and professional format.
- The four departments need to improve the quality and content of their standard operating guidelines, particularly in the area of response operations. Additional guidelines are needed to guide tactics, fire stream operations, pumping operations, ladders and ventilation, and other operational functions.
- Each department should institute a process that ensures that each member receives the necessary communications about department operations.

ESCI also conducted an evaluation of financial components of each department involved in the study. In essence, the evaluation was to identify current funding mechanisms as well as budget utilization and expenditure history. Based on the information obtained from the evaluation, ESCI determined that funding for the four departments is substantially below the national and Minnesota averages as indicated in the following figure.

Per Capita Cost of Fire Protection	
National Average	\$104.00
Minnesota Average	\$68.01
Benson FD	\$32,13
Clontarf FD	\$38.49
Danvers FD	\$49.59
DeGraff FD	Not Provided

The next portion of the report evaluates the current capital assets of each department including facilities and apparatus. The study region operates from four fixed facilities utilizing a total of 21 primary response apparatus. Each capital asset was given a basic review for functionality, safety, suitability for current use, and adaptability for future use. The following summary provides information relative to the capital asset review.

	Functionality	Safety	Suitable for Current Use	Adaptable for Future Use
Benson FD	Sufficient	Sufficient	Yes	Limited
Clontarf FD	Minimal	Inadequate	No	No
Danvers FD	Minimal	Minimally	No	Yes
DeGraff FD	Minimal	Inadequate	Yes	Yes

Apparatus were evaluated and ranked on a scale of Excellent, Good, Fair, Poor and Serviceable. The following illustrates the distribution of existing primary apparatus across those scores.

	Benson FD	Clontarf FD	Danvers FD	DeGraff FD
Excellent	2	1	1	1
Good	5	1	0	1
Fair	3	1	0	1
Poor	0	1	3	1
Serviceable	0	0	0	0

Next, ESCI evaluated the staffing and personnel management components of each organization. The following figures summarize the administrative and emergency response personnel current in use.

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	Benson FD	Clontarf FD	Danvers FD	DeGraff FD	Total
Fire Chief	1	1	1	1	4
Assistant Chief	2	1	1	1	5
Association Officers and Board Members	11	-	-	-	11
Training Officer	-	1	-	1	2
Total Admin and Support	14	3	2	3	22

	Benson FD	Clontarf FD	Danvers FD	DeGraff FD	Total
Captain	1	-	-	-	1
Lieutenant	1	-	2	-	3
Firefighters	17	9	8	12	46
Total Operations	19	9	10	12	50

Under typical circumstances, ESCI would provide an illustration of how well each department is doing at producing personnel for structure fires. Unfortunately, BFD was the only study department that had sufficient structure fires to make analysis possible. BFD was able to produce an average of 21.4 personnel to nine structure fires during 2009 and 2010. CFD only had one fire during that period and did not record personnel in its incident report. DeGraff FD had two structure fires during the same period and did not record personnel in its incident report. Danvers FD recorded no structure fires during that data period.

The personnel management components encompassed Compensation Systems, Disciplinary Processes, Application and Member Retention Programs and Testing, Measurement and Promotional Processes. The review of these components generated the following recommendations.

- Each department should work with local public and mental health organizations to establish a mechanism by which members can receive the benefits of an Employee Assistance Program (EAP) and Critical Incident Stress Debriefing (CISD) when necessary.
- Clontarf FD and Danvers FD should develop and implement a formal disciplinary policy.
- Clontarf FD and Danvers FD should develop and implement a formal disciplinary appeals process.
- Each department should implement a system of periodic competency testing of members to ensure that each member is continuously capable of performing critical tasks.
- Each department should implement a formal performance evaluation system to provide performance feedback to all personnel and develop a plan of improvement for the future.

- Each department should develop minimum requirements for each position and implement a process whereby members test and compete for promotions to higher rank.

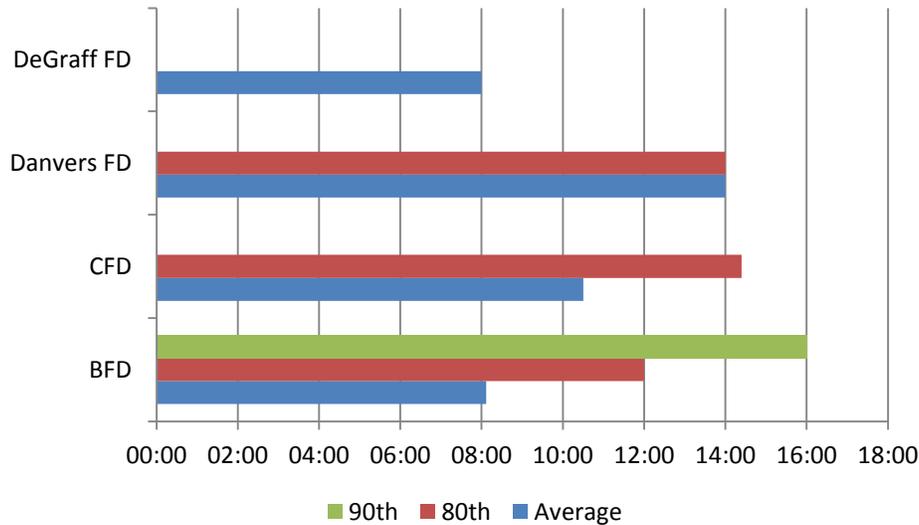
The remaining portions of the report's first section focus on the delivery of emergency services to the communities served by each agency. In examining service delivery, ESCI evaluated Service Demand, Distribution of Resources, Response Performance, Incident Control and Management, and Mutual and Automatic Aid Systems currently in place.

Overall, service demand, or workload, is relatively low across the region, totaling only 59 incidents in 2010 as compared to 82 incidents in 2009. In evaluating service demand temporally, it was determined that the summer months are the busiest for the region, as are weekend days (Friday and Saturday) and normal working daytime hours.

Across the region, the four agencies operate from four facilities, all staffed with volunteers based on incident dispatch. No station has on-duty coverage 24 hours per day. There exists a certain extent of the jurisdiction that can be reached within a certain travel time from the stations regardless of staffing patterns. Based on the fact that ESCI was unable to plot calls for service, it is not possible to determine what percentage of service demand falls within certain travel models travel models. Each department should make a conscious effort to use and record actual 9-1-1 addresses when documenting incidents for future analysis. The current use of house, property, or owner name is not usable in modern geographic information systems (GIS).

Total response time is the amount of time a resident or business waits for an apparatus to arrive at the scene of an emergency beginning when they first call 9-1-1. ESCI evaluated the response time for the study agencies for 2010 based on the average, 80th percentile, and 90th percentile measurements. The 90th percentile response time was calculated for BFD (16:00 or 16 minutes) based on at least a portion of the response area that is considered urban in population density. ESCI also calculated the 80th percentile response performance for each agency that responds to suburban and rural areas and provides an average for comparison. Since DeGraff FD only recorded one emergency incident during 2010, the average and 80th percentile response performance would be equal. The following figure illustrates the response times of each study agency.

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This section of the report, including the portions addressing incident control and management and mutual and automatic aid, generated the following recommendations.

- Clontarf FD and DeGraff FD should map all pressurized and dry hydrant locations and keep map books in each apparatus.
- Each department should adopt formal response performance objectives in order to track historic response performance and set goals for future improvements.
- Each department should work collectively to ensure that a minimum number of command staff is present within the region at all times.
- Each department should provide command officers with formal strategy and tactics training.
- Clontarf FD, Danvers FD, and DeGraff FD should obtain hazardous materials operations level training for all personnel as required by OSHA 1910.120.
- Clontarf FD should work to ensure that a safety office is designated on all working incidents.
- Clontarf FD, Danvers FD, and DeGraff FD should develop and implement a policy adhering to the “two-in, two-out” rule as established by OSHA.

ESCI completed the evaluation of current conditions for each agency by analyzing each department’s training and fire prevention programs. The following recommendations were generated from this review.

- Each department should ensure that new members receive formal basic safety training prior to being allowed to respond to emergency incident scenes, regardless of their limited role.
- Danvers FD and DeGraff FD should establish minimum training requirements for new personnel to leave probationary status.

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- Clontarf FD and DeGraff FD should establish minimum annual training requirements for all members.
- Each department should provide specific training for all officers and driver/operators.
- Each department should develop an annual training plan that allows members to plan and attend those sessions most pertinent.
- Clontarf FD and DeGraff FD should implement an electronic training records management system to increase efficiency in recordkeeping and training documentation.
- Each department should develop and follow formal lesson plans for all training sessions, particularly those that are manipulative in nature.
- Each department should increase the amount of multi-company drills conducted with surrounding agencies to enhance the cooperative and coordinated efforts already in place.
- Each department should implement a periodic physical performance evaluation to ensure personnel are physically capable of performing critical tasks.
- Each department should implement a program to periodically evaluate member skill competency to ensure that personnel are continually able to perform critical tasks
- Clontarf FD, Danvers FD, and DeGraff FD should provide for post-incident analysis, particularly given the low call volume of the three agencies.
- Danvers FD and DeGraff FD should implement a system whereby an officer is charged with maintaining and monitoring recertification requirements of members.

The next section of the report addresses potential opportunities for cooperative efforts between the study agencies. The previous section of the document provides an overview and baseline assessment of the emergency services delivery system within Benson, Clontarf, Danvers, and DeGraff and each department's primary response areas outside their respective municipal boundaries. This section uses that assessment of baseline conditions to develop scenarios for future service delivery utilizing the concept of shared or cooperative services.

Four basic strategies are generally available when considering consolidation of services, beginning with a do-nothing approach and ending with complete unification of the organizations into what is, essentially, a new emergency service provider: Autonomy, Functional Consolidation, Operational Consolidation, and Legal Unification. Each strategy is discussed within the body of the report. In identifying potential cooperative opportunities, the project team considered the key issues now challenging each agency. Some issues represent roadblocks to integration, while others provide a unique chance for improvement. As an element of the review, affected staff and other officials provided local and internal perspective on organizational culture, community expectation, and other significant matters.

The evaluation of the feasibility of consolidating the four study agencies is presented in detail including the level of cooperation, timeline for completion, sections affected, and overall objective. The following is a summary of the option.

The fire departments within the study area already benefit from some collaborative programs such as mutual and automatic aid; therefore, it is natural that continuing the long-term strategy of cooperation should eventually lead to the whole area forming a single fire agency. Since each department within the study area is volunteer in the way that they delivery services, the total budget for fire protection is extremely low—\$189,593 not including funding for DeGraff, which was not provided for this project. The greatest savings from consolidations and/or mergers are typically found in personnel costs and/or redundant fire stations and apparatus. This is not, however, the case for this study. Volunteers would presumably still receive incentive pay for incident response, training sessions, and meetings and would likely see an overall increase in these incentives based on the highest current incentive paid (\$10.25 – BFD); in addition, the consolidated system could potentially employ a full-time or part-time chief to oversee the entire operation. These changes could result in an increase in the overall cost of providing fire protection to the region through a consolidated system.

In addition to the operational consolidation of the four departments, ESCI provides eight functional cooperative effort strategies designed to improve cooperation and efficiency across the four agencies.

These strategies include:

- A – Develop Standard Operating Guidelines
- B – Create a Unified Occupational Medicine Program
- C – Create a Unified Wellness and Fitness Program
- D – Develop and Adopt Common Training Standards
- E – Create a Regional Training Manual
- F – Develop an Annual Regional Training Plan
- G – Provide for Joint Incident Command and Operations Supervision
- H – Implement a Computerized Training Records Management System

The remainder of the report describes a recommended process for moving forward with the potential implementation of a cooperative service delivery effort. The word ‘potential’ is used here because a part of this process includes the policy decisions necessary to determine, based on the results of the study,

whether there is sufficient desire among the political bodies of the organization to continue with the process or not. The implementation begins with that step.

The ESCI project team began collecting information concerning the fire and emergency services for Benson, Clontarf, Danvers, and DeGraff in May 2011. The team members recognize that the report contains a large quantity of information and ESCI would like to thank the elected officials of each organization involved as well as the officers, employees, and volunteers of the four fire departments for their tireless efforts in bringing this project to fruition. ESCI would also like to thank the various individuals and external organizations for their input, opinions, and candid conversations throughout this process. It is ESCI's sincere hope that the information contained in this report is utilized to its fullest extent and that the emergency services provided to the citizens of Swift County are improved by its implementation.

Note to the reader:

No financial information was received from DeGraff Fire Department for this project. This lack of information impacted ESCI's ability to accurately compare and contrast the four individual agencies participating in this study. In addition, financial projections are based on the information that was provided by Benson FD, Clontarf FD, and Danvers FD. Adjustment to final projections will be necessary when and if financial information is provided by DeGraff FD.

Evaluation of Current Conditions

Emergency Services Consulting International (ESCI) was engaged by the City of Benson to conduct a Feasibility Study for Shared or Cooperative Fire and Emergency Services for the fire departments serving the cities of Benson, Clontarf, Danvers, and DeGraff and their primary response areas. This report details the analysis of the data and information collected throughout the project and provides the reader with a description of each organization, an evaluation of the current conditions that exist throughout the communities involved regarding emergency services, and provides recommendations for future service delivery through a more cooperative model.

Organization Overview

This section of the report provides a comprehensive evaluation of each of the study organizations. Each department is discussed separately and a summary is provided that illustrates the comparison of current operations.

Benson Fire Department

Benson Fire Department (Benson FD or BFD) is a direct operating department of the City of Benson, Minnesota. The department provides fire protection services to a jurisdiction that encompasses all of the governmental boundaries of the community, along with additional contractual service areas. The jurisdiction is located in Swift County, approximately 130 miles west of the Minneapolis metropolitan area. The response area includes urban residential and commercial, rural residential, and agricultural land and has been experiencing light to moderate growth. The department first began providing services in 1881.

Currently, the specific services provided by the department include fire suppression, vehicle extrication, hazmat operations-level, technical rescue – high-angle rope, technical rescue – confined space, and public education. Technician-level hazardous materials response is provided by a state team.

Call receipt and dispatch services are provided by Swift County Communications. This department provides service to a population of 4,878 in an area of approximately 262 square miles. The services are provided from one facility with a fleet of vehicles that includes three engines, two tankers, one aerial leader, one heavy rescue, and two brush units.

Currently a total of 33 personnel are involved in delivering and supporting the department's services. The primary "management team" is made up of the chief, two assistant chiefs, a captain, and a lieutenant. Primary response staffing is provided by on-call responders coming from home or work. For immediate response, there are typically a minimum of 15 personnel that are in the community and available, carrying pagers to receive radio calls for emergency response.

The Insurance Services Office (ISO) reviews the fire protection resources within communities and provides a Community Fire Protection Rating system from which insurance rates are often based. The rating system evaluates three primary areas: the emergency communication and dispatch system, the fire department, and the community's pressurized hydrant or tanker-based water supply. The overall rating is then expressed as a number between 1 and 10, with 1 being the highest level of protection and 10 being unprotected or nearly so. As of the latest rating, ISO gave the service area a rating of class 4/6. The split rating applies the lower of the two ratings to those structures within five miles of a fire station and within 1,000 feet of a hydrant or creditable water source. All others receive the higher rating. The latest ISO rating review was conducted in 1999.

Clontarf Fire Department

Clontarf Fire Department (Clontarf FD CFD) is a direct operating department of the City of Clontarf, Minnesota. The department provides fire protection services to a jurisdiction that encompasses all of the governmental boundaries of the community, along with additional contractual service areas. The jurisdiction is located in Swift County, approximately six miles north of the City of Benson. The response area includes rural residential and agricultural land and has been experiencing very limited growth.

Currently, the specific services provided by the department include fire suppression and public education. Technician-level hazardous materials response is provided by a state team. Call receipt and dispatch services are provided by Swift County Communications.

This department provides service to a population of 326 in an area of approximately 62 square miles. The services are provided from one facility with a fleet of vehicles that includes one engine, one tanker, and two brush units.

There are currently a total of 12 personnel involved in delivering and supporting the department's services. The primary "management team" is made up of the chief and assistant chief. Primary response staffing is provided by on-call responders coming from home or work. For immediate response, there are typically a minimum of three personnel that are in the community and available, carrying pagers to receive radio calls for emergency response.

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Danvers Fire Department

Danvers Fire Department (Danvers FD or DFD) is a direct operating department of the City of Danvers in the state of Minnesota. The department provides fire protection services to a jurisdiction that encompasses all of the governmental boundaries of the community, along with additional contractual service areas. The jurisdiction is located in Swift County, approximately eight miles southwest of Benson. The response area includes rural residential and agricultural land and has been experiencing very limited growth. The department first began providing services in 1976.

Currently, the specific services provided by the department include fire suppression. Technician-level hazardous materials response is provided by a state team. Call receipt and dispatch services are provided by Swift County Communications.

This department provides service to a population of 410 in an area of approximately 92 square miles. The services are provided from one facility with a fleet of vehicles that includes two engines, one tanker, and a wildland unit. There are currently a total of 12 personnel involved in delivering and supporting the department's services. The primary "management team" is made up of the chief and assistant chief. Primary response staffing is provided by on-call responders coming from home or work. For immediate response, there are typically a minimum of four personnel that are in the community and available, carrying pagers to receive radio calls for emergency response.

The Insurance Services Office (ISO) reviews the fire protection resources within communities and provides a Community Fire Protection Rating system from which insurance rates are often based. The rating system evaluates three primary areas: the emergency communication and dispatch system, the fire department, and the community's pressurized hydrant or tanker-based water supply. The overall rating is then expressed as a number between 1 and 10, with 1 being the highest level of protection and 10 being unprotected or nearly so. As of the latest rating, ISO gave the service area a rating of class 9.

DeGraff Fire Department

DeGraff Fire Department (DeGraff FD or DFD) is a direct operating department of the City of DeGraff, Minnesota. The department provides fire protection services to a jurisdiction that duplicates the governmental boundaries of the community. It is the only department involved in this study that does not have contractual service area outside its municipal boundaries. The jurisdiction is located in Swift County, approximately seven miles southeast of Benson. The response area includes rural residential and agricultural land and has been experiencing very limited growth.

Currently, the specific services provided by the department include fire suppression. Technician-level hazardous materials response is provided by a state team. Call receipt and dispatch services are provided by Swift County Communications. This department provides service to a population of 115 in an area of approximately 0.8 square miles. The services are provided from one facility with a fleet of vehicles that includes two engines, one tanker, and one wildland unit.

There are currently a total of 14 personnel involved in delivering and supporting the department's services. The primary "management team" is made up of the chief, assistant chief, and training officer. Primary response staffing is provided by on-call responders coming from home or work. For immediate

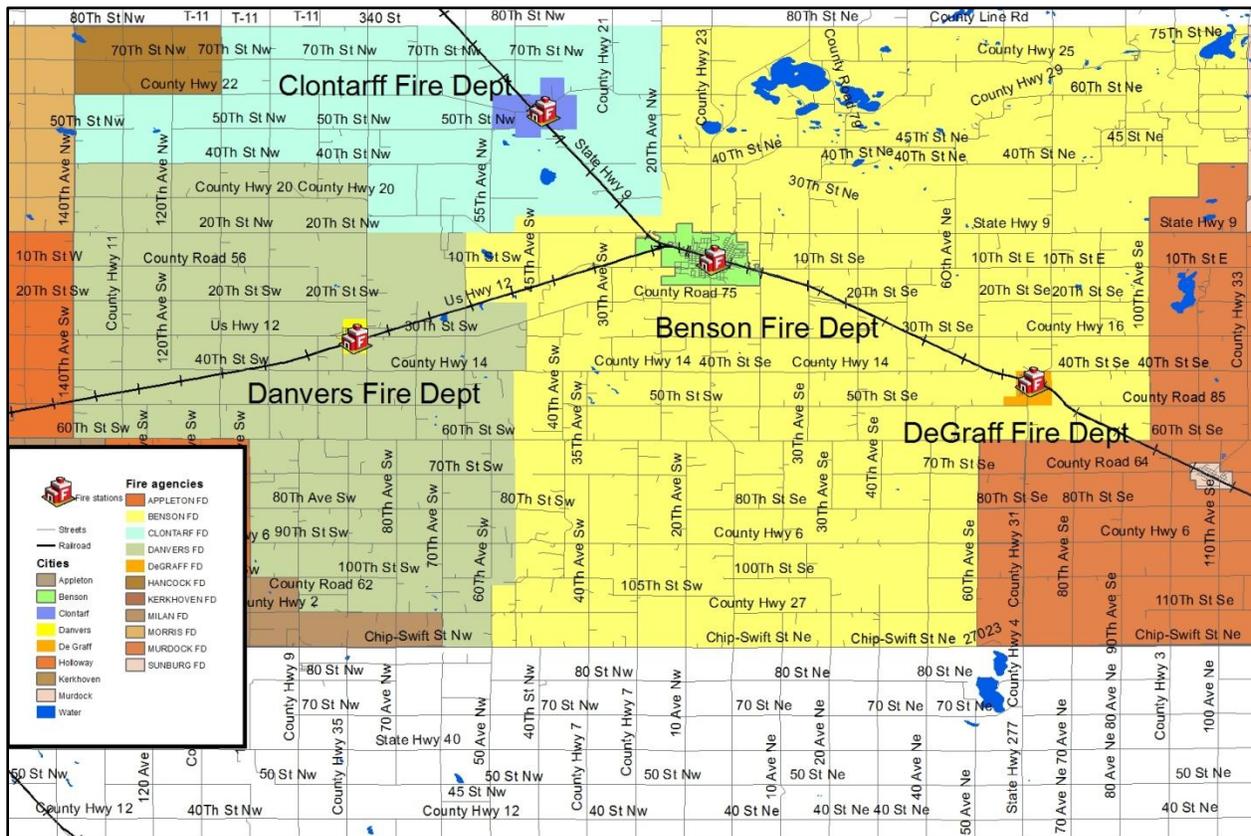
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response, there are typically a minimum of three personnel that are in the community and available, carrying pagers to receive radio calls for emergency response.

The Insurance Services Office (ISO) reviews the fire protection resources within communities and provides a Community Fire Protection Rating system from which insurance rates are often based. The rating system evaluates three primary areas: the emergency communication and dispatch system, the fire department, and the community's pressurized hydrant or tanker-based water supply. The overall rating is then expressed as a number between 1 and 10, with 1 being the highest level of protection and 10 being unprotected or nearly so. As of the latest rating, ISO gave the service area a rating of class 7.

The following figure provides an illustration of the overall service area of each study agency.

Figure 1: Service Area Overview



The following figures compare the area and populations served by each study agency.

Figure 2: Comparison of Area Served

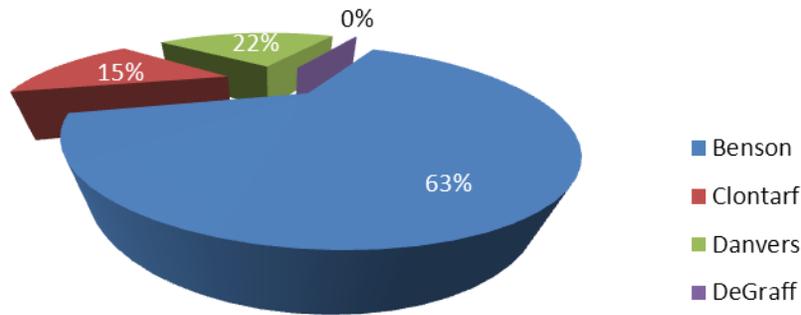
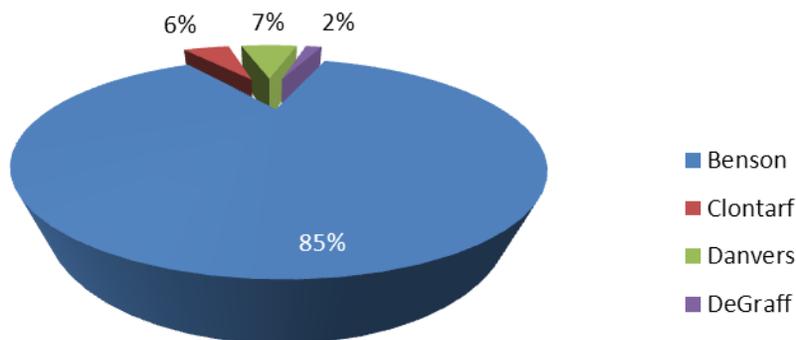


Figure 3: Comparison of Population Served



As illustrated in the preceding figures, Benson Fire Department covers a vast majority of both area and population within the study region.

Governance and Lines of Authority

It is important to understand the governance structure in which a fire department operates. This includes the documents that authorize its functioning and the ability for it to receive adequate and sustainable funding. The lines of authority differentiate the basic organizational structure under which each department functions. The following table describes the basic governance and authority of these fire departments.

Figure 4: Comparison of Organizational Governance

	Benson Fire Department	Clontarf Fire Department	Danvers Fire Department	DeGraff Fire Department
Municipality or Organization Type	Charter city	Hybrid - public private	Charter city	Charter city
Name Of Governing Entity, Board or Person	City of Benson	City of Clontarf	City of Danvers	City of DeGraff
Taxing Authority	Provided the authority to levy taxes for operating a fire protection system	Provided the authority to levy taxes for operating a fire protection system	Provided the authority to levy taxes for operating a fire protection system	Provided the authority to levy taxes for operating a fire protection system
Form of Government	Council-Manager	Strong Mayor-Council	Strong Mayor-Council	Strong Mayor-Council
Title of Governing Authority or Body	City Council	City Council	City Council	City Council
Governing Authority Number of Members	5	5	5	5
How Are Governing Authority Members Appointed	Elected by the voters			
Length of Term for Governing Authority Members	Four years	Four years	Four years	Four years
Title of Governing Authority Executive	City Manager	Mayor	Mayor	Mayor
Agency Authorization Document	City charter and ordinances			
Policy Limiting Governing Body from Operational Authority	Yes	Yes	Yes	Yes
Fire Chief Status	Elected officer position	Volunteered for the position	Elected officer position	Elected officer position
Elected Fire Chief Term of Office	Two years	As needed	As needed	As needed

Foundational Policy Documents

Organizations that operate efficiently are typically governed by clear policies that lay the foundation for effective organizational culture. These policies set the boundaries for both expected and acceptable behavior, while not discouraging creativity and self-motivation. A comprehensive set of departmental operating rules and guidelines should contain at least two primary sections. The following format is suggested.

1. **Administrative Rules** – This section would contain all of the rules that personnel in the organization are required to comply with at all times. Administrative Rules, by definition, **require** certain actions or behaviors in all situations. The governing body should adopt or

approve the Administrative Rules since the Chief is also subject to them. However, the Board should then delegate authority to the Chief for their enforcement on department personnel. The Administrative Rules should govern **all** members of the department: paid, volunteer and civilian. Where rules and policies, by their nature, require different application or provisions for different classifications of members, these differences should be clearly indicated and explained in writing. Specifically the Administrative Rules should contain sections which address:

- Public records access and retention
- Contracting and purchasing authority
- Safety and loss prevention
- Respiratory protection program
- Hazard communication program
- Harassment and discrimination
- Personnel appointment and promotion
- Disciplinary and grievance procedures
- Uniforms and personal appearance
- Other personnel management issues

2. Standard Operating Guidelines (SOGs) – This section should contain “street-level” operational standards of practice for personnel of the department. SOGs are different from Administrative Rules in that variances are allowed in unique or unusual circumstances where strict application of the SOG would be less effective. The document should provide for a program of regular, systematic updating to assure it remains current, practical and relevant. SOGs should be developed, approved, and enforced under the direction of the Fire Chief.

The following table provides information related to the departments’ foundational policy documents.

Figure 5: Comparison of Foundational Documents

	Benson Fire Department	Clontarf Fire Department	Danvers Fire Department	DeGraff Fire Department
Titles of Policy Documents	Bylaws, Standard Operating Guidelines, Administrative Policies	No formal organizational policy documents	No formal organizational policy documents	Bylaws
Total Number of Policy/Governing Documents	3	0	0	1
Quality of Administrative Policy Documents	Reasonably well organized, but missing a few important components	None	None	Extremely basic and missing a few important components
Important Civil Liability and Risk Management Policies Present	In city policy, not sure how this applies to BFD	None	None	No
Quality of Standard Operating Policies	Reasonably well organized, could use some updating and additional items	None	None	None
Adequate Operational Scene Guidance	Yes	None	None	None

The following two tables provide a listing of various topics that the fire departments might eventually wish to consider including in their Standard Operating Guidelines to enhance field operations.

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Figure 6: Sample SOG Topics for Field Operations

Alarms and Response Procedures	Medical Emergencies
Alarm Response Procedures	Operational Guidelines for Medical Aid Responses
Alarm Response Areas	Operations with Ambulance Personnel
Automatic Aid	Emergency Medical Technician - Defibrillator (EMT-D)
Mutual Aid	Major Medical Incidents
Contractual Agreements	Triage
Fire Company Operations	Exposure to Infectious Diseases and Hazardous Materials
Standard Company Operations	Suspected Drug Overdose
First to Arrive Duties	Animal Bites
Returning Companies to Service	Vial of Life and Medic Alert Tags
Use of Civilians	Attempted Suicide
Fire Scene Investigations	Suspected Homicide
High Volume Smoke Removal System	DOA (Dead on Arrival)
Personal Alert Safety Devices	Suspected Child Abuse
On-Scene Equipment Inventory	Suspected Sexual Assault
Personnel Accountability System	Hospital Disaster Notification
2 IN 2 OUT	EMS Reports
Initial Fireground Operations	EMS Radio Procedures
Fluorescent Safety Vests	Drug Box Exchange Policy
Highway Incident Safety	BLS Rules and Regulations
Command Operations	ALS Rules and Regulations
General Strategic Guidelines	Electrical Emergencies
Incident Management System	Electrical Emergency Operations
Command Post Procedures	Rescue Operations
Welfare	Vehicle Rescue and Extrication
Helicopter Operations	Life Line Operations
Public health Considerations	Rescue from Machinery
Incident Critique	Escalator Emergencies
Area Evacuation	Elevator Emergencies
Incident Command Resource Request	Cave-in and Manhole Rescues
Building Evacuation	Building Collapse
Firefighting	Rescue at Structure Fires
Metal Fires	Transportation Emergencies
Structure Fires (General)	Interstate Operations
Operations in Sprinklered Buildings	Railroad Emergencies
On-Site Auxiliary Fire Equipment	Aircraft Emergencies
High Rise Fires	Hazardous Materials Incidents
Wildland Fires	Hazardous Materials (General)
Vehicle Fires	Flammable Fuel Spill (Liquid or Gas)
Fire Stream Management	LPG Emergencies
Industrial Dumpster Fires	Fumigation Emergencies
Fire Watch Detail	Explosives and Bombs
Fires in US Mailboxes	PCB's
University of Virginia Reactor Facility	Pesticide Procedures
High Rise Pack	Radioactive Materials
Bowstring Truss Roof - Operations Procedures	Natural Gas Filled Structures - No Fire
Carbon Monoxide Hazards	Natural Gas Fed Fire - Inside Structure
Thermal Image Camera	Broken Natural Gas Main - Fire
	Broken Natural Gas Main - No Fire

Figure 7: Sample SOG Topics for Non-Emergency Operations

Station Operations	Color Coding Equipment
Station Operations - General	Radio Repair Procedure
Station Maintenance	Pressure Vessel Maintenance
Station Alerting System	Hose Maintenance
Purchasing Procedures	Self-Contained Breathing Apparatus (SCBA)
National Flag/National Anthem	Preventive Maintenance - SCBA's
Equipment Loan Out	Respiratory Breathing Air Systems
Yard Maintenance	Ladder Maintenance
Emergency Power Systems	Nozzle Maintenance
Miscellaneous Station Duties	Fire Extinguishers
Personal Locker Assignments	Hydrant Maintenance
Telephone Use	Hand Tool Maintenance
Station Libraries	Power Tool Maintenance
Scheduling Use of Media Center	Chainsaw Operation and Maintenance
Energy Conservation	Circular Saw Operation and Maintenance
Apparatus Operations	Public Education
Apparatus Maintenance	General Policy
Vehicle Out of Service Procedure	Public Education Scheduling Policy
Testing Apparatus Pumps	Public Relations
Driving Emergency Vehicles	Station Tours
Warning Devices	Fire Extinguisher Demonstrations
Apparatus Operational Limits	Engine Demonstrations
Fueling Procedure	Special Activities Engine - Engine One
Reserve Apparatus	Radio Controlled Education Robots
Apparatus Snow Chains	Fire Prevention
Apparatus Movement to Training Center	Fire Company Fire Prevention Inspections - General
Driver Operator - Pump Certification	Fire Prevention Inspection Guideline
Equipment Operations	Fire Investigation
Equipment Repairs	Related Codes
Equipment Out of Service	Pre-Fire Plans

Recommendations:

- Danvers and Clontarf should correct their lack of foundational policy documents. A basic set of administrative and operating policies and procedures could be developed using model documents available from industry organizations.
- Each department needs to ensure that both administrative and operational policies are kept updated and written in a complete and professional format.
- The four departments need to improve the quality and content of their standard operating guidelines, particularly in the area of response operations. Additional guidelines are needed to guide tactics, fire stream operations, pumping operations, ladders and ventilation, and other operational functions.

Organizational Design

A well-designed organizational structure should reflect the efficient assignment of responsibility and authority, allowing the organization to accomplish effectiveness by maximizing distribution of workload. The lines on an organizational chart simply clarify accountability, coordination, and supervision. Thorough job descriptions should provide the details of each position and ensure that each individual's specific role is clear and centered on the overall mission of the organization.

The organizational structure of the department should demonstrate a clear unity of command, in which each individual member reports to only one supervisor (within the context of any given position) and is aware to whom he or she is responsible for supervision and accountability. This method of organization encourages structured and consistent lines of communication and prevents positions, tasks, and assignments from being overlooked. The overall goals and objectives of the organization can be more effectively passed down through the rank and file members in a consistent fashion.

The organizational structure should be charted with clear, designated operating divisions that permit the core functions of the organization to be the primary focus of specific supervisors and assigned members. While some task-level activities may carry over from division to division, the primary focus of leadership, management, and budgeting within the division should be clarified by the division's key function within the mission statement. Those individuals supervising or operating within a specific division must be positively clear as to the role of the division and its goals and objectives.

The department should have sufficiently analyzed its mission and functions such that a resulting set of specific agency programs have been established. Organized, structured programs permit better assignment of resources, division of workload, development of future planning, and analysis of service delivery. Those departments that have clarified their programs with titles, assigned leadership, resources, budget appropriations, performance objectives and accountability are among the most successful.

The following table provides information related to these departments' basic organizational design.

Figure 8: Comparison of Organizational Design

	Benson Fire Department	Clontarf Fire Department	Danvers Fire Department	DeGraff Fire Department
Does This Department Have Clear Unity of Command	Yes	Yes	Yes	Yes
Is This Department Organized With Clear Operating Divisions	No	No	No	No
Are There Specific Programs With Managers Designated	The organization is small and programs are limited primarily to core services	The organization is small and programs are limited primarily to core services	The organization is small and programs are limited primarily to core services	The organization is small and programs are limited primarily to core services
List The Individuals That Report Directly To The Chief	Two assistant chiefs, one captain, and one lieutenant	All members	All members	All members
Chief's Span of Control	4	12	12	14
What is the Chief's Disciplinary Authority	Suspension from duty and recommendation for termination	No formal policy	No formal policy	Unknown
Quality of Job Descriptions	Incomplete, with only key duties listed	None	None	None

Internal Assessment of Critical Issues

It is extremely important that there be a clear understanding of critical issues facing the departments. Without such an understanding, department leadership cannot be prepared to face these issues. In addition, the enunciation of critical issues to employees and members increases their awareness of the organization's priorities and assists them in becoming focused on solutions. None of the departments in this study have conducted a formal strategic planning process. However, officers from each department were asked to identify the top three critical issues facing their agencies.

Figure 9: Assessment of Critical Issues

	Benson Fire Department	Clontarf Fire Department	Danvers Fire Department	DeGraff Fire Department
Critical Issue #1:	Recruitment and retention adequate for workforce	Adequate training and skills for safety	Adequate staffing for safe and effective response	Adequate staffing for safe and effective operation
Critical Issue #2:	Maintaining a positive organizational culture	Poor facility condition	Recruitment, retention and training of incoming replacement workforce	Maintaining adequate participation in meetings and training
Critical Issue #3:	Sustainable funding adequate for operations	Availability of adequate staffing for consistent response	Adequate sustainable funding	Maintaining skills and competencies in light of low run volume

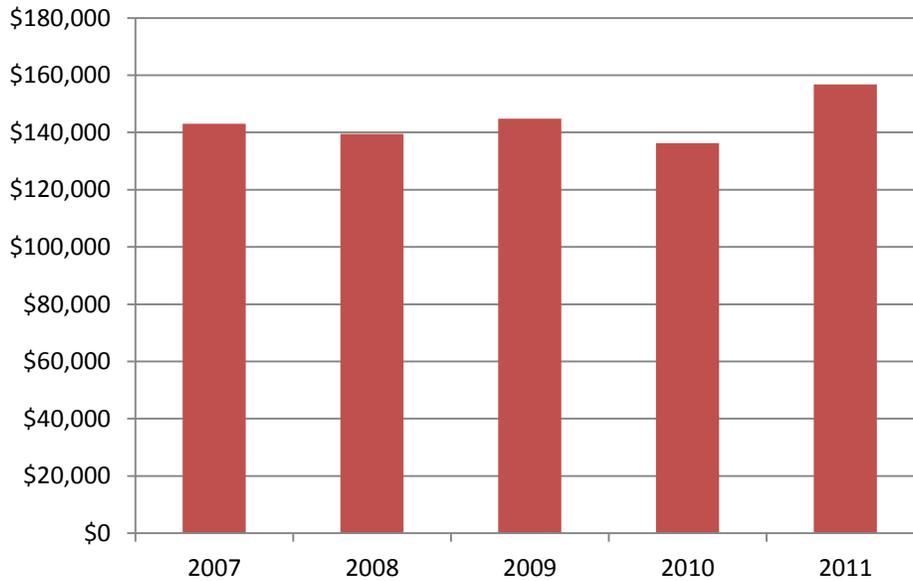
Finance and Budget

Without adequate funding, no emergency services organization can survive or provide the level of service the community expects and deserves. Adequate funding can come from a variety of sources, including property taxes, special purpose levies, fund-raising, donations, or fees for service. Regardless of the source of revenue, it is imperative that departments have sufficient funding to carry out their primary mission. This section provides an overview of each agency’s financial and budgeting components.

Benson Fire Department

BFD is an operating division of the City of Benson and receives operating funds from the taxes levied by the City and through contracts for service with surrounding municipalities. The following figure illustrates how the department's budget has varied over the last five years.

Figure 10: Budget History – Benson FD



Although a majority of the department's funding comes from the City of Benson, the department also has contracts with 11 townships to provide fire protection within those areas. The following figure illustrates how much of each area is protected and the amount of funding received from each.

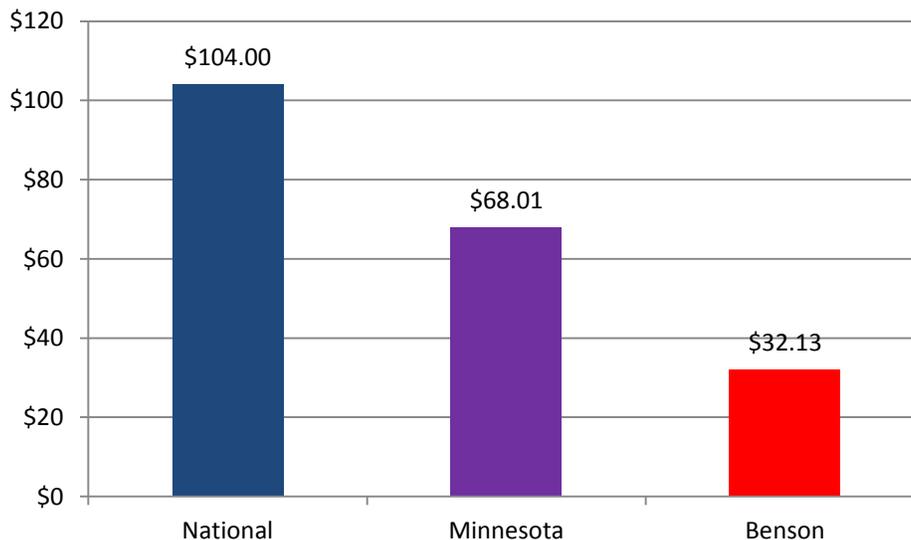
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Figure 11: Revenue Distribution – Benson FD

	Amount	Percent Served	Population	Population Served	Cost Per Capita
City of Benson	\$49,973	100%	3,240	3,240	\$15.42
Benson Township	\$6,419	100%	334	334	\$19.22
Camp Lake Township	\$9,842	92%	213	195	\$46.21
Cashel Township	\$11,060	100%	174	174	\$63.56
Clontarf Township	\$6,468	6%	86	5.16	\$75.21
Grace Township	\$3,930	37%	95	35	\$41.37
Kildare Township	\$7,786	68%	151	102	\$51.56
Langhei Township	\$5,291	68%	177	120	\$29.89
Rolling Forks Township	\$3,420	36%	151	54	\$22.65
Six-Mile Grove Township	\$14,863	53%	171	90	\$86.92
Swenoda Township	\$6,685	61%	140	85	\$47.75
Torning Township	\$30,988	100%	440	440	\$70.43

Based on the information contained in the figure above, the total cost per capita calculates to \$32.13. This is substantially below the Minnesota and National per capita rates for fire protection as illustrated in the following figure.

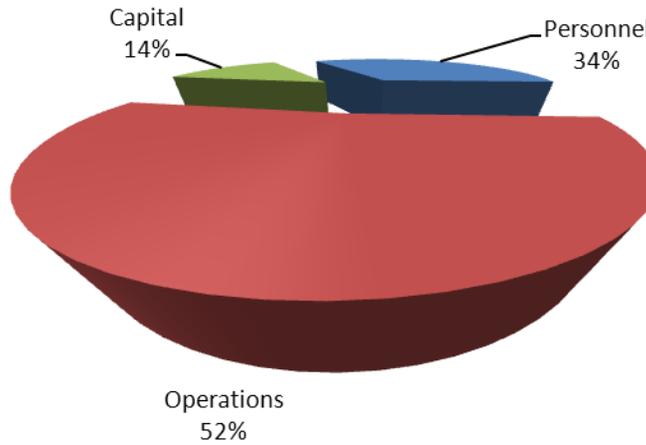
Figure 12: Cost Per Capita Comparison – Benson FD



Emergency services organizations distribute their respective budgets in different ways based on what types of services are delivered and whether or not paid personnel are utilized within the system. Those agencies that employ paid personnel tend to spend a majority of their budgets on personnel

expenditures (salaries and benefits) while volunteer agencies tend to focus their spending on operational costs. The figure below illustrates how BFD distributed the 2010 budget across the three primary categories of personnel, operations, and capital.

Figure 13: Budget Distribution – Benson FD

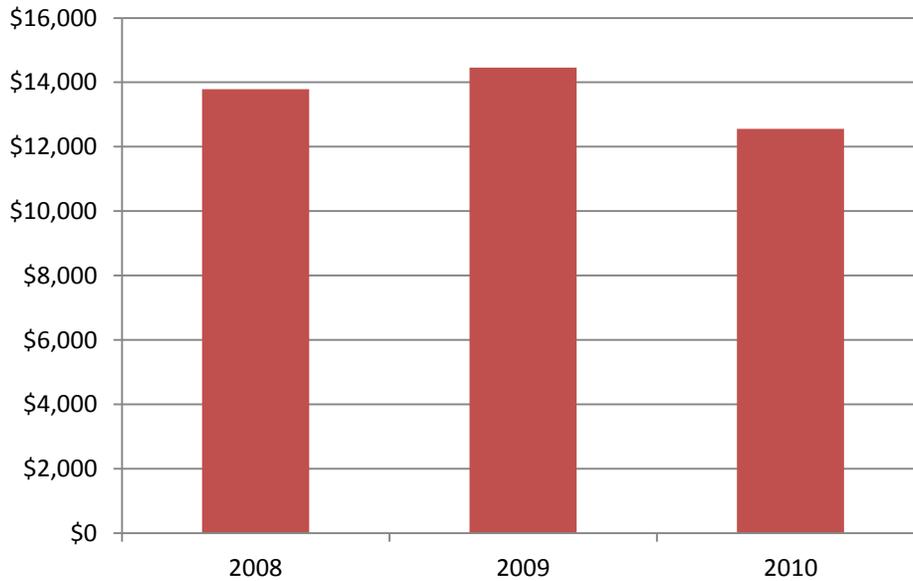


BFD commits most budgetary funds to operational costs. The personnel expenditures noted are for incentives provided to volunteer members of the department based on participation and response activity.

Clontarf Fire Department

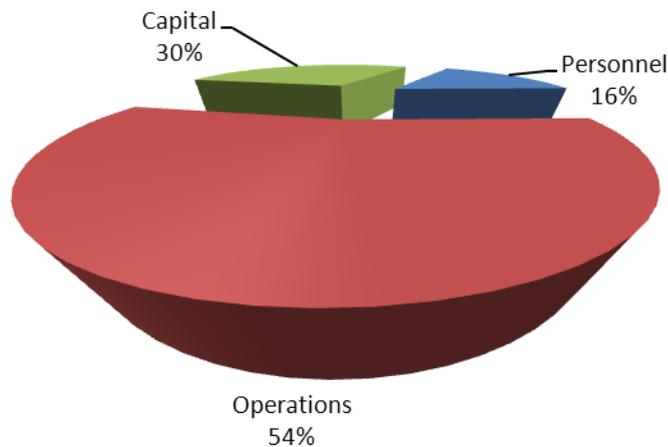
CFD is an operating division of the City of Clontarf and receives operating funds from the taxes levied by the City and through contracts for service with surrounding municipalities. The department was only able to produce budget history for 2008, 2009, and 2010, as illustrated below.

Figure 14: Budget History - Clontarf FD



The following figure illustrates how that budget is distributed across the personnel, operations, and capital expenditure categories.

Figure 15: Budget Distribution – Clontarf FD



As seen in the preceding figure, CFD commits most budgetary funds to operational costs. The personnel expenditures noted are for incentives provided to volunteer members of the department based on participation and response activity.

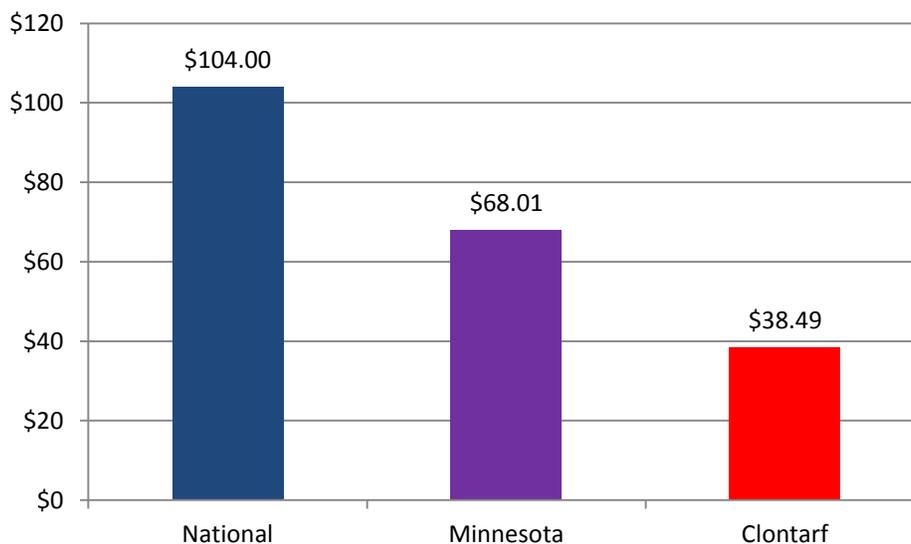
Although a majority of the department’s funding comes through the City of Clontarf, the remainder of the department’s funding comes from training and equipment grants, insurance payments, truck fund payments, and other miscellaneous sources. The following figure illustrates how much of each area is protected and the amount of funding received from each.

Figure 16: Revenue Distribution – Clontarf FD

	Amount	Percent Served	Population	Population Served	Cost Per Capita
City of Clontarf	\$12,553	100%	164	164	\$76.54
Hoff Township	-	28%	152	42	\$0.00
Tara Township	-	44%	88	38	\$0.00
Clontarf Township	-	94%	86	80	\$0.00

The total cost per capita calculates to \$38.49. This is substantially below the Minnesota and National per capita rates for fire protection as illustrated in the following figure.

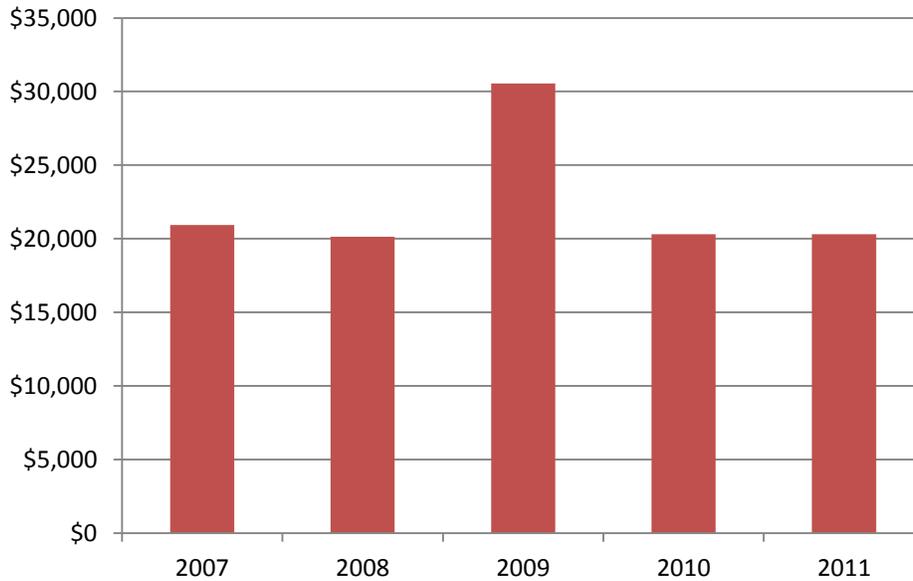
Figure 17: Cost Per Capita Comparison – Clontarf FD



Danvers Fire Department

Danvers FD is an operating division of the City of Danvers and receives operating funds from the taxes levied by the City and through contracts for service with surrounding municipalities. The following figure illustrates how the department’s budget has varied over the last five years.

Figure 18: Budget History – Danvers FD



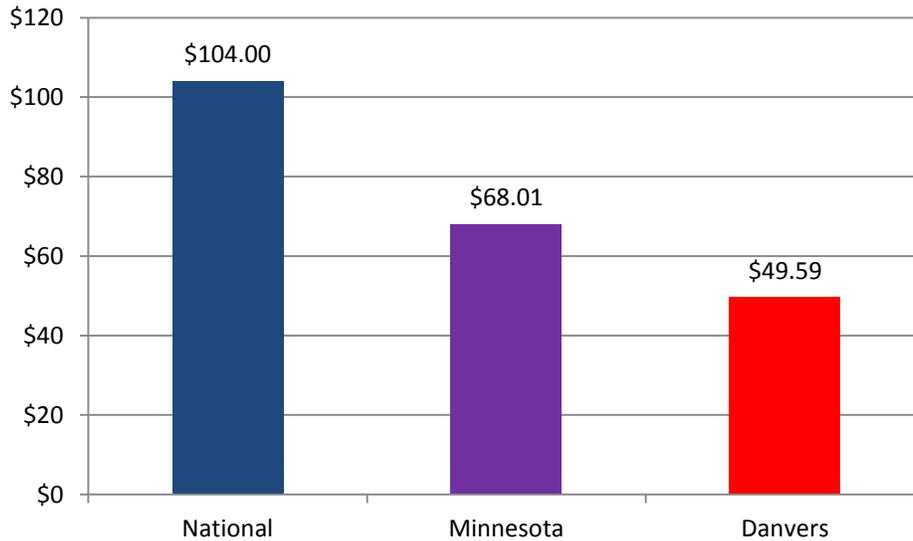
Although a majority of the department’s funding comes from the City of Danvers, the department also has contracts with five townships to provide fire protection within those areas. The following figure illustrates how much of each area is protected and the amount of funding received from each.

Figure 19: Revenue Distribution – Danvers FD

	Amount	Percent Serviced	Population	Population Served	Cost Per Capita
City of Danvers	\$8,419	100%	97	97	\$86.79
Marysland Township	\$4,680	100%	96	96	\$48.75
Swenoda Township	\$1,690	36%	140	50	\$33.53
Six-Mile Grove Township	\$2,145	46%	171	78	\$27.27
Tara Township	\$1,560	33%	88	29	\$53.72
West Bank Township	\$1,820	39%	150	58	\$31.11

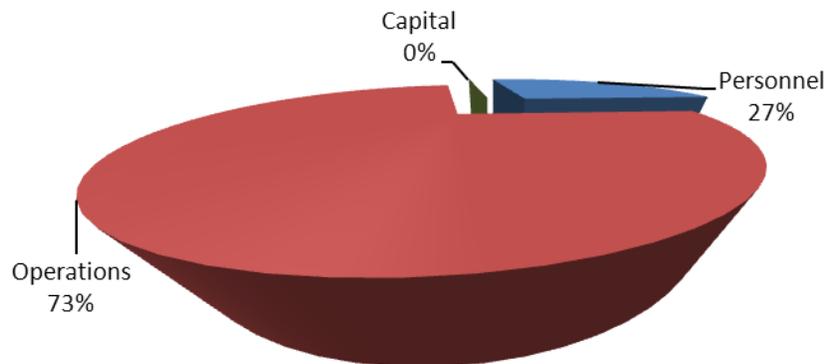
Based on the information contained in the preceding figure, the total cost per capita calculates to \$49.59. This is substantially below the Minnesota and National per capita rates for fire protection, as illustrated in the following figure.

Figure 20: Cost Per Capita Comparison – Danvers FD



The following figure illustrates how Danvers FD distributed the 2010 budget across the three primary categories of personnel, operations, and capital.

Figure 21: Budget Distribution – Danvers FD



Danvers FD commits most budgetary funds to operational costs. The personnel expenditures noted are for incentives provided to volunteer members of the department based on participation and response activity.

DeGraff Fire Department

DeGraff FD is an operating division of the City of DeGraff; as such, it receives operating funds from the taxes levied by the City. The department did not provide ESCI with budgetary or revenue information, therefore no analysis could be completed.

Reporting and Recordkeeping

A variety of uses are made of written records and their integrity must be protected. These fire departments also have a significant investment in facilities, apparatus, equipment and other items, along with their financial assets. Protecting these records and assets is very important. The following table summarizes information related to document control and other security issues for these departments.

Figure 22: Document Control and Security Issues

	Benson Fire Department	Clontarf Fire Department	Danvers Fire Department	DeGraff Fire Department
Hard Copy Files Secured	Yes, passage locks and container locks	Yes, passage locks only	Yes, container locks only	No
Buildings Consistently Secured When Unoccupied	Yes- firm policy rigidly followed	Yes- firm policy rigidly followed	Yes- firm policy rigidly followed	Yes- firm policy rigidly followed
Public Access Limited When Buildings Occupied	Public access secured to limited areas	Public access secured to limited areas	Public access is not significantly controlled	Public access is not significantly controlled
Locks or Codes Changed Occasionally	Locks change only when security threat identified	Locks change only when security threat identified	Locks change only when security threat identified	Locks rarely or never changed
Any Buildings with Premises Security Alarms	No security systems	No security systems	No security systems	No security systems
Any Buildings with Monitored Fire Alarm Systems	No monitored fire alarm systems	No monitored fire alarm systems	No monitored fire alarm systems	No monitored fire alarm systems
Cash Accepted on Premises	No cash accepted	No cash accepted	No cash accepted	No cash accepted
Petty Cash Use	No petty cash used	No petty cash used	No petty cash used	No petty cash used
General Use Credit Cards	No general use cards	No general use cards	No general use cards	No general use cards

Internal and External Communications

Quality communications is an achievable goal for any organization, but one that always seems to be most elusive. However, it is extremely important. Regularly scheduled meetings permit management

personnel to openly exchange ideas on a regular basis, share issues and concerns, apply creative teambuilding and problem-solving, and improve the overall flow of communications. Distributed minutes or summaries of regular staff meetings encourages internal communications and permits members to share ideas on issues involving departmental issues, enhancing a feeling of empowerment among personnel. Written, formal memorandums ensure that all members receive critical data in an organized and consistent fashion. This process also provides a critical written record of internal communications that are important to organizational efficiency. Employee and community newsletters can foster improved relations with internal and external stakeholders.

To their credit, there are established communication processes within each of these departments that provide opportunities for department personnel to be heard and be involved and for information to be exchanged with the public. The following table provides information related to each agency’s internal and external communications efforts.

Figure 23: Comparison of Internal and External Communications Factors

	Benson Fire Department	Clontarf Fire Department	Danvers Fire Department	DeGraff Fire Department
Does this agency conduct regularly scheduled staff meetings for key management personnel?	Yes - monthly	Yes - monthly	Yes - monthly	Yes - monthly
Are minutes of the staff meetings taken and made available to the members?	Yes	Minutes taken but not posted	Minutes taken but not posted	Minutes taken but not posted
Are written memos (print or electronic) used for the regular dissemination of agency information?	Yes	Not regularly, rely on department meetings	Not regularly, rely on department meetings	Not regularly, rely on department meetings
Is there a standardized process for distribution that ensures all members receive memos and information?	No	No	No	No
Is there a means of verifying receipt of critical policies or information?	Yes - signature required	No formal system	No formal system	No formal system

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	Benson Fire Department	Clontarf Fire Department	Danvers Fire Department	DeGraff Fire Department
Are there any forums for members to exchange information with top management?	Yes - monthly member meetings	Yes - monthly member meetings	Yes - monthly member meetings	Yes - monthly member meetings
Does the agency or its parent community publish a regular employee newsletter?	No	No	No	No
Are the bulletin boards in the organization controlled and organized under the responsibility of a specific assigned individual/group?	Yes	No	No	No
Is email distribution of information available to all members of the organization and used regularly?	Yes, bi-weekly	Sporadic use of email by some	No formal regular use of email	No formal regular use of email
Do all members have a formal location for hard-copy information, forms, policies?	Yes	No	No	No
Do key personnel have availability of voicemail?	Yes- key officers have voicemail	No regular voicemail used	No regular voicemail used	No regular voicemail used
Does the community publish a regular newsletter to the general public?	No	No	No	No
Does the department have an active website?	Yes- includes basic agency information only	No	No	No
Has the agency or community ever conducted a formal survey of the public opinion regarding services, priorities, budgets, etc?	Yes, conducted by this agency	No	No	No

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	Benson Fire Department	Clontarf Fire Department	Danvers Fire Department	DeGraff Fire Department
Does this agency have a formal, written complaint-handling policy in place?	Yes	No	No	Not in writing
Has any form of Citizen's Advisory Group ever been formed to assist this agency in regard to planning, budgeting, policy development, etc.?	No	No	No	No
Clear, Written Policy and Procedure for Access of Public Records (FOIA)	No	No	No	No

Recommendation:

- Each department should institute a process that ensures each member receives the necessary communications about department operations.

Information Technology Systems

Records management is a critical function to any organization. Effective performance measurement can only be accomplished when records are effectively collected, stored and analyzed. This section provides an overview of these agencies' very limited information technology systems.

Figure 24: Information Technology Inventory

	Benson Fire Department	Clontarf Fire Department	Danvers Fire Department	DeGraff Fire Department
Type of Computer Network or System	Individual PCs only	Personal computer used	Individual PCs only	None
Computer Files Backed Up	No backups occur	No backups occur	No backups occur	None
Computers Programmed with Password Protection	Yes- timeout with inactivity	Passwords not used	Passwords not used	Passwords not used
Updated Firewall and Virus Protection	Yes	Yes	Yes	No
Records Fully Computerized	Incident records	No	Financial records	No

Capital Assets

In order for any emergency services system to be effective, physical resources must be sufficient to handle the current and expected workload and be adequately distributed throughout the primary response area so as to affect the quickest response possible to the greatest number of incidents. Additionally, the apparatus or vehicles used in service delivery must be reliable and sufficient in number to accommodate the anticipated workload. This section of the report will evaluate the facilities and apparatus currently in use by the four departments. Distribution of those resources throughout the response area will be analyzed in the next section of this report.

Facilities

Inadequate facilities for housing personnel and apparatus detract from an organization's mission. Limited space can significantly impact the available options for resource assignment, hinder the ability to maintain a well-trained workforce, and may affect member and employee morale. The primary functions that take place within the station should provide adequate and efficient space for all functions. Some examples include:

- Housing and cleaning of apparatus and equipment
- Administrative office duties where necessary
- Personnel training
- Residential living that is gender compatible for on-duty members when necessary
- Operations that include enough room for community groups and parking

While this list may seem elementary, the lack of dedicated space compromises the ability of the facility to support these functions, and can detract from its primary purpose. ESCI did not conduct an in-depth review of the stations in the study area but did note locations, access to the community, and general size and condition.

Benson Fire Department



Benson Fire Department
 1411 Kansas Avenue, Benson

Construction Features

Building Square Feet	10,900
Apparatus Bays:	
<i>Back-in, single unit</i>	0
<i>Back-in, used with stacked parking</i>	4
<i>Drive-through use, single unit</i>	1
<i>Drive-through capable, used with stacked parking</i>	0
Building Height	Two-story
Construction Type	TYPE II-B--Unprotected Non-Combustible
Outside Finish	Metal siding
Unusual Construction Features	None
Overall Construction Condition	Good condition
Does Structure Appear to be ADA Compliant	Yes
Building Code Issues Evident	None
Roof Type	Peaked- metal
Roof Age	Original to building
Roof Condition	No known problems
Type of Heating System (all that apply)	Forced air- natural gas, Radiant- natural gas
Heating System Age	Original to building
Air Conditioning (all that apply)	Central air- living and administrative areas only
Any Other Known Maintenance or Disrepair Issues	None

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Design Features

Overall Size of Facility Adequate for Current Use	Yes
Apparatus Exit	Exit to traffic flow safe and unimpeded
Building and Property Blend Well with Neighborhood	Yes
Building and Property Adaptable if Future Expansion Needed	Expansion need unlikely
Adequate Staff and Visitor Parking	Parking is adequate
Any Additional Design Comments	None

Safety Features

Automatic Door Stops on Overhead Doors Operating Properly	Yes
Adequate Fire Extinguishers (not on apparatus)	No
Cooking Equipment Central Shutdown	No
Automatic Fire Sprinklers Present	None
Fire Sprinkler System Type	
Alarm Systems Present	No alarm systems present
Is Commercial Cooking Equipment Present	No
Proper Hood Duct and Grease Filters in Place	
Fixed Fire Extinguishing System in Hood Properly Inspected	
Flammable and Combustible Liquids Stored in Approved Cabinet	Yes
Location of Improperly Stored Flammables/Combustibles	
All Pressure Cylinders Stored Properly	Yes
Location of Improperly Stored Pressure Cylinders	
SCBA Compressor System Present	Yes
Air Sample Certification Present and Visible	Yes
Back-Up Generator Present	No generator present
Generator Fuel Type and Source	

Environmental Features

Apparatus Exhaust Removal	Direct connect vacuum system, connected
Underground Storage Tanks Present	No
Type of Underground Storage Tank	
Age of Underground Storage Tank	
Type of Leak Detection in Place	
Apparatus Floor Drain Oil Separators in Place	Oil separator in use

Station Staff Facilities and Features

Adequate Space for Working On or Around Apparatus	Space around apparatus is adequate
Apparatus Room Accommodates Working on Small Equipment	Adequate space
Personnel Can Move Quickly and Easily to Apparatus for Response	Yes
Adequate Space for Cooking and Eating	Yes
Adequate Space for Local Company Training and Drills	Yes
Are Compromises Necessary for Two-Gender Staffing	No
Two-Gender Compromises	
Adequate Space for Personal Hygiene	Yes
Adequate Space for Sleeping	Not intended for sleep accommodation
Adequate Space for Storage	Yes
Identify any Additional Operational Compromises Made by Staff or Crew to Compensate for Facility Inadequacies	
List Facility Features	Administrative/support offices, Day room/lounge, Kitchen, Classroom for >10, Training library, Shower/locker room(s), SCBA filling station

Clontarf Fire Department



Clontarf Fire Department
 201 Grace Avenue, Clontarf

Construction Features

Building Square Feet	2,160
Apparatus Bays:	
<i>Back-in, single unit</i>	2
<i>Back-in, used with stacked parking</i>	1
<i>Drive-through use, single unit</i>	0
<i>Drive-through capable, used with stacked parking</i>	0
Building Height	One-story
Construction Type	TYPE III-B--Unprotected Combustible
Outside Finish	Metal siding, Asbestos siding
Unusual Construction Features	Yes, Addition on rear of building to accommodate truck length is post construction not to code, gravel floor
Overall Construction Condition	Worn paint or finishes, Significant finish rot or corrosion evident, Structural problems evident or reported
Does Structure Appear to be ADA Compliant	No
Building Code Issues Evident	Yes support post not anchored on new addition
Roof Type	Flat- other
Roof Age	Over 20 years
Roof Condition	Significant leaking evident or reported
Type of Heating System (all that apply)	Forced air- fuel oil
Heating System Age	Over 10 years
Air Conditioning (all that apply)	No AC present
Any Other Known Maintenance or Disrepair Issues	Yes, Manually operated overhead doors poorly adjusted, jump tracks

Benson, Clontarf, Danvers and DeGraff, Minnesota
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Design Features

Overall Size of Facility Adequate for Current Use	No
Apparatus Exit	Exit to traffic flow safe and unimpeded
Building and Property Blend Well with Neighborhood	No
Building and Property Adaptable if Future Expansion Needed	No
Adequate Staff and Visitor Parking	Parking is adequate
Any Additional Design Comments	Yes, Building is entirely too small

Safety Features

Automatic Door Stops on Overhead Doors Operating Properly	No
Adequate Fire Extinguishers (not on apparatus)	No
Cooking Equipment Central Shutdown	No cooking equipment present
Automatic Fire Sprinklers Present	None
Fire Sprinkler System Type	
Alarm Systems Present	No alarm systems present
Is Commercial Cooking Equipment Present	No
Proper Hood Duct and Grease Filters in Place	
Fixed Fire Extinguishing System in Hood Properly Inspected	
Flammable and Combustible Liquids Stored in Approved Cabinet	None present
Location of Improperly Stored Flammables/Combustibles	
All Pressure Cylinders Stored Properly	Yes
Location of Improperly Stored Pressure Cylinders	
SCBA Compressor System Present	Yes
Air Sample Certification Present and Visible	Certification status unknown, not present
Back-Up Generator Present	No generator present
Generator Fuel Type and Source	

Environmental Features

Apparatus Exhaust Removal	No exhaust removal effort in place
Underground Storage Tanks Present	No
Type of Underground Storage Tank	
Age of Underground Storage Tank	
Type of Leak Detection in Place	
Apparatus Floor Drain Oil Separators in Place	No floor drains in apparatus area

Station Staff Facilities and Features

Adequate Space for Working On or Around Apparatus	Space around apparatus cramped and movement is limited, Limited space for working at rear of apparatus, Apparatus parking is impeded due to inadequate space
Apparatus Room Accommodates Working on Small Equipment	Work must be conducted outdoors
Personnel Can Move Quickly and Easily to Apparatus for Response	Inadequate space
Adequate Space for Cooking and Eating	Inadequate space
Adequate Space for Local Company Training and Drills	Inadequate space
Are Compromises Necessary for Two-Gender Staffing	No
Two-Gender Compromises	
Adequate Space for Personal Hygiene	No running water in facility
Adequate Space for Sleeping	Not intended for sleep accommodation
Adequate Space for Storage	Inadequate space
Identify any Additional Operational Compromises Made by Staff or Crew to Compensate for Facility Inadequacies	
List Facility Features	SCBA filling station

Danvers Fire Department



Danvers Fire Department
 412 Minnesota Street, Danvers

Construction Features

Year Facility Initially Constructed	1976
Building Square Feet	2,400
Apparatus Bays:	
<i>Back-in, single unit</i>	0
<i>Back-in, used with stacked parking</i>	2
<i>Drive-through use, single unit</i>	0
<i>Drive-through capable, used with stacked parking</i>	0
Building Height	One-story
Construction Type	TYPE II-B--Unprotected Non-Combustible
Outside Finish	Metal siding
Unusual Construction Features	None
Overall Construction Condition	Worn paint or finishes
Does Structure Appear to be ADA Compliant	No
Building Code Issues Evident	Yes, no one hour separation
Roof Type	Peaked- metal
Roof Age	Original to building
Roof Condition	No known problems
Type of Heating System (all that apply)	Forced air- fuel oil
Heating System Age	Original to building
Air Conditioning (all that apply)	No AC present
Any Other Known Maintenance or Disrepair Issues	None

Benson, Clontarf, Danvers and DeGraff, Minnesota
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Design Features

Overall Size of Facility Adequate for Current Use	No
Apparatus Exit	Exit to traffic flow safe and unimpeded
Building and Property Blend Well with Neighborhood	Yes
Building and Property Adaptable if Future Expansion Needed	Yes
Adequate Staff and Visitor Parking	Parking is adequate
Any Additional Design Comments	None

Safety Features

Automatic Door Stops on Overhead Doors Operating Properly	Yes
Adequate Fire Extinguishers (not on apparatus)	No
Cooking Equipment Central Shutdown	No cooking equipment present
Automatic Fire Sprinklers Present	None
Fire Sprinkler System Type	
Alarm Systems Present	No alarm systems present
Is Commercial Cooking Equipment Present	No
Proper Hood Duct and Grease Filters in Place	
Fixed Fire Extinguishing System in Hood Properly Inspected	
Flammable and Combustible Liquids Stored in Approved Cabinet	No
Location of Improperly Stored Flammables/Combustibles	around floor
All Pressure Cylinders Stored Properly	Yes
Location of Improperly Stored Pressure Cylinders	
SCBA Compressor System Present	No
Air Sample Certification Present and Visible	
Back-Up Generator Present	No generator present
Generator Fuel Type and Source	

Environmental Features

Apparatus Exhaust Removal	No exhaust removal effort in place
Underground Storage Tanks Present	Yes
Type of Underground Storage Tank	Fuel oil for HVAC
Age of Underground Storage Tank	Original to building
Type of Leak Detection in Place	Manual level readings comparison
Apparatus Floor Drain Oil Separators in Place	No oil separator in use

Station Staff Facilities and Features

Adequate Space for Working On or Around Apparatus	Space around apparatus cramped and movement is limited, Limited space for working at rear of apparatus, Apparatus parking is impeded due to inadequate space
Apparatus Room Accommodates Working on Small Equipment	Work must be conducted outdoors
Personnel Can Move Quickly and Easily to Apparatus for Response	Inadequate space
Adequate Space for Cooking and Eating	Inadequate space
Adequate Space for Local Company Training and Drills	Yes
Are Compromises Necessary for Two-Gender Staffing	No
Two-Gender Compromises	
Adequate Space for Personal Hygiene	Yes
Adequate Space for Sleeping	Not intended for sleep accommodation
Adequate Space for Storage	Inadequate space
Identify any Additional Operational Compromises Made by Staff or Crew to Compensate for Facility Inadequacies	
List Facility Features	Separate watch room/station office, Conference room(s)

DeGraff Fire Department



DeGraff Fire Department
 102 4th Street South, DeGraff

Construction Features

Building Square Feet	2,800
Apparatus Bays:	
<i>Back-in, single unit</i>	4
<i>Back-in, used with stacked parking</i>	0
<i>Drive-through use, single unit</i>	0
<i>Drive-through capable, used with stacked parking</i>	0
Building Height	One-story
Construction Type	TYPE II-B--Unprotected Non-Combustible
Outside Finish	Metal siding
Unusual Construction Features	None
Overall Construction Condition	Good condition
Does Structure Appear to be ADA Compliant	No
Building Code Issues Evident	None
Roof Type	Flat- other
Roof Age	1 to 10 years
Roof Condition	No known problems
Type of Heating System (all that apply)	Forced air- LP, Radiant- electric, Not heated
Heating System Age	1 to 10 years
Air Conditioning (all that apply)	No AC present
Any Other Known Maintenance or Disrepair Issues	None

Benson, Clontarf, Danvers and DeGraff, Minnesota
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Design Features

Overall Size of Facility Adequate for Current Use	Yes
Apparatus Exit	Exit to traffic flow safe and unimpeded
Building and Property Blend Well with Neighborhood	Yes
Building and Property Adaptable if Future Expansion Needed	Yes
Adequate Staff and Visitor Parking	Parking is adequate
Any Additional Design Comments	None

Safety Features

Automatic Door Stops on Overhead Doors Operating Properly	No
Adequate Fire Extinguishers (not on apparatus)	No
Cooking Equipment Central Shutdown	No cooking equipment present
Automatic Fire Sprinklers Present	None
Fire Sprinkler System Type	
Alarm Systems Present	No alarm systems present
Is Commercial Cooking Equipment Present	No
Proper Hood Duct and Grease Filters in Place	
Fixed Fire Extinguishing System in Hood Properly Inspected	
Flammable and Combustible Liquids Stored in Approved Cabinet	None present
Location of Improperly Stored Flammables/Combustibles	
All Pressure Cylinders Stored Properly	Yes
Location of Improperly Stored Pressure Cylinders	
SCBA Compressor System Present	Yes
Air Sample Certification Present and Visible	Certification status unknown, not present
Back-Up Generator Present	No generator present
Generator Fuel Type and Source	

Environmental Features

Apparatus Exhaust Removal	No exhaust removal effort in place
Underground Storage Tanks Present	No
Type of Underground Storage Tank	
Age of Underground Storage Tank	
Type of Leak Detection in Place	
Apparatus Floor Drain Oil Separators in Place	No oil separator in use

Station Staff Facilities and Features

Adequate Space for Working On or Around Apparatus	Limited space for working at rear of apparatus
Apparatus Room Accommodates Working on Small Equipment	Space is small and limited
Personnel Can Move Quickly and Easily to Apparatus for Response	Compromised stacked parking impedes movement
Adequate Space for Cooking and Eating	Inadequate space
Adequate Space for Local Company Training and Drills	Inadequate space
Are Compromises Necessary for Two-Gender Staffing	No
Two-Gender Compromises	
Adequate Space for Personal Hygiene	No running water in facility
Adequate Space for Sleeping	Not intended for sleep accommodation
Adequate Space for Storage	Inadequate space
Identify any Additional Operational Compromises Made by Staff or Crew to Compensate for Facility Inadequacies	
List Facility Features	SCBA filling station

Apparatus

In totality, the departments maintain a fleet of 22 response and specialty service vehicles. Most of the current emergency vehicles fall within what is considered to be an acceptable life span, with an average age calculated at 15.0 years. The following figures summarize currently existing fire and emergency medical response apparatus, as well as the equipment capacities and condition.

Benson Fire Department



Engine 10

Unit Status	Active Service
Manufacturer	Toyne Fire Equipment
Year of Manufacture	1993
Mileage	21,154
Hours	1,296
Pumping Capacity	1,250 gpm
Tank Capacity	1,000 gallons
Seating Capacity	5
Number of SCBA	4
Equipment	Large diameter hose, Generator, Power rescue tool, BLS medical gear, Automatic external defibrillator, Class A foam injected
Surface Rust Present	None
Structural Rust and Corrosion	Light
Apparent Fluid Leaks	None
Overall Appearance and Condition Rating	Good



Engine 1

Unit Status	Active Service
Manufacturer	Emergency One
Year of Manufacture	1980
Mileage	18,304
Pumping Capacity	1,000 gpm
Tank Capacity	500 gallons
Seating Capacity	4
Number of SCBA	4
Equipment	Large diameter hose, Generator
Surface Rust Present	Light
Structural Rust and Corrosion	Light
Apparent Fluid Leaks	None
Overall Appearance and Condition Rating	Fair

Benson, Clontarf, Danvers and DeGraff, Minnesota
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Ladder 1

Unit Status	Active Service
Manufacturer	Pierce Mfg.
Year of Manufacture	1979
Mileage	14,819
Hours	659
Pumping Capacity	2,000 gpm
Type of Elevating Aerial Device	Platform Tower
Elevating Device Style	Rear Mount
Height Of Device At Full Elevation	85
Does this unit also respond as a standard engine (quint use)	Responds as aerial/truck company only
Tank Capacity	Other no tank
Seating Capacity	4
Number of SCBA	2
Equipment	Large diameter hose, Generator
Surface Rust	Light
Structural Rust and Corrosion	Light
Apparent Fluid Leaks	Light
Overall Appearance and Condition Rating	Fair

Benson, Clontarf, Danvers and DeGraff, Minnesota
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PT 1

Unit Status	Active Service
Manufacturer	Custom Fire Apparatus, Inc
Year of Manufacture	2003
Mileage	9111
Hours	576
Does this unit also respond as a standard engine	Pumper-Tanker, also responds as engine
Pumping Capacity	1,500 gpm
Tank Capacity	2,500 gallons
Seating Capacity	5
Number of SCBA	4
Equipment	Large diameter hose, Generator, Thermal imaging camera, Class A foam injection
Surface Rust	None
Structural Rust and Corrosion	None
Apparent Fluid Leaks	Light
Overall Appearance and Condition Rating	Excellent



Tanker 2

Unit Status	Active Service
Manufacturer	Other Engle Tank Manufacturer
Year of Manufacture	1987
Mileage	300000
Does this unit also respond as a standard engine	Tanker use only
Pumping Capacity	Other no pump
Tank Capacity	3,000 gallons
Seating Capacity	2
Number of SCBA	0
Equipment	Portable dump tank, Portable ground pump
Surface Rust	None
Structural Rust and Corrosion	Light
Apparent Fluid Leaks	Light
Overall Appearance and Condition Rating	Good

Benson, Clontarf, Danvers and DeGraff, Minnesota
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Tanker 1

Unit Status	Active Service
Manufacturer	Other International- local modifications
Year of Manufacture	1983
Mileage	15,528
Does this unit also respond as a standard engine	Tanker use only
Pumping Capacity	Other no pump
Tank Capacity	Other 1900
Seating Capacity	2
Number of SCBA	0
Equipment	Portable dump tank, Portable ground pump
Surface Rust	Light
Structural Rust and Corrosion	Moderate
Apparent Fluid Leaks	Light
Overall Appearance and Condition Rating	Fair



Rescue 1

Unit Status	Active Service
General Rescue Class	Heavy Rescue, walk-in
Manufacturer	Marion Body Works, Inc.
Year of Manufacture	1994
Mileage	10,115
Seating Capacity	6
Number of SCBA	6
Equipment	Generator, power rescue tool, rope rescue gear, water rescue gear, confined space rescue gear, BLS medical gear
Surface Rust	None
Structural Rust and Corrosion	Light
Apparent Fluid Leaks	None
Overall Appearance and Condition Rating	Good

Benson, Clontarf, Danvers and DeGraff, Minnesota
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Grass 3

Unit Status	Active Service
Manufacturer	Chevrolet- Local Modifications
Year of Manufacture	2002
Mileage	119,613
Pumping Capacity	100-250 gpm
Tank Capacity	Other 150
Seating Capacity	2
Number of SCBA	0
Equipment	Other wildland equipment
Surface Rust	Light
Structural Rust and Corrosion	Light
Apparent Fluid Leaks	None
Overall Appearance and Condition Rating	Good



Grass 1

Unit Status	Active Service
Manufacturer	Chevrolet- Local Modifications
Year of Manufacture	2005
Mileage	8,909
Pumping Capacity	100-250 gpm
Tank Capacity	200 gallons
Seating Capacity	4
Number of SCBA	0
Equipment	Class A foam, wildland equipment
Surface Rust	None
Structural Rust and Corrosion	None
Apparent Fluid Leaks	None
Overall Appearance and Condition Rating	Excellent

Benson, Clontarf, Danvers and DeGraff, Minnesota
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Ranger 1

Unit Status	Active Service
Manufacturer	Other Polaris
Year of Manufacture	2010
Pumping Capacity	100-250 gpm
Tank Capacity	Other 50
Seating Capacity	2
Number of SCBA	0
Equipment	Other wildland equipment
Surface Rust	None
Structural Rust and Corrosion	None
Apparent Fluid Leaks	None
Overall Appearance and Condition Rating	New

Clontarf Fire Department



Engine 1

Unit Status	Active Service
Manufacturer	Pierce Mfg.
Year of Manufacture	2009
Mileage	3,195
Hours	126
Pumping Capacity	1,250 gpm
Tank Capacity	1,000 gallons
Seating Capacity	5
Number of SCBA	4
Equipment	Generator, Class A foam injected
Surface Rust Present	None
Structural Rust and Corrosion	None
Apparent Fluid Leaks	None
Overall Appearance and Condition Rating	New

Benson, Clontarf, Danvers and DeGraff, Minnesota
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Tanker 1

Unit Status	Active Service
Manufacturer	Other White- local modifications
Year of Manufacture	1985
Mileage	67,207
Hours	2,975
Does this unit also respond as a standard engine	Tanker use only
Pumping Capacity	Other none
Tank Capacity	3,000 gallons
Seating Capacity	2
Number of SCBA	0
Equipment	Portable dump tank, Portable float pump
Surface Rust	Moderate
Structural Rust and Corrosion	Moderate
Apparent Fluid Leaks	Significant
Overall Appearance and Condition Rating	Fair



Grass 1

Unit Status	Active Service
Manufacturer	Chevrolet- Local Modifications
Year of Manufacture	1984
Mileage	24,990
Pumping Capacity	100-250 gpm
Tank Capacity	Other 300
Seating Capacity	3
Number of SCBA	0
Equipment	Other wildland equipment
Surface Rust	None
Structural Rust and Corrosion	Light
Apparent Fluid Leaks	None
Overall Appearance and Condition Rating	Good

Benson, Clontarf, Danvers and DeGraff, Minnesota
 Feasibility Study for Shared or Cooperative Fire and Emergency Services



Grass 1

Unit Status	Active Service
Manufacturer	Dodge- Local Modifications
Year of Manufacture	1977
Mileage	46,772
Pumping Capacity	100-250 gpm
Tank Capacity	200 gallons
Seating Capacity	3
Number of SCBA	0
Equipment	Other wildland equipment
Surface Rust	Moderate
Structural Rust and Corrosion	Moderate
Apparent Fluid Leaks	Light
Overall Appearance and Condition Rating	Poor

Danvers Fire Department



Engine 1

Unit Status	Active Service
Manufacturer	Other FMC
Year of Manufacture	1974
Mileage	17488
Pumping Capacity	1,000 gpm
Tank Capacity	750 gallons
Seating Capacity	3
Number of SCBA	4
Equipment	Generator, Class A foam/educator
Surface Rust Present	Moderate
Structural Rust and Corrosion	Light
Apparent Fluid Leaks	Light
Overall Appearance and Condition Rating	Fair

Benson, Clontarf, Danvers and DeGraff, Minnesota
 Feasibility Study for Shared or Cooperative Fire and Emergency Services



Engine 2

Unit Status	Active Service
Manufacturer	American La France
Year of Manufacture	1967
Mileage	36,620
Hours	2,810
Pumping Capacity	1,000 gpm
Tank Capacity	1,000 gallons
Seating Capacity	4
Number of SCBA	3
Equipment	Generator, Thermal imaging camera
Surface Rust Present	Light
Structural Rust and Corrosion	Light
Apparent Fluid Leaks	None
Overall Appearance and Condition Rating	Fair



Tanker 1

Unit Status	Active Service
Manufacturer	U.S. Tanker Fire Apparatus
Year of Manufacture	1979
Mileage	16,357
Does this unit also respond as a standard engine	Tanker use only
Pumping Capacity	Other 40 gpm
Tank Capacity	3,300 gallons
Seating Capacity	3
Number of SCBA	0
Equipment	Portable dump tank, Portable float pump, Class A foam/eductor
Surface Rust	Light
Structural Rust and Corrosion	Light
Apparent Fluid Leaks	Light
Overall Appearance and Condition Rating	Fair

Benson, Clontarf, Danvers and DeGraff, Minnesota
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Grass 1

Unit Status	Active Service
Manufacturer	Chevrolet- Local Modifications
Year of Manufacture	2001
Mileage	121,504
Pumping Capacity	100-250 gpm
Tank Capacity	Other 160 gallons
Seating Capacity	4
Number of SCBA	0
Equipment	Class A foam, wildland equipment
Surface Rust	None
Structural Rust and Corrosion	None
Apparent Fluid Leaks	None
Overall Appearance and Condition Rating	Excellent

DeGraff Fire Department



Engine 1

Unit Status	Active Service
Manufacturer	Pierce Mfg.
Year of Manufacture	2006
Mileage	3,628
Pumping Capacity	1,250 gpm
Tank Capacity	1,000 gallons
Seating Capacity	3
Number of SCBA	4
Equipment	Generator, BLS medical gear, Class A foam injected
Surface Rust Present	None
Structural Rust and Corrosion	None
Apparent Fluid Leaks	None
Overall Appearance and Condition Rating	Excellent

Benson, Clontarf, Danvers and DeGraff, Minnesota
 Feasibility Study for Shared or Cooperative Fire and Emergency Services



Engine 631

Unit Status	Active Service
Manufacturer	Other Luverne Fire Equipment
Year of Manufacture	1968
Mileage	16,535
Pumping Capacity	500 gpm
Tank Capacity	500 gallons
Seating Capacity	2
Number of SCBA	2
Equipment	Other none
Surface Rust Present	Moderate
Structural Rust and Corrosion	Heavy
Apparent Fluid Leaks	Light
Overall Appearance and Condition Rating	Poor



Tanker

Unit Status	Active Service
Manufacturer	Other International- local modifications
Year of Manufacture	1996
Mileage	300,000
Does this unit also respond as a standard engine	Tanker use only
Pumping Capacity	300 gpm
Tank Capacity	Other 2,400
Seating Capacity	2
Number of SCBA	0
Equipment	Portable dump tank
Surface Rust	Light
Structural Rust and Corrosion	Light
Apparent Fluid Leaks	None
Overall Appearance and Condition Rating	Good

Benson, Clontarf, Danvers and DeGraff, Minnesota
 Feasibility Study for Shared or Cooperative Fire and Emergency Services

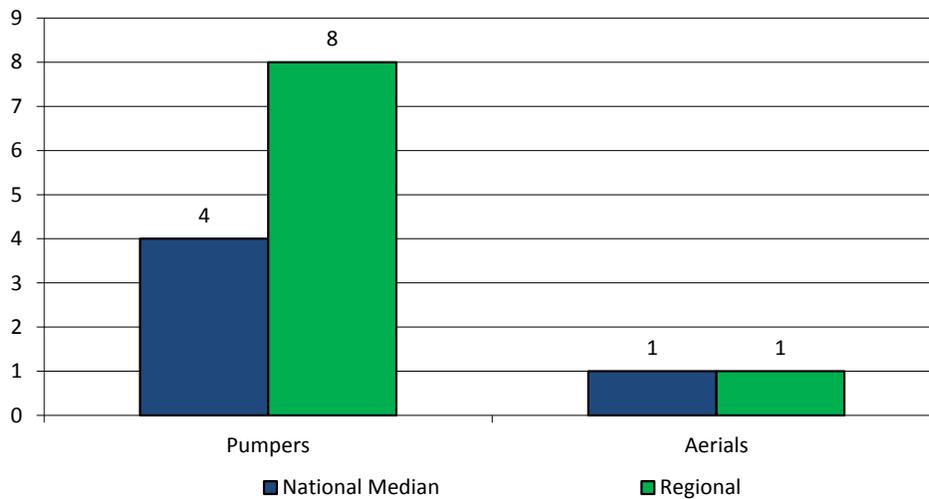


Grass 1

Unit Status	Active Service
Manufacturer	Chevrolet- Local Modifications
Year of Manufacture	1985
Mileage	33,290
Pumping Capacity	100-250 gpm
Tank Capacity	Other 285 gallons
Seating Capacity	2
Number of SCBA	0
Equipment	Other Wildland fire equipment
Surface Rust	Light
Structural Rust and Corrosion	Light
Apparent Fluid Leaks	None
Overall Appearance and Condition Rating	Fair

From a regional perspective, the combined departments have four more engines (pumpers) than the national average for departments with a similar combined population, as illustrated in the following figure.

Figure 25: Comparison of Combined Resources per 1,000 Population



Figures are derived from national median resource rates per thousand population

Staffing and Personnel Management

In simplest terms, staffing is defined “as to supply with a staff or with workers.”¹ In broader terms it involves the decisions and activities connected with selecting and training individuals for specific job functions and charging them with job responsibilities. These individuals provide the staff for an organization.

Before delving into a discussion of staffing and personnel management a clarification is provided. The terms "human resource management" and "human resources" (HR) have largely replaced the term "personnel management" as a description of the processes involved in managing people in organizations.² However, the terms are frequently used interchangeably when describing the recruitment and retention of a workforce, regardless of whether that workforce is career, other paid, or volunteer.

Human resource management (HRM) is based on the assumption that workers and members of organizations are individuals with varying goals, desires, needs, and wants. As such, the workforce should never be thought of as an inanimate business resource. Because people represent the very foundation of any successful organization, HRM should take a positive view of workers, assuming that all wish to contribute productively; and that the main obstacles to any endeavor result from a lack of knowledge, insufficient training, or process failure.

Careful attention must be paid to managing the workforce to achieve maximum productivity for the organization and maximum satisfaction for the individual. A safe working environment, fair treatment, and recognition for a job well done are key components to job satisfaction.

It is important that the organization’s members know to whom they should go when they have a problem, question, or issue related to their relationship to the organization. In large organizations, a human resource department typically handles this function. Staff within such a department addresses questions, issues, and tasks related to appointment, benefits, performance, discipline, promotion, or termination of employees. These duties are often combined with other responsibilities in smaller organizations.

¹ Merriam-Webster Online Dictionary, 2010.

² Armstrong, Michael (2006). *A Handbook of Human Resource Management Practice* (10th edition), London: Kogan.

Administrative and Support Staff

The primary responsibility of a department's administration and support staff is to ensure that the organization's operational entities have the abilities and means to fulfill its mission at an emergency incident. Efficient and effective administration and support are critical to the department's success. Without adequate oversight, planning, documentation, training, and maintenance program, the operational capabilities of the department will suffer and may fail operational testing. Administration and support require appropriate resources to function effectively.

Analyzing the ratio of administration and support positions to the total departmental positions facilitates an understanding of the relative number of resources committed to this function. The appropriate balance of administration and support positions to the operational component is critical to the department's ability to fulfill its mission and responsibilities. Although no formal studies have been conducted to identify the optimum personnel mix, it has been ESCI's experience that the typical ratio of administrative and support staff to total personnel in career departments falls within the 10 to 15 percent range.

Benson

BFD is an all-volunteer fire department; the administrative and support positions are also active in emergency operations. Administration and support for BFD consists of the fire chief and two assistant chiefs. In addition to these positions, 11 individuals serve as board members and/or officers of the non-profit corporation.

Clontarf

CFD is an all-volunteer fire department. The department's administrative and support positions are also active in emergency operations. Administration and support for CFD consists of the fire chief, one assistant chief, and one training officer.

Danvers

Danvers FD is an all-volunteer fire department; the administrative and support positions are also active in emergency operations. Administration and support for Danvers FD consists of the fire chief and one assistant chief.

DeGraff

DeGraff FD is an all-volunteer fire department; its administrative and support positions are also active in emergency operations. Administration and support for DeGraff FD consists of the fire chief, one assistant chief, and one training officer.

The following figure summarizes the administrative and support positions across the study region.

Figure 26: Administrative and Support Personnel

	Benson FD	Clontarf FD	Danvers FD	DeGraff FD	Total
Fire Chief	1	1	1	1	4
Assistant Chief	2	1	1	1	5
Association Officers and Board Members	11	-	-	-	11
Training Officer	-	1	-	1	2
Total Admin and Support	14	3	2	3	22
% Admin and Support	40.0%	25.0%	15.4%	20.0%	30.6%

As noted previously, these administrative and support staff also function in emergency operations. Therefore, applying a generalization about the ratio of administration and support to total personnel would not be appropriate.

Emergency Services Staff

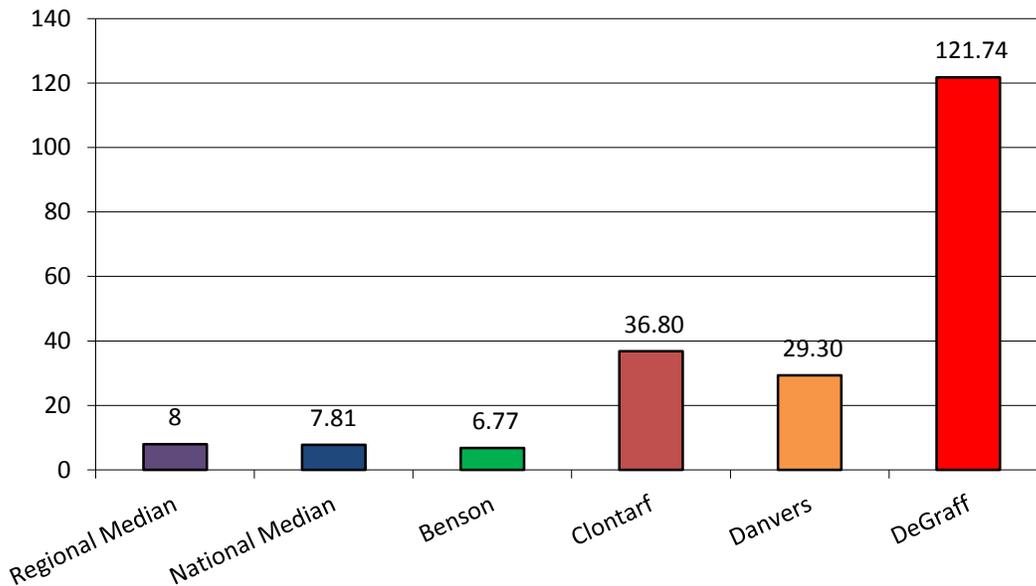
It takes an adequate and well trained staff of emergency responders to put the appropriate emergency apparatus and equipment to its best use in mitigating incidents. Insufficient staffing at an operational scene decreases the effectiveness of the response and increases the risk of injury to all individuals involved. The following list summarizes the services that are provided by each agency.

Figure 27: Emergency Services Personnel Summary

	Benson FD	Clontarf FD	Danvers FD	DeGraff FD	Total
Captain	1	-	-	-	1
Lieutenant	1	-	2	-	3
Firefighters	17	9	8	12	46
Total Operations	19	9	10	12	50

The following figure compares the study departments to the regional and national medians for numbers of volunteer personnel per 1,000 population.

Figure 28: Regional Comparison of Volunteers per 1,000 Population



Each department except Benson has higher rates of volunteers per 1,000 population. This is due to the low populations of the other three departments in comparison to Benson.

Current Staffing Performance

In most communities around the country, the number of fire calls has declined over the past decade. Yet as the frequency of fires diminishes, in part due to stricter fire codes and safety education, the workload of fire departments has risen sharply — medical calls, hazardous materials calls, and every sort of household emergency are now addressed by fire departments. Therefore, as the frequency of fires diminishes, the need for a ready group of firefighters has increased.

Although modern codes tend to make fires in newer structures more infrequent, today's energy-efficient construction (designed to hold heat during the winter) also tends to confine the heat of a hostile fire. In addition, research has shown that modern furnishings generally burn hotter (due to synthetics), and roofs collapse sooner because prefabricated roof trusses separate easily after a very short exposure to flame. In the 1970s, scientists at the National Institute of Standards and Technology found that after a fire broke out, building occupants had about 17 minutes to escape before being

overcome by heat and smoke. Today, that estimate is three minutes.³ The necessity of firefighters arriving on the scene of a fire in the shortest span of time is more critical now than ever.

ESCI is providing analysis of incident staffing performance in two ways. Initially, the report will provide a glimpse of how well the department is doing at producing its own manpower for incidents within its primary service area. ESCI believes this data is important and can be an indicator for the individual department as to the effectiveness of its staffing efforts.

ESCI also recognizes that for all but the smallest, low-risk incidents, fire departments are typically acting together in providing fire protection through a coordinated regional response of mutual and automatic aid. This is particularly true for structure fires and other high-risk incidents where staffing needs are high. ESCI believes that this data is equally important and can be an indicator of the level of success the department is achieving in providing adequate staffing to meet the needs of the higher-risk incidents.

Of significance to the staffing objective of this study is that *NFPA (National Fire Protection Association) 1710* establishes that a response company consists of four personnel. The standard does not *require* that all four be on the same vehicle, but does expect that the four will operate as a single functioning unit once on scene. The *NFPA 1710* response time standard also requires that all four personnel be on scene within the recommended response time guidelines.

There is another reason the arrival of four personnel is critical for structure fires. As mentioned earlier, OSHA regulations require that before personnel can enter a building to extinguish a fire, at least two personnel must be on scene and assigned to conduct search and rescue in case the fire attack crew becomes trapped. This is referred to as the two-in, two-out rule.⁴ There are, however, some exceptions to this regulation. If it is *known* that victims are trapped inside the building, a rescue attempt can be performed without additional personnel ready to intervene outside the structure.

Under normal circumstances, ESCI would provide an illustration of how well each department is doing at producing personnel for structure fires. Unfortunately, BFD was the only study department that had sufficient structure fires to make analysis possible. BFD was able to produce an average of 21.4 personnel to nine structure fires during 2009 and 2010. CFD only had one fire during that period and did not record personnel in its incident report. DeGraff FD had two structure fires during the same period

³ National Institute of Standards and Technology, *Performance of Home Smoke Alarms, Analysis of the Response of Several Available Technologies in Residential Fire Settings*, Bukowski, Richard, et al.

⁴ 29 CFR 1910.134(g)(4).

and did not record personnel in its incident report. Danvers FD recorded no structure fires during that data period.

Compensation Systems

In order for a department to recruit and retain quality personnel, compensation and benefits (as well as overall working conditions) must be in line or in excess to those of surrounding organizations. Volunteer organizations have an especially difficult time in recruiting and retaining personnel due to the fact that, in the current economy, personnel are looking for positions that will help support their standards of living rather than strictly volunteer roles. To combat this, many volunteer organizations have implemented programs to compensate their members in a variety of ways. The following figure summarizes the compensation systems components utilized within the region.

Figure 29: Compensation Systems Components Comparison

	Benson Fire Department	Clontarf Fire Department	Danvers Fire Department	DeGraff Fire Department
Retirement Plan	Relief Association	None	Relief Association	None
Medical Insurance (not duty related)	None	None	None	None
Dental Insurance (not duty related)	None	None	None	None
Vision Insurance (not duty related)	None	None	None	None
Critical Incident Stress Debriefing (CISD) Program	County or regional team	County or regional team	County or regional team	County or regional team
Employee Assistance Program (not duty related)	No EAP	No EAP	No EAP	No EAP
Volunteer/POC Compensation	Paid per hour on calls	Paid per call, Mileage to incidents	Paid per hour on calls	None
Rate Information	\$10.25 per hour for calls	-	\$8.00 per hour for calls, meetings, and training	-

Recommendation:

- Each department should work with local public and mental health organizations to establish a mechanism by which members can receive the benefits of an Employee Assistance Program (EAP) and Critical Incident Stress Debriefing (CISD) when necessary.

Disciplinary Processes

Maintaining discipline in a public safety organization is a crucial component of a well-run department. Members must be allowed latitude to perform using wisdom and judgment but must also be held accountable for actions, whether good or less agreeable. It is important to establish a method by which employees are encouraged to exhibit behavior that reflects a high moral standard and creates and maintains a safe and healthy working environment. Disciplinary policies that focus on coaching, counseling, and behavioral modification instead of punishment have been shown to produce positive results. The following figure summarizes the disciplinary and appeals processes in use by the organizations.

Figure 30: Disciplinary Processes Components Comparison

	Benson Fire Department	Clontarf Fire Department	Danvers Fire Department	DeGraff Fire Department
Disciplinary Policy	Formal written policy in place	No disciplinary policy	No disciplinary policy	Formal written policy in place
Disciplinary Appeals Process	Formal written process in administrative policy documents	No appeal process available	No appeal process available	Formal written process in administrative policy documents

Recommendations:

- Clontarf FD and Danvers FD should develop and implement a formal disciplinary policy.
- Clontarf FD and Danvers FD should develop and implement a formal disciplinary appeals process.

Application and Member Retention Programs

Personnel recruitment is a key function of all emergency service agencies. The community places a tremendous amount of faith in fire and EMS personnel, trusting them to provide the highest level of service when the public is most vulnerable. As such, the process used to select personnel should be very comprehensive.

The Americans with Disabilities Act (ADA) prohibits discrimination against individuals with physical disabilities but permits employers to establish reasonable physical standards required to perform the primary functions of any job safely and effectively. History has shown that the most effective method of

avoiding ADA litigation is through reasonable and consistent application of job-relevant pre-employment physical ability testing.

Experience within the fire service industry has shown that relaxing the requirements for entry-level positions is not the answer for recruiting any employee. Instead, most departments have had greatest success in activities that encourage qualified applicants to apply. This process often involves targeted advertising and promotional campaigns aimed at demonstrating the salary and benefits, as well as the personal satisfaction, of a career in the fire service. Existing employees can be encouraged to participate in any such campaign and professional assistance from a human resource department is advisable. The following figure summarizes the recruitment, application and retention efforts and policies across the region.

Figure 31: Application and Retention Components Comparison

	Benson Fire Department	Clontarf Fire Department	Danvers Fire Department	DeGraff Fire Department
Minimum Physical Standards Established	Yes	No physical standards	No physical standards	No physical standards
Aptitude of Knowledge Testing	Yes	No	No	No
Pre-Appointment Medical Exam Required	Yes	Yes	Yes	Yes
Pre-Appointment Medical Exam Paid	Paid by agency	Paid by agency	Paid by agency	Paid by agency
Nature of Pre-Appointment Medical Exam	Exam is fully <i>NFPA 1582</i> compliant	Conducted by department or contracted physician	Conducted by department or contracted physician	Conducted by department or contracted physician
Who is the Hiring Authority	Fire Chief	Department committee	Fire Chief	Fire Chief
Applicant Process Includes	Complete application packet with job description and requirements, Application review, Applicant interview panel, Criminal history check, Employment reference checks, Written test, Physical agility test, Medical examination, Probationary period, Employers must sign off that they will release personnel for day-time incidents	Application sheet, Personal knowledge of individual	Medical examination, Probationary period	Application sheet, Medical examination

Testing, Measurement and Promotion

Once on staff, personnel should be evaluated periodically to ensure their continued ability to perform job duties safely and efficiently. Technical and manipulative skills should be assessed on a regular basis. This provides documentation about a person’s ability to perform responsibilities and provides valuable input into the training and education development process.

It is important to maintain such programs whenever possible; it has long been known that members sincerely wish to be a contributing part of any organization. This basic desire to succeed is best encouraged through feedback that allows each member to know what he/she is doing well and what skills may need improvement. Honest and effective feedback encourages members to reinforce mastered skills and abilities and to work harder to improve the areas where performance may fall short.

Regular evaluation and feedback for personnel is critical to behavior modification and improvement. No formal performance evaluation system is currently in place for all employees of the fire departments.

Technical and manipulative skills should be evaluated regularly. This provides documentation about a person's ability to perform their responsibilities and provides valuable input into the training and education development process. No formal competency evaluation of fire skills of employees with emergency response job duties is conducted.

Incumbent uniformed career fire department personnel who are assigned hazardous materials duties are required to participate in and pass a medical physical assessment on a yearly basis. Annual medical physical examinations are not required for other department employees with emergency response job duties.

Annual medical physical examinations should be considered for fire department personnel at all ranks and job assignments. Examinations should follow *NFPA 1582*. Baseline values for all firefighters should be established at time of hire that include: titer level, vision, spirometry, audiometry, hepatitis B and C, and tetanus.

A stress test is used to determine the amount of stress that a heart can manage before developing either an abnormal rhythm or evidence of ischemia (inadequate blood flow to the heart muscle). The test provides information about how the heart responds to exertion. It usually involves walking on a treadmill or pedaling a stationary bike at increasing levels of difficulty, while an electrocardiogram, heart rate, and blood pressure are monitored. The test helps to determine if there is adequate blood flow to the heart during increasing levels of activity and the likelihood of having a coronary event or the need for further evaluation.

Medical physical assessments should involve periodic stress tests of incumbent employees every two to five years, based on age and risk factors. We recommend that a stress test be performed at the time of

hire to determine if a candidate has an underlying heart defect or disease that would put them at risk while performing the duties of a firefighter. The leading cause of death for firefighters is heart attack (44 percent). Death from trauma, including internal and head injuries, is the second leading cause of death (27 percent). Asphyxia and burns account for 20 percent of firefighter fatalities.⁵ The following figure summarizes the organizations' testing, measurement and promotional processes.

	Benson Fire Department	Clontarf Fire Department	Danvers Fire Department	DeGraff Fire Department
Periodic Capability Testing to Measure Minimum Standards Compliance	No formal periodic testing-observation only			
Periodic Performance Evaluations	No	No	No	No
Formal Promotional Testing	No	No	No	No

Recommendations:

- Each department should implement a system of periodic competency testing of members to ensure that each member is continuously capable of performing critical tasks.
- Each department should implement a formal performance evaluation system to provide performance feedback to all personnel and develop a plan of improvement for the future.
- Each department should develop minimum requirements for each position and implement a process whereby members test and compete for promotions to higher rank.

⁵ The United States Fire Administration (USFA), *The USFA Firefighter Fatality Retrospective Study: 1990-2000*, October 2002.

Service Delivery and Performance

The delivery of fire suppression and rescue services requires efficient notification of an emergency, rapid response from well-located facilities in appropriate apparatus, and sufficient staffing following a well-practiced plan of action. This section evaluates these various components and provides observations of the elements that make up the delivery of the most critical core services provided by the four fire departments.

Demand

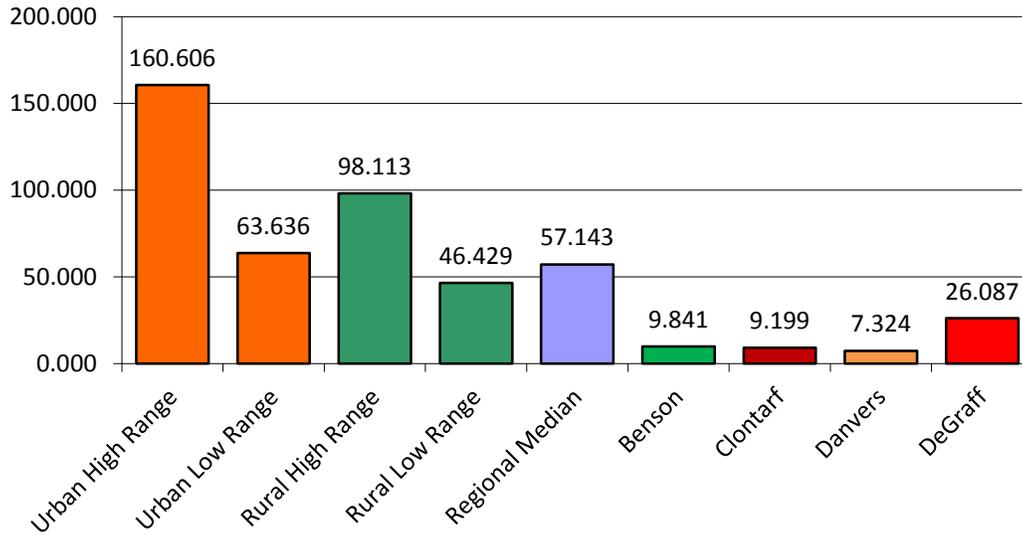
Each department provided ESCI with National Fire Incident Record System (NFIRS) incident records for calendar years 2009 and 2010. The following figure illustrates the overall volume of service demand over the data period provided.

Figure 32: Regional Workload History

Year	Category Type	Benson FD	Clontarf FD	Danvers FD	DeGraff FD
2009 Total	Fire	24	1	4	4
	Explosion	3	-	1	-
	EMS	15	1	-	-
	Hazmat	2	-	-	-
	Good Intent	4	1	1	-
	False Call	15	-	1	-
	Weather	4	-	1	-
	2009 Total		67	3	8
2010 Total	Fire	14	1	3	6
	EMS	8	1	-	-
	Hazmat	3	-	-	-
	Service Call	3	-	-	-
	Good Intent	3	-	-	-
	False Call	13	-	-	-
	Weather	4	-	-	-
	2010 Total		48	2	3

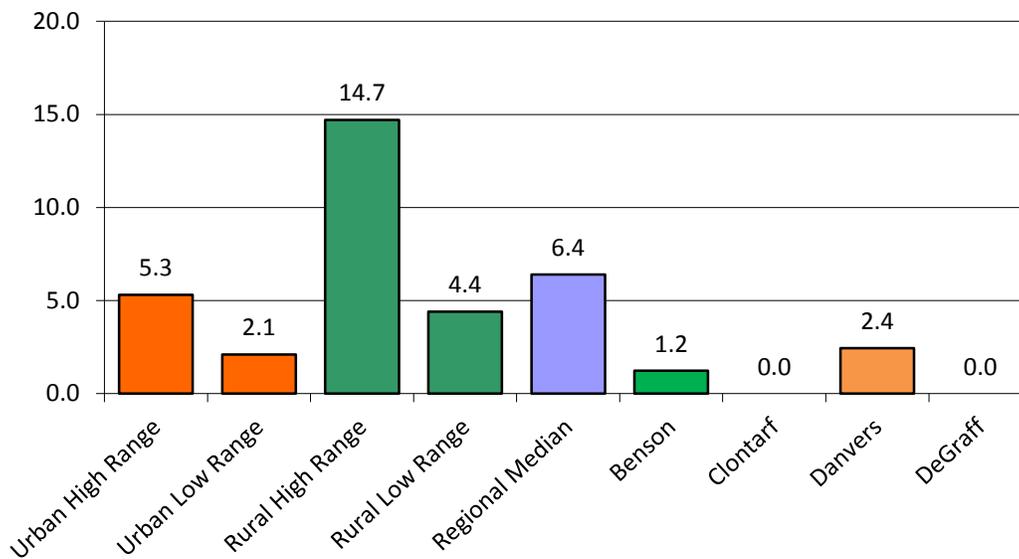
The following figure illustrates how each of the study departments compares against the urban and rural high and low ranges of incidents per 1,000 population.

Figure 33: Regional Incident per 1,000 Population



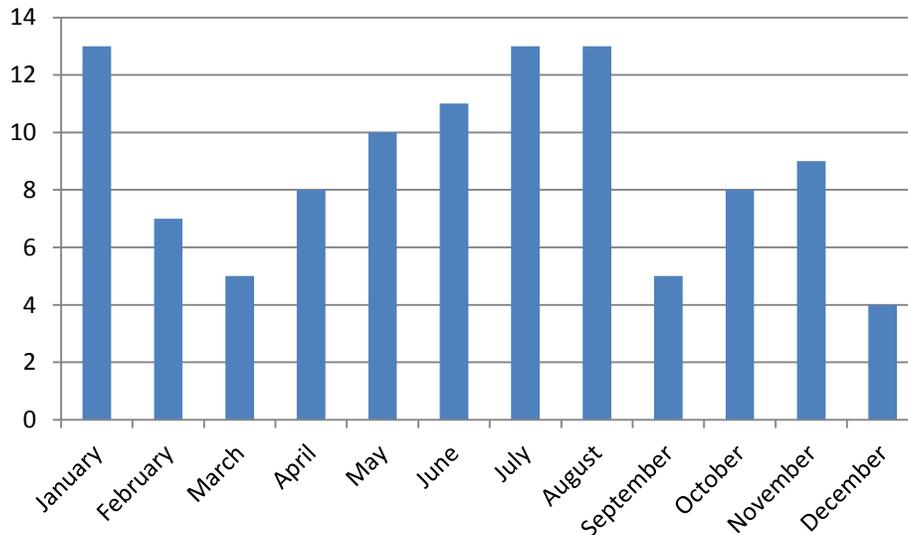
The total incidents experienced throughout the study area are significantly less than the urban and rural high and low ranges as well as the regional median, which involves the Midwestern U. S. The same is true for actual structural fires that occurred within the study area over the last two years, as illustrated below.

Figure 34: Regional Structure Fires per 1,000 Population



A review of incidents by time of occurrence also reveals when the greatest response demand is occurring. The following charts show how activity and demand changes for each agency based on various measures of time. Due to low call volume for CFD, Danvers FD, and DeGraff FD, only BFD's service demand is presented in this analysis. ESCI began by breaking down yearly workload into monthly increments.

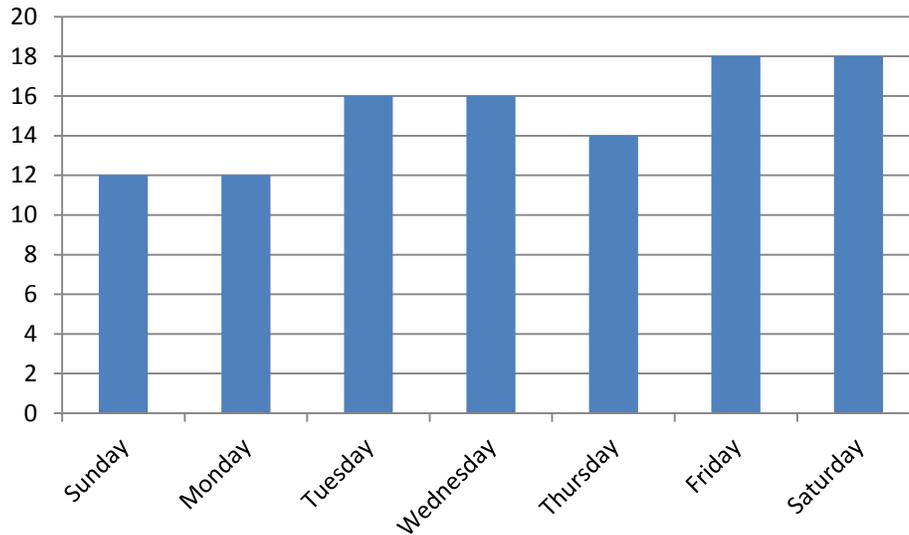
Figure 35: Service Demand by Month – BFD



BFD's monthly workload is highly variable with the busiest months mid-winter and late summer. CFD recorded five total incidents during 2009 and 2010 and had no month in which multiple incidents occurred. Danvers FD recorded 11 incidents during the same period and recorded multiple incidents during August in 2009 and 2010 as well as January 2009 and November 2009; two incidents each month. DeGraff FD recorded 10 incidents during the same period and only recorded multiple incidents during April and August 2010 with two calls in each of those months.

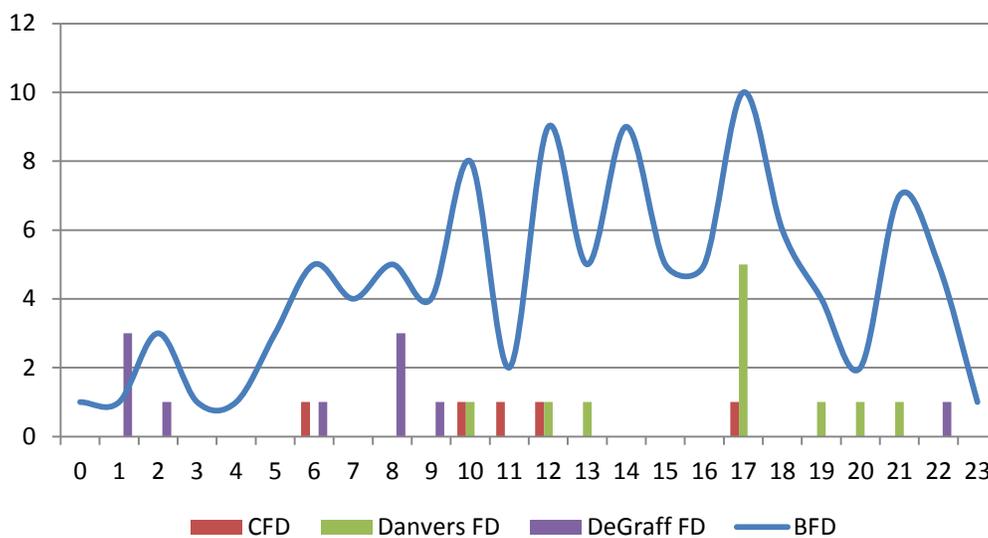
In further analysis, workload is examined by day of the week, again showing a high degree of variability across the departments' daily workload.

Figure 36: Historical Workload by Day of Week – BFD



The figure above illustrates how workload varies by day of week and indicates that workload is higher on Fridays and Saturdays generally. CFD recorded no multiple incidents for any day of the week. Danvers FD’s busiest day of the week during 2009 was Wednesday (four incidents) and DeGraff’s busiest day of the week during 2010 was Sunday (two incidents). The final analysis of historical workload concludes with examination of service demand by hour of day. Understanding when peak activity occurs begins the process of reviewing deployment strategies and needs assessment.

Figure 37: Historical Workload by Hour of Day



Each department's workload is presented in the preceding figure although BFD was the only department to record incidents during each hour of the day. BFD's service demand follows a bell curve typical of emergency services agencies. Workload begins to rise in the early morning, fluctuate during the mid-day hours, and decline into the early evening hours. This closely follows the typical pattern of human activity.

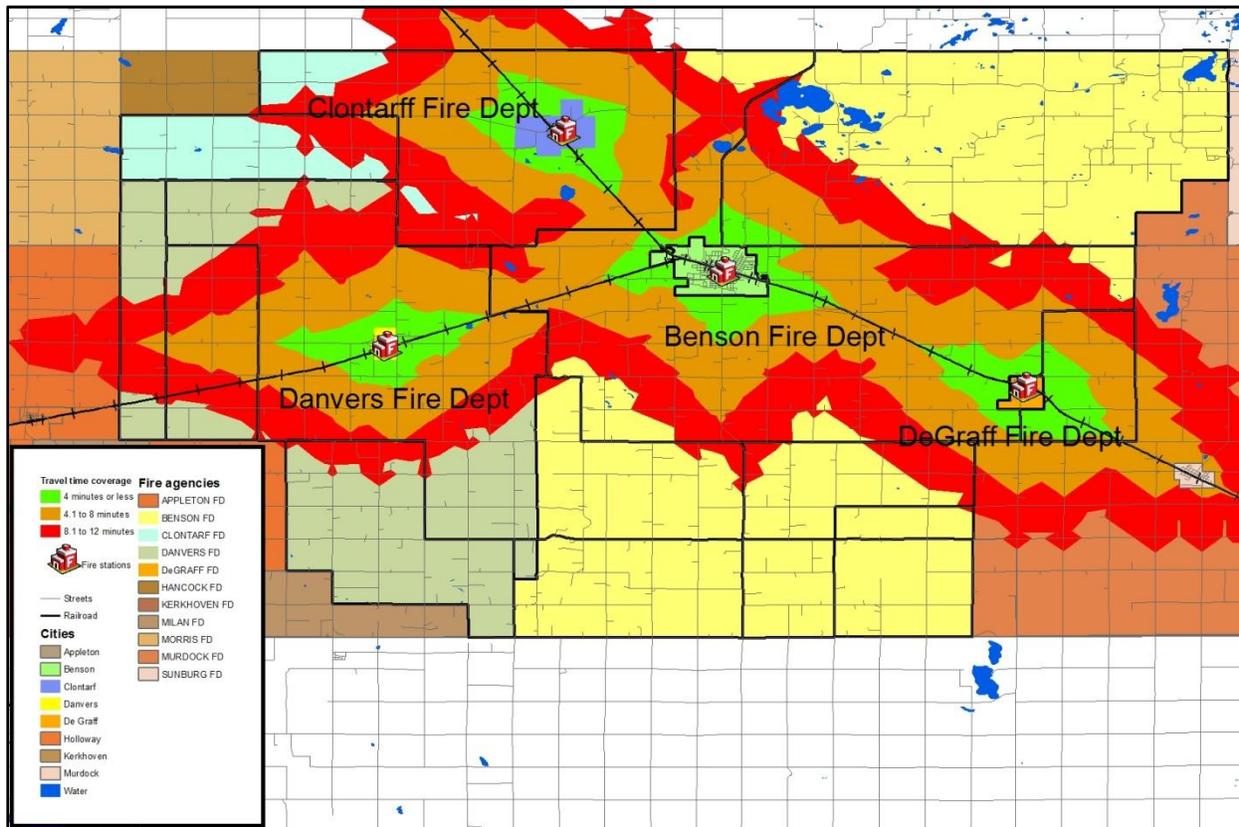
In most projects such as this, the next representation would be that of geographic service demand distribution. This analysis allows for assessing the location of stations in comparison to the actual service demand within the area. In other words, ESCI would plot each incident on a map to illustrate how incidents were distributed across the region. Unfortunately, the method in which incident information is recorded by the four agencies is such that this type of plotting is impossible. For accuracy, ESCI prefers to utilize rates above 95 percent when geocoding incidents for plotting. For Swift County, the accuracy was less than 20 percent. Thus, no geographic display of incident distribution or density is offered in this report.

Distribution

Across the region, the four agencies operate from four facilities, all staffed with volunteers based on incident dispatch. No station has on-duty coverage 24 hours per day. There exists a certain extent of the jurisdiction that can be reached within a certain travel time from the stations regardless of staffing patterns.

The following map illustrates the 4, 8, and 12-minute travel model from each existing station location.

Figure 38: Travel Time Capability



Based on the fact that ESCI was unable to plot calls for service, it is not possible to determine what percentage of service demand falls within each of the noted travel models.

The national peer standards, *NFPA 1710 Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*⁶ and *NFPA 1720 Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer or Combination Fire Departments* includes a performance objective of 240 seconds or less travel time for the arrival of the first arriving engine company.⁷ The travel time models produced by ESCI indicate that existing station deployment would be capable of producing a travel time performance of less than 90 percent, below the *NFPA 1720* standard for volunteer and combination fire departments. Actual

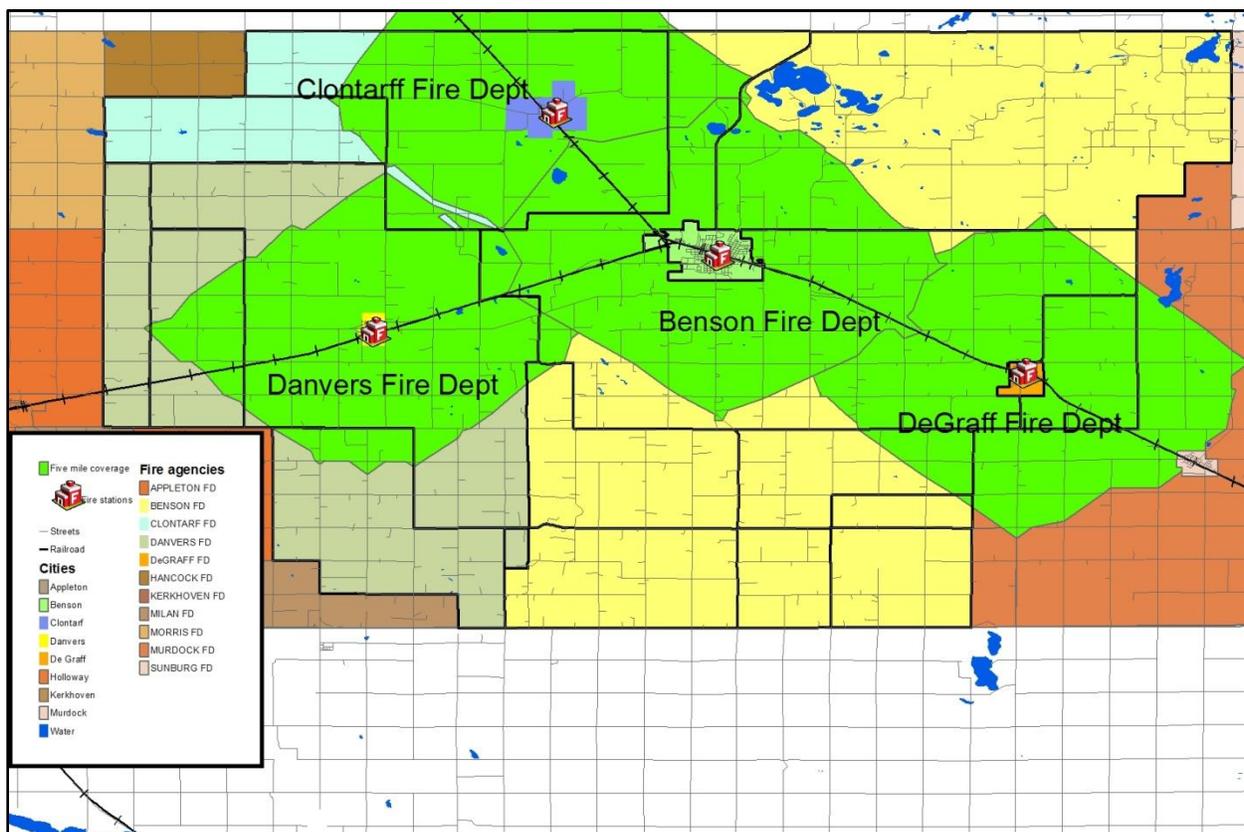
⁶ *NFPA 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments.* (National Fire Protection Association 2010.)

⁷ *NFPA 1720, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer and Combination Fire Departments.* (National Fire Protection Association 2010.)

performance may be different from modeled performance, and the department's overall response time performance will be discussed in a later section of this report.

Another factor to consider when evaluating distribution of resources is the impact of that distribution on the Insurance Services Office's (ISO) rating for the area. ISO rates fire departments based on several criteria and then applies a code that many property and casualty insurance carriers utilize to set homeowners insurance rates. As discussed previously, the four study agencies have varying ISO ratings based on where property is located in relation to the nearest fire station. Those areas outside of five road miles from a fire station are considered to be 'unprotected.' Those property owners may find it difficult to obtain insurance coverage for their property and, if they do, it can be quite expensive. The following figure illustrates the five-mile distance from each of the study fire stations.

Figure 39: Five-Mile Coverage

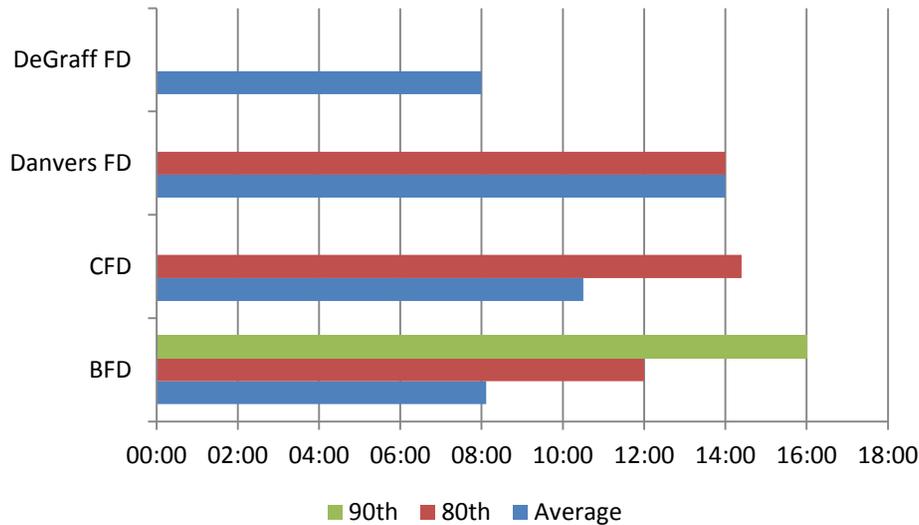


The central portion of each response area is within the five-mile coverage area but large portions lie outside that distance. This can impact homeowner's insurance rates for residents living in those areas outside five miles from a fire station.

Response Performance

Total response time is the amount of time a resident or business waits for an apparatus to arrive at the scene of an emergency beginning when they first call 9-1-1. The following charts illustrate the response time for the study agencies for 2010 based on the average, 80th percentile, and 90th percentile measurements.⁸

Figure 40: Response Performance Summary



The preceding figure was constructed using only emergency incident responses during calendar year 2010. The 90th percentile response time was calculated for BFD (16:00) based on at least a portion of their response area that is considered urban in population density. ESCI also calculated the 80th percentile response performance for each agency that responds to suburban and rural areas and provides an average for comparison. Since DeGraff FD only recorded one emergency incident during 2010, the average and 80th percentile response performance would be equal.

Incident Command

Fire departments must have systems in place to manage incidents and resources. Preparation begins with the establishment of pre-incident plans on higher risk structures, such as commercial or industrial occupancies, along with development of resource management systems in the event of large-scale or

⁸ Mutual aid calls, non-emergent calls, and interfacility transfers were removed from response time analyses as they were found.

concurrent incidents. Location mapping, standardized response protocols, and water supply planning also help prepare a department for efficient and effective emergency response.

Once a call is dispatched, management of the incident itself begins. Fire departments should utilize incident command structures compliant with the National Incident Management System (NIMS). Personnel accountability systems should be established in department procedures, and should be implemented on all multi-apparatus working incidents.

Finally, OSHA regulations related to operating in a hazardous atmosphere or around hazardous materials should be enforced through department procedures and training. This includes the regulations requiring firefighters to operate in teams of two, with a minimum of two persons, response-ready, remaining outside the hazard area whenever a team of two is operating inside the hazard area. This is commonly referred to as the “two-in, two-out” regulation. Proper levels of hazardous materials response training compliant with OSHA’s CFR 1910.120 standard should also be enforced.

The following table summarizes comparative information on the departments’ command and control performance.

Figure 41: Command and Control Comparisons

Department Name	Benson Fire Department	Clontarf Fire Department	Danvers Fire Department	DeGraff Fire Department
Levels of Tactical Pre-Incident Planning	Pre-incident plans for all commercial, Standardized forms and drawings used, Printed versions shared on all appropriate vehicles	No pre-incident planning program	Pre-incident plans for only high-hazard occupancies	Pre-incident plans for all commercial, Plans updated at least annually
Levels of Operational Planning	Resources managed by standard apparatus assignment based on call-type, Mutual aid agreements in place- no formal assignment system Local or regional disaster plans	Mutual aid agreements in place- no formal assignment system	Mutual aid agreements in place- no formal assignment system	Mutual aid agreements in place- no formal assignment system
Hydrant Locations Mapped	Yes with main sizes and flow rates	None	No hydrants	No hydrant mapping available

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Department Name	Benson Fire Department	Clontarf Fire Department	Danvers Fire Department	DeGraff Fire Department
Alternate Static Water Points Mapped	No	No	No	No
Maps Available in All Vehicles	Yes department vehicles only	Yes department vehicles only	Yes department vehicles only	Yes department vehicles only
Standard Response Recommendation Based on Type of Call	Yes	No	No	No
Minimum Number of Responders per Apparatus Standardized	Yes	No	No	No
Turnout Time Standards Established	No	No	No	No
Total Response Time Standards Established	No	No	No	No
Simultaneous Incident Cover Plans	Additional manpower paging for on-call responders	Additional manpower paging for on-call responders, Mutual aid initiated on simultaneous call receipt	Additional manpower paging for on-call responders, Mutual aid initiated on simultaneous call receipt	Additional manpower paging for on-call responders, Mutual aid initiated on simultaneous call receipt
Is a Duty Officer Assigned 24-Hours Per Day	No formal system	No formal system	No formal system	No formal system
Is Incident Command System Used	Most of the time-NIMS compliant	ICS is inconsistent	Most of the time-NIMS compliant	ICS is inconsistent
Incident Arrival Size-Up Announcement Required	All multi-company incidents	Not formally required and inconsistently performed	Not formally required and inconsistently performed	Not formally required and inconsistently performed
Initial Strategy Declaration Required on Arrival	Not formally required and inconsistently performed	Not formally required and inconsistently performed	Not formally required and inconsistently performed	Not formally required and inconsistently performed
Is an Accountability System Used on All Major Incidents	Always	Always	Most of the time	Always
Do Command Officers Have Formal Strategy and Tactics Training	No formal training requirements specific to strategy and tactics	No formal training requirements specific to strategy and tactics	No formal training requirements specific to strategy and tactics	No formal training requirements specific to strategy and tactics
Do Command Officers Have Formal Building Construction Training	Yes local classes only	No formal training requirements specific to building construction	No formal training requirements specific to building construction	No formal training requirements specific to building construction
Minimum Level of Hazmat Certification for Responding Personnel	Hazmat- Operations	Hazmat- Awareness	Hazmat- Awareness	Hazmat- Awareness

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Department Name	Benson Fire Department	Clontarf Fire Department	Danvers Fire Department	DeGraff Fire Department
Formal Safety Officer Assignment	All incidents with significant risk	Officer assignments are inconsistent	All working structure fires	All incidents with significant risk
Two-In, Two-Out OSHA/EPA Compliance	Strict compliance with Two-in, Two-out rules	Two-in, Two-out rule compliance only if sufficient manpower present	No formal adaptation of Two-in, Two-out rule in SOGs	No formal adaptation of Two-in, Two-out rule in SOGs

In review of the compliance with OSHA CFR Section 1910.120, one significant finding was the lack of personnel trained to the “Operations” level specified by the OSHA rules. Many firefighters in Clontarf, Danvers, and DeGraff receive training only to the “Awareness” level.

Of primary concern here is that each agency should have firm procedures in place to limit any personnel from performing tasks and functions that would be considered above their level of training and certification at incidents involving hazardous materials release. Personnel not trained beyond the Awareness level should not be permitted to respond into hazardous materials incident locations, but rather should be directed to remain in an off-site support mode.

The Awareness level of training is intended to enable an individual to “...discover a hazardous substance release and... initiate an emergency response sequence by notifying the proper authorities”, but nothing else.⁹ Obviously, once an incident has been reported, such as a fuel leak from a vehicle called in to 9-1-1, the incident has already been recognized and moved beyond the Awareness level. The act of dispatching a fire engine presumes action on the part of the responding crew involving size-up, containment, decontamination, or clean-up. Any of these tasks would exceed the training level certified under Awareness and are actions specifically described in the “First Responder Operations Level”.¹⁰ Written procedures should prohibit response by personnel certified by their department at less than Operations level to any incident with a known, suspected, or likely release of a hazardous substance, including fuels and gases.

Another significant finding was a lack of formal adoption of “two-in, two-out” standard operating procedures compliant with OSHA regulations. As an enforceable federal standard, the rule should be

⁹ OSHA CFR 1910.120(q)(6)(i)

¹⁰ OSHA CFR 1910.120(q)(6)(ii)

adopted into local policies and procedures, enforced through department command structure, and reinforced through regular training.

Recommendations:

- Clontarf FD and DeGraff FD should map all pressurized and dry hydrant locations and keep map books in each apparatus.
- Each department should adopt formal response performance objectives in order to track historic response performance and set goals for future improvements.
- Each department should work collectively to ensure that a minimum number of command staff are present within the region at all times.
- Each department should provide command officers with formal strategy and tactics training.
- Clontarf FD, Danvers FD, and DeGraff FD should obtain hazardous materials operations level training for all personnel as required by OSHA 1910.120.
- Clontarf FD should work to ensure that a safety office is designated on all working incidents.
- Clontarf FD, Danvers FD, and DeGraff FD should develop and implement a policy adhering to the “two-in, two-out” rule as established by OSHA.

Mutual and Automatic Aid Systems

There are numerous mutual aid agreements, both formal and informal, in place between fire, police, and emergency medical agencies in Swift County and surrounding areas. Mutual aid is typically employed on an “as needed” basis where units are called for and specified one by one through an Incident Commander. There are some conditions under which the departments have agreed to “dual response”, wherein units from more than one department are dispatched on certain types of calls.

According to interviews, multi-agency training is sporadic. For the most effective mutual and automatic aid programs, as well as maximum credit in the ISO Fire Protection Rating system, multi-agency drills should be scheduled regularly. Ideally, these should occur at least once per quarter and be recorded as multi-agency training in all agency records. In addition to the ISO credit, these trainings will naturally lead to enhanced working relationships, more regional thinking, and perhaps cooperative planning, policy, and procedural development.

From a formal standpoint, all four departments regularly interact with the local law enforcement agencies. Interviews indicated that these relationships are effective and efficient with no problems or issues cited by either fire or police officials. In many cases, police agencies are even responding to fire or

EMS calls and assisting with traffic and other needs, underscoring the quality of the relationships between fire and police.

Support Programs

Training

Providing quality and safe fire and emergency services requires a well-trained response force. Training and education of department personnel are critical functions for any agency. In the past, officers in the fire service were raised with a “Management by Objectives” foundation. This type of system was based upon quality, quantity, and costs as the elements. Officers used to plan, measure, control, time, and execute training outcomes.

Today’s fire service consists of creating, promoting, and delivering training to members; but many training programs fall short and members become less interested. Training officers should capitalize on a training program that will effectively overcome personal and organizational blocks to achieve results. Without a quality, comprehensive training program, emergency outcomes are compromised and department personnel are at risk.

Because the fire service is constantly changing, training cannot be limited to new recruits. Seasoned firefighters can benefit from training by learning new methods and procedures. In addition to training firefighters in the skills and knowledge needed in today’s fire departments, training officers and instructors need to establish educational opportunities for more advanced procedures and new technical subjects. The following figure summarizes the training components of each participating agency.

Figure 42: Training Components Comparison

Department Name	Benson Fire Department	Clontarf Department	Danvers Fire Department	DeGraff Fire Department
Initial Training of Personnel Conducted By	State or community college programs	State or community college programs	State or community college programs	State or community college programs
Firefighter Training Required Prior to Scene Response	Mandatory Firefighter I course, Can respond in support roles until completion of FFI	No formal training required- duties limited on scene, Mandatory Firefighter I and II course	Serve in support roles until completion of FFI	Mandatory Firefighter I course
Firefighter Training Required to Leave Probation/Trainee Status	Attendance and Participation	Mandatory Firefighter I and II course	No formal training required	No formal training required

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Department Name	Benson Fire Department	Clontarf Department	Danvers Fire Department	DeGraff Fire Department
Established Minimum Training Hours Annually	Yes	No	Attend half of meetings and trainings	No
Consistent Officer Training Provided	No	No	No	No
Consistent Driver/Operator Training Provided	No	No	No	No
Individual Responsible for Training Program	Training Officers and two Assistant Chiefs	Training Officer	None, shared duties	Training Officer
Number of Certified Fire Instructors in Agency	5	0	0	0
Are All Company Officers Trained in Instructional Technique	No	No	No	No
Annual Training Plan Prepared and Followed	No	No	No	No
Does the Training Program Have Software and Data Support	Off-the-shelf database software used	No	Off-the-shelf database software used	No
Does the Training Program Have an Identified Program Budget	Yes, but typically not sufficient for all desired program activities	No	No	Yes, but typically not sufficient for all desired program activities
Training Resources Available	Formal classroom(s), Appropriate AV equipment, Training library, Open area for drills (owned or with agreement), Drill tower-rented/shared	None	Training library, Open area for drills (owned or with agreement)	None
Standard Training Curriculum Manuals Used	IFSTA	Various	IFSTA	IFSTA
Lesson Plans Utilized	Lesson plans inconsistently or rarely used	Lesson plans inconsistently or rarely used	Lesson plans inconsistently or rarely used	Lesson plans inconsistently or rarely used
Night Drills Conducted	Quarterly	Quarterly	Quarterly	Quarterly
Multi-Company Drills Conducted	Rarely	Annually	Quarterly	Rarely
Regional Disaster Drills Conducted	Annually, by regional association	Rarely	Inconsistently	Rarely

Benson, Clontarf, Danvers and DeGraff, Minnesota
Feasibility Study for Shared or Cooperative Fire and Emergency Services

Department Name	Benson Fire Department	Clontarf Department	Danvers Fire Department	DeGraff Fire Department
Periodic Physical Performance Evaluation to Ensure Personnel Maintain Physical Capacity to Perform Duties	No formal program, observed through annual trainings	No effort to track physical ability	No effort to track physical ability	No effort to track physical ability
Is There a Periodic Skills Competency Test to Ensure Personnel Maintain Competency in Job-Required Skills	No formal program, observed through annual trainings	No effort to track required skills competency	No effort to track required skills competency	No effort to track required skills competency
Post-Incident Analysis	Conducted for all major incidents	Rarely conducted	Rarely conducted	Rarely conducted
Safety Officer for Drills	Safety officer assigned on all manipulative drill sessions	Instructor also fills safety role	Safety officer rarely used for drills	Instructor also fills safety role
Training Records	Individual attendance records computerized, searchable	Individual attendance records in hard copy only	Individual attendance records in hard copy only	Individual attendance records in hard copy only
Recertification Requirements	Recorded and monitored by agency training officer	Recorded and monitored by company officer	Left to individual	Left to individual

Recommendations:

- Each department should ensure that new members receive formal basic safety training prior to being allowed to respond to emergency incident scenes, regardless of their limited role.
- Danvers FD and DeGraff FD should establish minimum training requirements for new personnel to leave probationary status.
- Clontarf FD and DeGraff FD should establish minimum annual training requirements for all members.
- Each department should provide specific training for all officers and driver/operators.
- Each department should develop an annual training plan that allows members to plan and attend those sessions most pertinent.
- Clontarf FD and DeGraff FD should implement an electronic training records management system to increase efficiency in recordkeeping and training documentation.
- Each department should develop and follow formal lesson plans for all training sessions, particularly those that are manipulative in nature.
- Each department should increase the amount of multi-company drills conducted with surrounding agencies to enhance the cooperative and coordinated efforts already in place.
- Each department should implement a periodic physical performance evaluation to ensure personnel are physically capable of performing critical tasks.
- Each department should implement a program to periodically evaluate member skill competency to ensure that personnel are continually able to perform critical tasks
- Clontarf FD, Danvers FD, and DeGraff FD should provide for post-incident analysis, particularly given the low call volume of the three agencies.
- Danvers FD and DeGraff FD should implement a system whereby an officer is charged with maintaining and monitoring recertification requirements of members.

Life Safety Services

Aggressive risk management programs, through active fire prevention efforts, are a fire department's best opportunity to minimize the losses and human trauma associated with fire. A fire department should actively promote fire resistive construction, built-in early warning and fire suppression systems, and an educated public trained to minimize their risk to fire.

The fire prevention effort in each of these departments is not a formal departmental division and consists primarily of the fire chief and a few other personnel who assist in fire inspections, public education and other prevention efforts. This section of the report summarizes each department's efforts in this area.

The State of Minnesota Fire Code references the 2007 Edition of the International Fire Code (IFC). This model code, with some state amendments, was adopted under authority of the Minnesota State Legislature.

The importance of effective code enforcement cannot be overemphasized. The International Fire Code, while containing many regulations for new construction, is primarily a maintenance code. This means that the code is intended to set standards for maintaining a building’s fire and life safety features, such as exits, detection and suppression systems, compartmentation, and smoke removal systems. It also ensures that the building is kept free from hazards and conditions that might lead to the ignition of a fire or increase fire spread.

The nationally *recommended* frequency of commercial fire safety inspections varies by the type of business. Generally they are classified by degree of hazard. The table below describes the various hazard classes and the National Fire Protection Association’s optimum recommended frequency for fire safety inspections.

Figure 43: NFPA Inspection Frequency

Hazard Classification	Example Facilities	Recommended Inspection Frequency
Low	Apartment common areas, small stores and offices, medical offices, storage of other than flammable or hazardous materials.	Annual
Moderate	Gas stations, large (>12,000 square feet) stores and offices, restaurants, schools, hospitals, manufacturing (moderate hazardous materials use), industrial (moderate hazardous materials use), auto repair shops, storage of large quantities of combustible or flammable material.	Semi-annual
High	Nursing homes, large quantity users of hazardous materials, industrial facilities with high process hazards, bulk flammable liquid storage facilities, an facility classified as an “extremely hazardous substance” facility by federal regulations	Quarterly

While the above charted inspection frequency may be very difficult for any department to maintain, it does serve to point out the accepted national practice of classifying occupancies by hazard (risk) and adjusting inspection frequency accordingly. This practice is also demonstrated in national model fire codes, where frequency of inspection is often dictated by risk.

Another area of life safety programming, fire safety education is the greatest opportunity to influence human behavior that often results in hostile fire. It is an area that should be emphasized by an active fire prevention program. The most receptive audience to the fire safety message is children.

There are also very good programs designed to address the growing emergency medical incident rate. These programs, such as NFPA’s Risk Watch, teach children how to avoid common injuries due to accidents. Many departments adopt such programs as part of the total prevention program for their communities.

Finally, the investigation of fires, explosions, and related emergencies when they do occur is an integral part of providing life safety services to a community. The “fire problem” in a community is addressed by a “cycle” of resources provided by the authority having jurisdiction. These resources include **public education** so the citizen is aware of hazards, how to prevent them, and what to do should they occur; **engineering/code enforcement** so fire and life safety is an inherent part of the community infrastructure and, where there is a violation, compliance is achieved; **fire suppression** so that, when there is a failure in the education or engineering/code enforcement part of the cycle, the emergency can be resolved; and **fire investigation** where the incident is documented, the cause determined accidental or intentional, and steps taken so it will not happen again. The results of fire investigations suggest public education needs and results, the need for code modifications and changes, fire department training, resources and deployment, and identification of the community’s “fire problem.”

The following table summarizes the information relative to these agencies’ fire prevention and life safety programs.

Figure 44: Life Safety and Prevention Components Comparison

Department Name	Benson Fire Department	Clontarf Fire Department	Danvers Fire Department	DeGraff Fire Department
Applicable Fire Code	Locally adopted for local enforcement Code is state-wide minimum	Code is state-wide minimum	Code is state-wide minimum	Code is state-wide minimum
Local Sprinkler Requirements Exceeding Model Code	None	None	None	None
Agency Involvement in New Commercial Construction	Site review conducted Partial plan review conducted locally	None	None	None

Benson, Clontarf, Danvers and DeGraff, Minnesota
Feasibility Study for Shared or Cooperative Fire and Emergency Services

Department Name	Benson Fire Department	Clontarf Fire Department	Danvers Fire Department	DeGraff Fire Department
Key-Vault Entry Box Program	Yes- voluntary only	No program in place	No program in place	No program in place
Inspection Frequency for High-Risk Occupancies	No fire inspection program in place	No fire inspection program in place	No fire inspection program in place	No fire inspection program in place
Inspection Frequency for Moderate-Risk Occupancies	None	None	None	None
Inspection Frequency for Low-Risk Occupancies	None	None	None	None
Number of Initial Inspections Conducted Prior Year	None	None	None	None
Formal Training for Inspectors	None	None	None	None
Public Education Officer/Program Manager Assigned	Yes, ancillary duty assignment	No formal assignment	No formal assignment	No formal assignment
Topics Included in Public Education Programs	Residential exit plans/drills, Smoke alarm use, General fire safety, Fire extinguisher use	Primarily public relations and goodwill effort	Not consistently	Not consistently
Publications Stocked and Distributed	Yes	Not consistently	No	No
Formal Public Education Training Provided to All Personnel	None	None	None	None
Number of Formal Public Education Contact Events Prior Year	6	1	0	0
Level of Fire Investigation Provided by Agency Itself	Fire origin and cause determination	Initial scene control and reporting	Initial scene control and reporting	Initial scene control and reporting
Additional Fire Investigation Resources Available	State Fire Marshal's Office fire investigators	State Fire Marshal's Office fire investigators	State Fire Marshal's Office fire investigators	State Fire Marshal's Office fire investigators
Individual Responsible for Fire Investigations	Any command officer	Chief	None	None
Formal Training for All Personnel	Scene control and evidence quarantine	None	None	None
Formal Training for Specified Fire Investigators	None	None	None	None
Investigation Program Guided by NFPA 921	No	No	No	No
Juvenile Firesetter Program	Referred to state or agency	No formal program	Referred to state or agency	Referred to state or agency

Opportunities for Cooperative Efforts

The previous section of this document provides an overview and baseline assessment of the emergency services delivery system within Benson, Clontarf, Danvers, and DeGraff and each department's primary response areas outside their respective municipal boundaries. This section uses that assessment of baseline conditions to develop scenarios for future service delivery utilizing the concept of shared or cooperative services.

General Partnering Strategies

Four basic strategies are generally available when considering consolidation of services, beginning with a do-nothing approach and ending with complete unification of the organizations into what is, essentially, a new emergency service provider. A description of the four methodologies is found below:

Autonomy

The departments can decide to continue as separate organizations by not taking advantage of any further partnering opportunities. Autonomy provides each governing board with the most organizational control because, under this strategy, the agencies continue to make decisions considering only unilateral issues. The strategy represents a perpetuation of the status quo, and it is useful as a means by which to measure the other strategies.

Functional Consolidation

Public entities usually have broad authority under law to enter intergovernmental agreements (IGAs) for the purpose of cost and service efficiency. Minnesota is no different in this regard. The laws of the State of Minnesota address the issue, allowing intergovernmental contracts for any lawfully authorized

Operational Consolidation

This strategy joins two or more entities, in their entirety, through the execution of an intergovernmental agreement (IGA). The resulting organization features a single organizational structure and chain of command. Depending on the form of the agreement(s) establishing the organization, members may remain with the original agency, transfer to one of the other agencies, or transfer to an entirely new

Legal Unification

Under certain circumstances in law, fire departments can join into a single entity. This formal approach unites not only the programs but also the organizations themselves. State laws addressing political subdivisions usually detail a process for legal unification.

Typically, state laws draw a distinction between words like *annexation*, *merger*, and *consolidation* when speaking of legal unification. Organizationally, however, the outcome of any such legal process results in one unified organization. The major differences between the legal strategies relate to governance and taxation issues. In many states, some process of *inclusion* exists that essentially involves the annexation of one entity to another, preserving the governing board and taxing authority of the surviving agency. A legal merger, on the other hand, usually entails the complete dissolution of two or more agencies with the concurrent formation of a single new entity (and board) in place of the former.

In identifying potential cooperative opportunities, the project team considered the key issues now challenging each agency. Some issues represent roadblocks to integration, while others provide a unique chance for improvement. As an element of the review, affected staff and other officials provided local and internal perspective on organizational culture, community expectation, and other significant matters.

The following paragraphs provide a summary of all potential shared services strategies available within the study region. Although every attempt has been made to identify all the potential areas of potential, intimate knowledge of the current system may allow for other areas to be explored outside the parameters of this report. It is important to point out that some study agencies are already working to implement select concepts. Regardless of the existing level of implementation, ESCI provides detailed information on all strategies to provide the reader with a complete picture of full cooperative potential.

Consolidation of Benson, Clontarf, Danvers, and DeGraff Fire Departments

Level of Cooperation

- Operational

Timeline for Completion

- Long Term

Section

- Administration and Operations

Affected Stakeholders

- All Agencies

Objective

- Consolidate fire departments into a single operational unit, either through the establishment of a new special fire district or under the provisions of an extensive intergovernmental agreement or joint powers agreement.
- Provide increased fire and emergency service efficiency in the areas served by the Benson, Clontarf, Danvers, and DeGraff fire departments.

Summary

The fire departments within the study area already benefit from some collaborative programs such as mutual and automatic aid; therefore it is natural that continuing the long-term strategy of cooperation should eventually lead to the whole area forming a single fire agency. Since each department within the study area is volunteer in the way that they delivery services, the total budget for fire protection is extremely low - \$189,593 (not including funding for DeGraff, which was not provided for this project). The greatest savings from consolidations and/or mergers are typically found in personnel costs and/or redundant fire stations and apparatus. This is not, however, the case for this study. Volunteers would presumably still receive incentive pay for incident response, training sessions and meetings and would likely see an overall increase in these incentives based on the highest current incentive paid (\$10.25 – BFD), and the consolidated system could potentially employ a full- or part-time Chief to oversee the entire operation. These changes could result in an increase in the overall cost of providing fire protection to the region through a consolidated system.

Discussion and Financial Analysis

The present system of providing emergency services by the different agencies throughout the region has limited continuity. This unification strategy expands on the current efforts and places operation of the departments under a single governance. In the existing situation, the governing body of each municipality prepares and adopts separate budgets, and policies. Previous sections of this report presented recommendations for each of the fire departments individually and, in some cases, in concert with one another. Deciding which recommendations to enact is the responsibility of the governing bodies of the departments. If the various departments' management and operational structures are merged, planning and executing change becomes more efficient and effective.

ESCI believes that efficiencies may be found with the consolidation of the administrative and operational functions. Combining all functions of the departments can be accomplished by creating a single fire department budget and apportioning cost in accordance with a predetermined formula. In ESCI's experience with other such partnerships, it has been noted that organizational pairings resulting in one operational structure seem to be more successful over the long term. ESCI recommends a complete consolidation of all fire department functions.

To fix the parameters of analysis, ESCI assumes that an operational consolidation of the departments will result in a single organization administered by one fire chief and governed by a single oversight authority; in this case, the City of Benson. The administrative and operational makeup of the organization includes the equivalent number of personnel as the combined departments. It should be understood that this is where ESCI chose to lay the foundation. The end result of any consolidation and how the management and oversight of such a single agency develops will be determined through a lengthy process of negotiation and compromise.

Cost is always a key factor when deciding to enact organizational partnerships. To that end, ESCI created a model budget for the fire departments designed to fairly represent the monetary policies of each agency equally, to neutralize the normal differences usually found in unilateral fiscal practices, and to account for any financial peculiarities (such as budgetary back loading).

In calculating a model budget for a unified organization, ESCI made several assumptions in regards to personnel:

- One Fire Chief would be required. This could be a full-time or part-time position.

- The number of Assistant Chiefs would be reduced to four, one at each station.
- The number of line officers would be increased to eight, two at each station.
- The total number of personnel within the system would remain the same.

ESCI was unable to generate a baseline model budget that breaks out personnel, operations, and materials due to the way that some of the study departments maintain their budgets. However, ESCI was able to make some generalizations about the total budget and generate a model consolidated budget estimate of \$220,203. This is without an adjustment for an increase in the incentive pay to the current BFD \$10.25 rate and associated training and meeting pay rates. When these adjustments are added, the total model budget is calculated to be approximately \$227,513.

Analysis of specific cost changes for any existing tax entity will be dependent upon the method that is selected to fund the new consolidated system. Once a determination is made as to what revenue source or combination of sources are to be used in funding the consolidated system, specific comparisons can be developed to demonstrate the individual cost impact to participating communities. As noted above, however, overall system cost is projected to increase, due primarily to the addition of a full-time fire chief.

Benchmarks

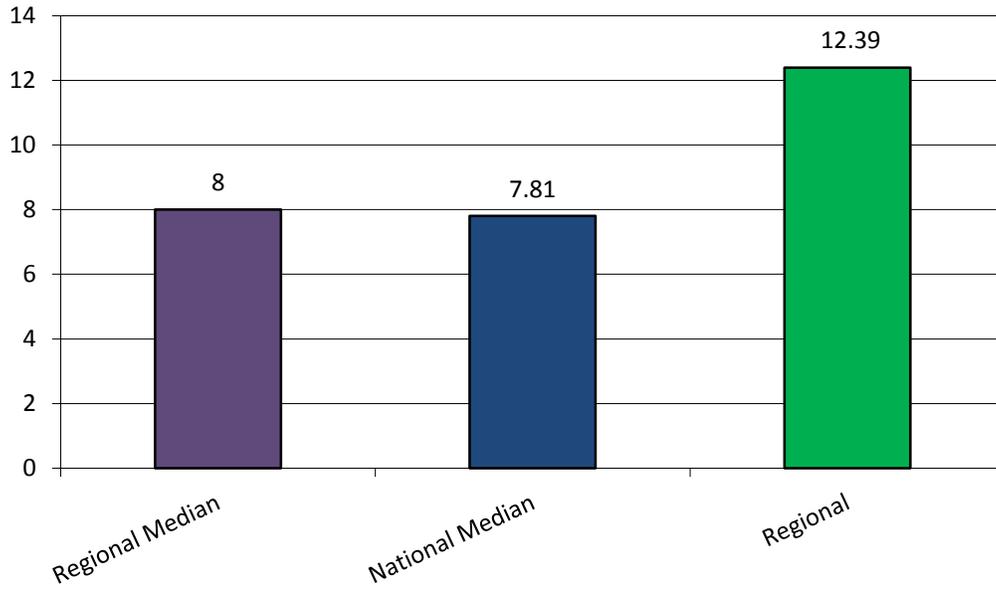
A study jointly conducted by NFPA and the Federal Emergency Management Agency (FEMA) examined the emergency workload, capital resources, and the numbers of firefighters (career and volunteer) in communities across the United States. In addition, a previous NFPA study provides other information about U.S. fire department staffing and resources.¹¹ ESCI uses data from the two related studies to develop a series of comparative benchmarks for fire protection organizations. It should be emphasized, however, that the benchmarks used in this section *do not* represent standards of service. The measurements are intended only as references to assist policymakers in comparing the organizations with others in a similar demographic or region. Some benchmarks use a regional point of reference (i.e., Midwest United States) while others compare the departments with a national sample.

The figure below shows that a consolidated department would have more volunteer firefighters per 1,000 residents than the median of other Midwestern fire departments serving a similar population

¹¹ FEMA/NFPA, "A Needs Assessment of the U.S. Fire Service", FA-240/December. NFPA, "U.S. Fire Department Profile through 2001", December 2002. The study divides the U.S. into Northeast, North Central, South, and Western regions. Fire departments within each of the four regions are categorized by service area population.

base. This disparity is likely due to the small size of the individual communities and the high number of volunteers in each department as compared to municipal population. ESCI believes that the need for volunteers will continue long into the foreseeable future.

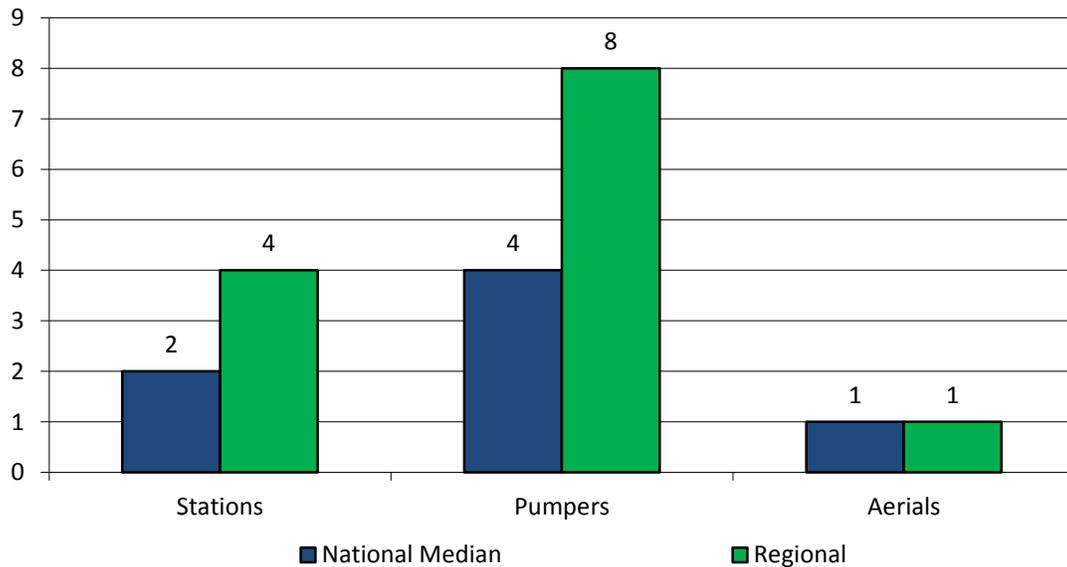
Figure 45: Consolidated Comparison of Firefighters per 1,000 Population



Regardless of the raw number of personnel available to a fire department, what matters most is the actual number of emergency responders the agency is able to produce at an emergency scene. This almost always relates to the actual number of emergency responders available for immediate deployment.

The following figure provides an overview of a consolidated comparison of fire suppression resources and compares these with the median rate of resource allocation in other communities of similar size within the Midwest United States.

Figure 46: Consolidated Comparison of Resources per 1,000 Population

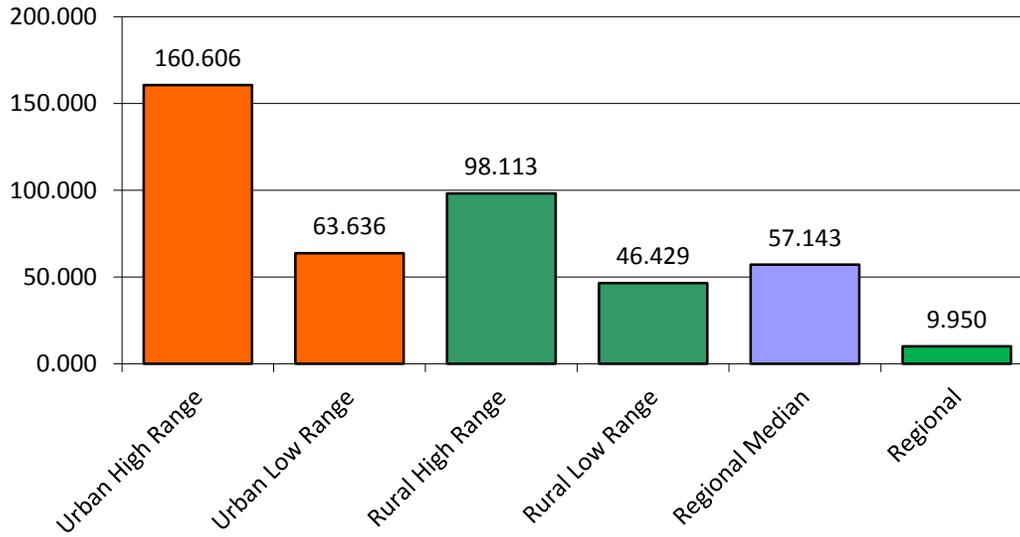


Figures are derived from national median resource rates per thousand population

The chart above does not illustrate the extent that geography plays in determining the resources that are necessary to protect the service area with a consolidated fire department. The only factor for comparison in this graphic is population. The consolidated department would maintain slightly more stations, a significantly higher number of pumpers, and an equal number of aerial apparatus as the median of other Midwestern fire departments serving similar populations.

The following figure compares the response workload of a consolidated department to the median workload of other similar Midwest region fire departments and shows the national range for incidents in communities with a population similar to that served by the combined departments.

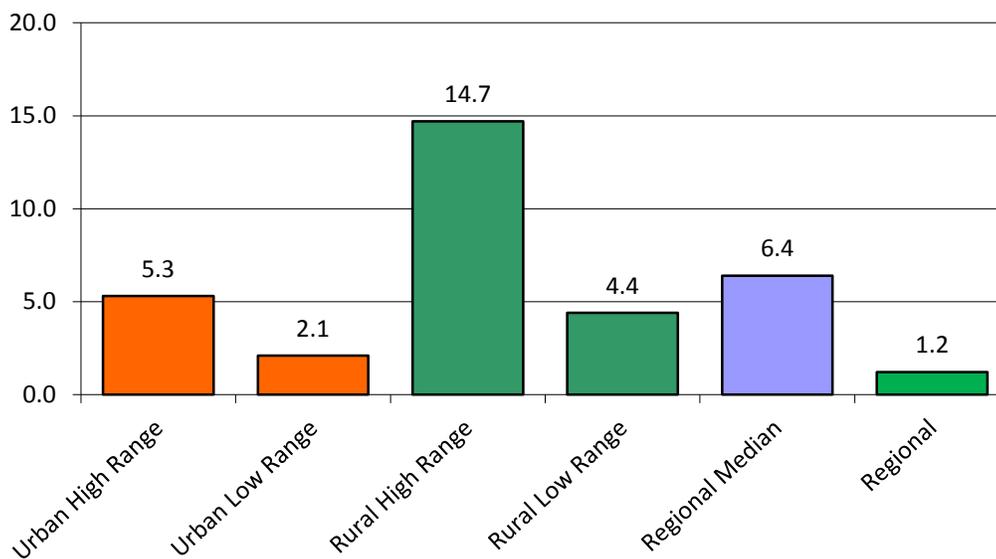
Figure 47: Comparison of Incidents per 1,000 Population



As illustrated, the emergency workload of the consolidated fire department is significantly lower than the urban and rural ranges of other similar-sized communities as well as significantly lower than the regional median of incidents per 1,000 population.

As illustrated in the figure below, the consolidated fire department could expect a fire incidence rate that is much lower than the median of other Midwestern fire departments serving similar populations.

Figure 48: Comparison of Fires per 1,000 Population



Firefighter Relief Associations

One issue that could be a major factor in the decision to enter into a shared services or other cooperative services agreement between the fire departments concerns each agency’s Fire Relief Association. A 2011 report issued by the Minnesota Office of the State Auditor found that 717 relief associations were in existence in Minnesota during 2009.¹² Those 717 relief associations held nearly \$403 million in net assets, which represents accrued benefits for 20,812 firefighters statewide. During 2009, relief association received \$15.4 million in fire state aid and received \$7.8 million in municipal contributions. During that same year, \$30.8 million in service pensions was paid out by 444 different relief associations.

Benson and Danvers each have individual fire relief associations that benefit their volunteer members. Danvers participates in a lump sum plan; at the appropriate time, eligible members receive a one-time payment from the association based on set criteria. Benson participates in a hybrid plan in which members can choose to take monthly allotments from the plan or a lump sum payment upon retirement. Neither Clontarf nor DeGraff were identified in the report as having any type of fire relief association. The following figure illustrates the differences in each relief association’s net assets, accrued liabilities and funding ratios.

Figure 49: Comparison of Assets, Liabilities, and Funding

	Net Assets	Accrued Liabilities	Funding Ratio
Benson FRA	\$352,716	\$492,123	72%
Clontarf FRA	N/A	N/A	N/A
Danvers FRA	\$68,059	\$61,373	111%
DeGraff FRA	N/A	N/A	N/A

The following figure compares each association’s revenues during 2009.

Figure 50: Comparison of Fund Revenues

	State Aid	Supplemental Benefit Reimb.	Municipal Contributions	Investment Earnings	Other	Total 2009 Revenue
Benson FRA	\$19,702	\$2,605	\$0	\$16,051	\$203	\$16,254
Clontarf FRA	N/A	N/A	N/A	N/A	N/A	N/A
Danvers FRA	\$4,163	\$0	\$0	\$2,178	\$0	\$6,341
DeGraff FRA	N/A	N/A	N/A	N/A	N/A	N/A

¹² Financial and Investment Report of Volunteer Fire Relief Associations. March 2011.

Expenditures from each fund were also varied as illustrated in the following table.

Figure 51: Comparison of Fund Expenditures

	Administration	Service Pensions	Other
Benson FRA	\$4,968	\$35,440	\$0
Clontarf FRA	N/A	N/A	N/A
Danvers FRA	\$350	\$18,192	\$0
DeGraff FRA	N/A	N/A	N/A

Aside from the fiscal differences between the plans, the qualifying criteria between the agencies also vary. The following table summarizes the qualifying criteria for each relief association.

Figure 52: Relief Association Qualifying Criteria Summary

Relief Association	Retirement Age	Years of Active Service	Years of Membership
Benson FRA	50	10	10
Clontarf FRA	N/A	N/A	N/A
Danvers FRA	50	10	10
DeGraff FRA	N/A	N/A	N/A

Consolidation of the relief associations would require policy makers to determine the most appropriate qualifying criteria from the variables. Benefits offered under each plan also differ, as illustrated in the following figure.

Figure 53: Comparison of Fund Benefits¹³

	Annual Benefit	Long-Term Disability	Short-Term Disability	Survivor Benefit
Benson FRA	\$1,000	\$1,000	None	\$1,000
Clontarf FRA	N/A	N/A	N/A	N/A
Danvers FRA	\$650	\$650	None	\$650
DeGraff FRA	N/A	N/A	N/A	N/A

In determining what impact a shared or cooperative serve model would have on the relief associations, ESCI evaluated the current liabilities of each fund and applied the highest level of benefit to assess future fiscal implications. Based on the auditor’s report, the two agencies that have fire relief associations currently have 55 active members and two deferred members. Adding the 27 current members of Clontarf and DeGraff, the total active membership would equal 82. At an assumed \$1,000

¹³ Long-Term Disability and Survivor Benefits are calculated on a per year of service basis.

per year of service payment, the total liability would currently calculate to approximately \$820,000 compared to a current asset value of the two current funds of \$420,775 for a net deficit of \$399,225, or a funding ratio of 51.3 percent. The median funding ratio of all Minnesota lump sum plans in 2009 was 98.0 percent.

If the decision is made to move forward with the consolidation of the four study agencies, a decision will need to be made at the elected official level as to how to handle the consolidation of the respective relief associations. The current \$1,000 difference between the lowest and highest benefit levels (\$1,000 for Benson and no benefits for Clontarf and DeGraff) creates a significant deficit as described above. Efforts to reduce the deficit could include reducing the annual benefit to a lower level. Regardless of the funding level implemented, a deficit will exist based on the lack of fire relief associations currently in place in Clontarf and DeGraff.

Policy Action

A number of policy options exist for integrating the fire and emergency services of the fire departments. Some of the following options might be deemed inappropriate in this situation by the local elected officials who are much more in touch with local political will and culture, but these options are worthy of discussing for future opportunities. The options include the following:

- Form a consolidated fire department through intergovernmental agreements only, and the establishment of a Joint Powers Agreement (JPA). This would leave all existing funding and governance mechanisms in place and require extensive negotiation of intergovernmental agreements for the formation, governance, and operation of a regional fire and EMS department. Equitable funding would be negotiated through the JPA. This policy option would only functionally merge the fire protection system of the cities, requiring local action and proper notification for reversal.
- Form a consolidated fire department through the creation of a special fire service district. This would transfer the authority and responsibility of fire protection from the four existing cities to a newly created board to oversee the district creating a new unit of government and a new taxing authority. Funding would, in all likelihood, come solely from ad valorem taxation and, although a commensurate reduction in the individual cities' tax rates may result, the total tax passed onto the citizens may be higher than current rates.

Critical Issues

Organizational consolidations and mergers fail for many reasons. Sometimes law prohibits the idea at the outset. Other times the proposal may be doomed by the unfavorable outcome of a public election, or the reality of finance. These issues aside however, four major pitfalls can cause even the most

feasible consolidation to go wrong. specifically, the four are command, communication, control, and culture.

- **Command:** Undertaking any partnership as complex as a consolidation absolutely requires effective leadership be demonstrated consistently at all levels. Policymakers and administrators must guide their respective agencies, yet (at the same time) they must cooperate with partner organizations. Differing leadership styles may cause repressed friction at best and open conflict at worst. Problems with sharing control and making decisions sends the wrong message to the members of the organization, which can lead to an unraveling of even the best proposal.
- **Communication:** Silence or limited information from leaders about potential or upcoming partnerships breeds fear, mistrust, and misinformation among affected persons. The leadership of collaborating organizations must agree to communicate actively with all affected groups. Everyone must be provided the same information at the same time. Most importantly, leaders must demonstrate two-way communication skills by carefully listening to (and acting on) the concerns of all constituents.
- **Control:** Frequently, the consolidation process is compared to a marriage. As the saying goes, “Marriage is when two people become as one; the trouble starts when they try to decide which one.”¹⁴ As in marriage, consolidation often fails because of organizational or personal ego issues. The tenets of leadership require that someone be in charge; but in the interest of greater good, some of those in leadership positions must agree to yield power. Some who are used to operating in a position of control may have trouble adjusting to new roles that require more collaboration. Personal sacrifice in the interest of community good may not always win out.
- **Culture:** Two schools of thought exist regarding organizational culture. The first camp views culture as implicit in social life, naturally emerging as individuals transform themselves into social groups (tribes, organizations, communities, and nations). The second camp offers that culture is comprised of distinct observable forms (language, use of symbols, customs, methods of problem solving, and design of work settings) that people create and use to confront the broader social environment. This second view is most widely used in the evaluation and management of organizational culture, but the first is no less important when considering bringing two discrete organizations into a closer relationship.
- The general characteristics of a fire department encourage the creation of a culture unique to that organization. The paramilitary structure, the reliance on teamwork, and the hazards of the work builds strong bonds between the members who tend to share group behaviors, assumptions, beliefs, and values. Bringing multiple groups together with cultures formed through different experiences always results in a change to both organizational cultures. If the partnership is successful, no one culture will overcome the other – instead, a new culture will evolve from the two. If the organizational cultures are incompatible – well, frankly, the partnership will often fail.
- Leaders must be aware of organizational culture and its role in the wellness of the agency’s heart and soul. Early recognition by leadership of the importance of culture to the success of a partnership can help to overcome differences and build on strengths.

¹⁴ Source unknown.

Guidance

- Consult with service partners. The city councils of each city should begin a dialog with each other and with service partners and neighboring fire agencies regarding the proposed consolidation. Establish which agencies are likely to actively participate in reaching the goal.
- Consult with legal counsel. The individual city councils should consult with legal counsel regarding the statutory options and requirements for consolidation.
- Joint Adoption of a Regional Fire Protection Vision. Each city council should formally adopt a Regional Fire Protection Vision to set the course for any future cooperative service or consolidation.
- Organize the Steering Committee. Representatives from each city council should form a joint planning committee to formulate and report on all elements of a consolidation plan. Establish leadership roles of the chair and other committee members. Create meeting guidelines and elect leadership. Set meeting dates and times. Review and adopt the work plan. Meetings are ongoing, as is the review and revision of the work plan. The Committee performs as a clearinghouse for all information concerning the effort so that service partners speak with a unified voice.
- Name the consolidated department. As an element of the work plan, the Steering Committee should establish a suitable name for the consolidated fire department. The name should reflect the identity of the whole protected area.

Functional Cooperative Efforts

Aside from an operational consolidation of the four study agencies, there are other functional components of each department that could be operated in a cooperative manner. As was shown during the evaluation phase of this report, apart from automatic and mutual aid, each department operates independently. Little in the way of standard operating guidelines, training, recordkeeping, unit staffing, etc. is coordinated amongst the departments. This produces inefficiencies throughout the system. In the absence of consolidation of the study agencies, ESCI makes the following recommendations in regards to functional cooperative efforts that should improve efficiency and the overall level of service to the community as well as an increased level of safety for department personnel.

A – Develop Standard Operating Guidelines

Level of Cooperation

- Functional

Timeline for Completion

- Short Term

Section

- Emergency Operations

Affected Stakeholders

- All Agencies

Objective

- Provide guidelines for operation during emergencies, emergent, and non-emergent incidents.

Summary

Standard operating guidelines are used at the operations level of the fire department. They are analogous to a playbook, providing direction yet allowing for individualized company officer adjustments to situations. Currently each fire agency in this study is responsible for developing a unique set of standard operating guidelines for their organization.

Discussion

Standard operating guidelines will improve on-scene safety, efficiency, and effectiveness of personnel. With personnel from all agencies trained in using the same procedures, they can approach an incident with an understanding that everyone will proceed in a similar fashion. This will greatly reduce or eliminate the confusion that can lead to delays in the delivery of service.

Guidance

- Keep the guidelines in electronic format for ease of updating.
- Give initial and recurring education to personnel in their use.
- Provide for continual use of the standard operating guidelines during routine incidents and at each training session.
- Provide for a periodic appraisal of the guidelines to maintain currency with changes in tactics, strategy, and equipment.
- Consciously keep guidelines non-specific to allow for adaptation to particular incidents by the supervisor.

Fiscal Considerations

- The elimination of duplicated staff effort in the creation and updating of standard operating guidelines will reduce soft costs.
- Instructional time optimized during multi-agency training sessions by excluding time devoted to adapting to differing procedures.

B – Create a Unified Occupational Medicine Program

Level of Cooperation

- Functional

Timeline for Completion

- Middle Term

Section

- Administration

Affected Stakeholders

- All Agencies

Objective

- Provide a fire-service related occupational and health program.

Summary

A single method and source for providing occupational and health services may provide savings through economies of scale. NFPA 1500, Standard on Fire Department Occupational Safety and Health Programs, provides the minimum requirements for a fire-service related occupational safety and health program. Along with NFPA 1500, NFPA 1582, the Standard on Comprehensive Occupational Medicine Programs for Fire Departments, and related documents, provide guidance for the creation of occupational health programs and for establishing medical requirements for current and future firefighters.

Discussion

There is a need for all fire departments to have access to a group of professionals with expertise in the occupational medicine field. Occupational medicine is dedicated to promoting and protecting the health of workers through preventive services, clinical care, research, and educational programs. One aspect of a program is keeping up to date with health and safety regulations, standards, and current practices. Occupational medicine specialists review current practices to see if the agencies meet new regulations, make modifications if needed, and assist the departments in adopting any changes.

The importance of employee health and welfare, and the potential liability associated with the lack of such programs necessitates that fire departments establish close professional relationships with

occupational medicine specialists to assure that emergency workers are protected by the most up-to-date occupational health and safety programs possible.

Occupational safety and health programs (sometimes referred to as Industrial Medicine) vary in depth, form, and delivery. A fire department may employ a physician full time, contract with a provider organization, or conduct part of a program in-house while contracting for the remaining services. Any number of providers throughout the region could provide these services to the departments.

The legal requirements for a fire department occupational safety and health program have been established. How a fire department administers and supports the program determines the success and the resultant benefit. An additional advantage of using a local occupational safety and health provider is the ability to quickly evaluate and treat non-threatening injuries suffered by employees.

Guidance

- Determine required and desired specifications for an occupational safety and health program.
- Create a single personnel policy for occupational safety and health.
- Develop an RFP for soliciting vendors to supply occupational safety and health services.
- Conduct baseline testing for firefighters without previous audio and lung function baseline records.

Fiscal Considerations

- Occupational medicine programs are often menu driven. Items selected for inclusion in the program determine the final cost. Additional financial factors involve whether the fire departments elect to exceed mandated requirements, perform some of the occupational medicine functions internally, or consolidate the occupational medicine program with interrelated programs. Interrelated programs that share functions include wellness, infectious disease, FIT testing, EMS, and hazardous materials.

C – Create a Unified Wellness and Fitness Program

Level of Cooperation

- Functional

Timeline for Completion

- Middle Term

Section

- Administration

Affected Stakeholders

- All Agencies

Objective

- Provide a wellness and fitness program that promotes the improved health and well-being of personnel at all ranks.
- Increase fitness levels and decrease injuries.
- Reduce frequency and number of sick/injury incidents.
- Reduce the number of days used for sick/injury leave.

Summary

Wellness and fitness programs have proven beneficial to employers and employees alike. Onsite visits by licensed wellness experts are part of an all-inclusive program. Services offered under a comprehensive wellness program may include:

- Wellness screening
- Wellness and fitness educational materials
- Support groups
- Presentations
- Fitness evaluations
- Newsletters
- Nutritional information
- Health risk assessment
- Fitness training

Discussion

The benefits of wellness and fitness programs have, in some instances, been quantified anecdotally without specific documentation. Documented individual incidents and case studies over a longer period of time have now yielded conclusive data as to their benefits. Two case studies are used here to illustrate this point.

First, during an annual visit for his medical and fitness evaluation, a battalion chief with the Indianapolis, Indiana fire department was found to have an abnormal heart rhythm. He had considered himself to be in excellent condition, competing in track and field events since 1996. He was immediately removed from duty and sent to a cardiologist for a heart catheterization. He was diagnosed with severe blockages in four coronary arteries. Within two days of his medical evaluation, he underwent quadruple bypass surgery. His cardiologist told him he wouldn't have lived another two weeks without intervention. Remarkably, the battalion chief returned to work and was back exercising within six weeks of surgery.

The second example involves a mid-sized fire department employing both career and volunteer personnel. The department was in need of a fitness/wellness program and subsequently contracted with Oregon Health Sciences University to provide an evidence-based program custom tailored for its diverse group of firefighters. The primary goals of the program were to "increase fitness levels and decrease injuries." Results of the study spanning seven years conducted by OHSU Health Management Services included these findings:

- Greater than 30 percent increase in the number of participants.
- A decrease in average total cholesterol.
- A decrease in average LDL cholesterol from 130 to 120.
- Participants with BP in the high normal range or above dropped from 18.3 percent to 8.5 percent.
- Participants with moderate or high coronary risk dropped from 61.7 percent to 35.4 percent.
- Participants with an overall wellness score of good or excellent increased from 41.7 percent to 58.5 percent.
- Annual number of days lost (workers compensation days) dropped from a high of nearly 300 days to below 50 days. During the study period, the fire department increased the number of career personnel two-fold.

Guidance

- Determine the components of a wellness and fitness program that would best benefit all departments.
- Involve a broad cross section of employees in the development process.
- Investigate multiple programs and providers for best fit.
- Coordinate activities with established fitness and safety committees.
- Train in-house peer fitness trainer/coaches.
- Incorporate wellness and fitness services as an element of recruit academies.
- Include volunteers, staff, and support personnel in wellness and fitness services.
- Provide initial and recurring wellness education to personnel.
- Provide a newsletter (paper or virtual) for all personnel.
- Incorporate wellness in training sessions.
- Provide for a periodic appraisal of the wellness and fitness program.

Fiscal Considerations

- The cost per employee of a wellness and fitness program can vary widely. An annual per employee cost may range from as low as \$25 to as high as \$100 depending on many factors, such as:
 - Frequency of employee contact
 - Range of services desired
 - Equipment need
 - Inclusion of ancillary offerings (newsletter, peer fitness coach training)
- The soft costs associated with on-duty time required for wellness and fitness instruction needs to be addressed before carrying out a plan.
- Potential cost savings may result from:
 - Reduced work related injury leave days
 - Reduced sick leave usage
 - Reduction in medical benefits used
 - Improvement in employee fitness and morale

D – Develop and Adopt Common Training Standards

Level of Cooperation

- Functional

Timeline for Completion

- Short Term

Section

- Training

Affected Stakeholders

- All Agencies

Objective

- Adopt uniform training guidelines.
- Adopt uniform certification standards.

Summary

Training standards provide the benchmark for training. They define and specify the quantity and quality of training for achieving levels of competency and certification. Certain standards are mandated by governing or regulating agencies such as OSHA (Occupational Safety and Health Administration). Others are considered industry standards developed by organizations like the National Fire Protection Association (NFPA). Occasionally, locally developed standards are adopted to address circumstances unique to that area. Private vendor standards and certifications are often applicable to specialized training.

Training records should consist of:

- Daily training records
- Company training records
- Individual training records
- An inventory of equipment assigned to the training department
- A complete reference library

Discussion

By collectively adopting a set of training standards (IFSTA, for example), fire departments are foundationally prepared to provide uniformity throughout the training delivery system and would improve inter-agency compatibility. It would further simplify development of a regional training manual, annual training plan, and data entry and retrieval of computerized training records. Adoption will provide for uniformly trained and certified responders and will assure increased emergency scene compatibility, efficiency, effectiveness, personnel confidence, and safety.

Guidance

- Establish a work group including at least one training representative from each department.
 - Identify mandated training standards affecting all departments.
 - Assess all standards used by the departments, including rationale for their use.
 - Consider any unique local issues.
 - Develop a process for the adoption of training standards.
 - Adopt training standards to which all departments will adhere.
 - Provide for continuous review and updating of training standards.
- Educate personnel on the purpose and application of the standards.
- Provide for continual use of training standards throughout the training delivery system.
- Maintain standards in a readily available format.
- Provide for frequent evaluation and updating of training standards.
- Address and resolve personnel certification issues (address through reciprocity) created by new standards and certifications.

Fiscal Considerations

- A reduction in duplicated staff effort (reduces soft costs) and training staff to develop similar but separate programs based on the same or differing standards.
- A potential for reduced specialized training costs through a larger pool of personnel.
- Responders trained to the same standard provide a more cohesive workforce, increasing efficiencies.

E – Create a Regional Training Manual

Level of Cooperation

- Functional

Timeline for Completion

- Short Term

Section

- Training

Affected Stakeholders

- All Agencies

Objective

- Provide consistent, standardized training procedures.

Summary

Fire department instructors use manuals based on national, state, and local standards as a resource to develop lesson plans for classroom and field training. Training sessions provide students with the knowledge, skills, and abilities to perform in emergency and non-emergency situations.

Discussion

Each fire department unilaterally selects training materials from a variety of options. Not surprisingly, training and performance varies across the region. The creation and use of a standard training manual will provide for more consistent training, better on-scene coordination, and improved firefighter safety.

As the firefighters of each department are trained in the same procedures, each can respond to an emergency with the confidence that all responders are prepared to work effectively as a team. This will improve the willingness of firefighters from different departments to work together as a coordinated emergency workforce. Standardized training procedures improve on-scene safety, efficiency, and effectiveness.

Care should be exercised to prevent the development process from taking too long. To expedite progress, ESCI recommends adopting material from existing model training manuals, hose evolutions, and standard operating guidelines.

Model fire department training material is readily available through non-profit organizations and private companies. Sources for commercially available training material include the Fire Department Training Network (FDTN), Thomson DelMar, and Oklahoma State University. The International Fire Service Training Association (through Oklahoma State University) and Fire Protection Publications (FPP) have been longstanding producers of training manuals, course curricula, and audiovisual aids for fire departments.

NFPA recommended practices and standards can also assist with the development of the training manual. Relevant standards include:

- *NFPA 1401, Recommended Practice for Fire Service Training Reports and Records*
- *NFPA 1403, Standard on Live Fire Training Evolutions*
- *NFPA 1404, Standard for Fire Service Respiratory Protection Training*
- *NFPA 1410, Standard on Training for Initial Emergency Scene Operations*
- *NFPA 1451, Standard for a Fire Service Vehicle Operations Training Program*

The need for training of personnel with specialized duties should be included in the regional training manual. Assistance is available through the BFST Fire Standards Section.

Guidance

- Establish and maintain a user group that meets regularly.
- Include at least one training representative from each department.
- Develop and adopt a single training manual.
- Place the training manual in electronic format for easier updating and to allow access by firefighters.
- Provide for coordinated training of all agencies.
- Provide for regularly scheduled multi-agency drills.
- Provide for a regular evaluation and review of the training manual for applicability to pertinent laws, industry standards, and regional standard operating guidelines.
- Seek out existing procedures for use in development of the training manual.

Fiscal Considerations

- The elimination of duplicated staff effort (reduces soft costs) in the selection, development, and updating of separate training manuals.
- Instructional time is likely impacted during multi-agency training sessions by reducing or eliminating the time devoted to adaptive or remedial training.

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- An emergency workforce trained under a cooperative system is more efficient and effective in reducing property damage and loss during emergency incidents.
- A workforce trained to operate under universal standards will experience fewer emergency scene injuries.

F – Develop an Annual Regional Training Plan

Level of Cooperation

- Functional

Timeline for Completion

- Short Term

Section

- Training

Affected Stakeholders

- All Agencies

Objectives

- Provide standardized and consistent training.
- Provide a well-trained emergency workforce.
- Provide long-term vision and direction for training delivery.

Summary

The 2007 version of NFPA 1500 states, "The fire department shall provide training and education for all department members commensurate with the duties and functions that they are expected to perform."¹⁵ Two fire departments in this study address annual planning for fire and EMS training. A formalized training plan provides the guidance for meeting training requirements. The plan and subsequent training is used to ensure that firefighters are competent, certified, and possess the ability to safely deal with emergencies. Training priorities are established by evaluating responder competencies to training mandates, requirements, desired training, and with the emergency services being delivered. Contemporary training delivery often revolves around performance or outcome-based training.

An annual training plan should reflect priorities by identifying the training that will occur. Training topics, general subject matter, required resources, responsible party, tentative schedule, and instructors are all covered in the plan. Rationale for why certain topics were chosen (or not chosen) is also included in the plan.

¹⁵ National Fire Protection Association Standard 1500 *Standard for Fire Department Occupational Safety and Health Programs, Training and Education*, 2007 Edition.

Discussion

To efficiently plan the direction of a training program, complex factors must be considered, including: training mandates, department type, personnel career development, unanticipated need, priorities, and finite training time. Successfully charting a course through such issues can be a daunting and overwhelming task for the lone training officer.

Currently, each fire department individually deals with the same or similar fire training responsibilities and issues — inefficiencies exist as a result. A single training plan is an opportunity to combine intellectual resources to exploit the strengths and assets of each department for mutual benefit.

“Efficient training systems are those that identify what they do well and take advantage of the opportunities provided by other systems to supplement their efforts. Inefficient systems are those that try to be all things to all people, and in doing so, squander resources.”¹⁶

Determining the level of training that will be supported is crucial. Develop the annual training plan accordingly and deliver the training that directly supports those levels. For example, training could be directed at supporting certifications of Firefighter I, Fire Officer I, and Apparatus and Pump Operator. A pool of instructors who are experts in that subject can be developed from those with the interest, qualifications, and expertise.

Developing and carrying through with a well-conceived and coordinated training plan can improve on-scene safety, efficiency, and effectiveness of personnel. With personnel from all agencies trained from the same plan, an emergency incident may be attacked with an expectation as to the level of training and skill set of the responders. The training plan will also assist in the planning and tracking of employee development and certifications.

Guidance

- Provide a coordinated training plan including:
 - All agencies.
 - Plan regular use of training facilities by all departments.
 - Schedule regular single agency manipulative single and multi-company drills.
 - Schedule regular multi-agency, multi-company manipulative drills.
- Establish and maintain a training committee that meets regularly. Include at least one training representative from each department:
 - Develop an annual training plan.

¹⁶ Department of Homeland Security, FEMA, U.S. Fire Administration, *The Future of Fire Service Training and Education Professional Status: Part Two – Training and Education*, page 1.

- Publish, distribute, and implement the plan.
- Provide an orientation for personnel of each department regarding the plan's purpose and contents.
- Publish monthly training schedules based on the plan.
- Place the annual plan and monthly schedules in electronic format for distribution and ease of updating.
- Provide for periodic reviews and adjustments to the plan.
- Direct all curricula towards risk management.
- Include all hazards in the training plan rather than solely fire-related incidents. The fire service's response and mitigation missions have expanded greatly over the years and now include all disasters, natural and manmade.

Fiscal Considerations

- An elimination or reduction in duplicated staff effort (reduced soft costs) in the creation and updating of multiple training plans.
- Instructional time is increased during multi-agency training sessions with personnel trained to selected certification levels.
- A reduction in costs through coordination of shared training resources and equipment.

G – Provide for Joint Incident Command and Operations Supervision

Level of Cooperation

- Functional

Timeline for Completion

- Short Term

Section

- EMS and Emergency Operations

Affected Stakeholders

- All agencies

Objective

- Provide for IC (Incident Command) supervision of emergency operations.
- Provide for supervision of on-duty personnel during routine operations.

Summary

Deputy Chiefs (DCs, also referred to as battalion chiefs, incident commanders or shift supervisors) routinely have authority and responsibility for all aspects of day-to-day operations and personnel management of the fire department. DCs assume command of emergency incidents and may also be assigned for the management of various fire department programs.

Discussion

Little is currently provided in the way of oversight, supervision, and leadership to the operations personnel of the fire department with the exception of day-time administrative personnel. Most fire departments maintain a span of control of five or six stations per supervisor. Occasionally, line supervisors may oversee as many as eight fire stations. The total number of units, personnel, and emergency responses usually determines the reasonableness of the span of control. The more stations, units, and personnel under direct supervision, usually reduces their ability to conduct activities outside of incident command, and may negatively impact response times to emergencies. A point is reached where proper supervision cannot be accomplished with large spans of control. In that case, some tasks will be overlooked or work will not be completed.

A supervisor usually responds as incident commander to emergencies requiring multiple fire department units, hazardous materials incidents, or emergencies involving special circumstances. The incident commander is responsible for all aspects of the response including the development of incident objectives and management of all incident operations. The three command-level positions directly under supervision of the incident commander are the safety officer, information officer, and liaison officer.

The role of the safety officer is to develop and recommend actions to assure the health and safety of emergency workers. The role of the information officer is to develop and release incident information to the media, incident personnel, and appropriate agencies and organizations. The role of the liaison officer is to serve as the point of contact for coordinating activities between the various agencies and groups that may be involved in an incident.

The general staff under the incident commander includes operations, planning, logistics, and finance. These responsibilities (as with those of the command staff) remain with the incident commander until such time that they may be assigned to another qualified individual.

Benchmarks

Assembling an effective response force on the scene of an emergency incident in a timely manner will often lead to a successful outcome. To assemble enough personnel to complete the tasks of extinguishing a moderate-risk structural fire may require fifteen fire suppression personnel. One of those tasks is command. A supervisor in the command role is the officer assigned to remain outside of the structure to coordinate the attack, evaluate results and redirect the attack, arrange for more resources, and monitor conditions that might jeopardize crew safety.

In lieu of complete unification between the fire departments, an agreement to share incident command staff across the region could result in efficiencies not possible individually.

Guidance

- Use standards of coverage and deployment documents to determine an appropriate level and number of incident commanders for the region.
- Create a formula for allocating the cost of a regional incident command program. Examples of factors for costing include: population, incidents, valuation, and coverage desired.
- Develop a job description for the position of shift commander/deputy chief that includes duties and responsibilities.

Fiscal Considerations

No significant financial considerations.

H – Implement a Computerized Training Records Management System

Level of Cooperation

- Functional

Timeline for Completion

- Mid-Term

Section

- Training

Affected Stakeholders

- All Agencies

Objective

- Provide a fully integrated comprehensive training records management system (RMS).

Summary

Computerized RMS provides for ease of data entry, retention, and accessibility. RMS are designed to provide comprehensive information regarding an individual, company, station, shift, and department training status. All RMS are designed to query records and generate a variety of user-defined reports.

Each of the study fire departments unilaterally selected RMS for their departments, resulting in a diversity of products. Although each department attempts to make good use of their system's capabilities, no agency takes full advantage of RMS capabilities. NFPA 1401, Recommended Practice for Fire Service Training Reports and Records, provides standards for record keeping systems.

Discussion

An assortment of factors including a lack of support, the time to become proficient with the software, and software limitations frustrate and prevent users from fully using RMS. The use of a standard RMS in the region would rectify the ineffectiveness that presently exists.

With a regional RMS, one administrative staff person would work collectively with all users to instruct, maintain, and troubleshoot the system. The ability to use the system to its maximum potential and to retain and generate meaningful reports is improved. An environment is created for system users to share knowledge, experience, and assist one another in problem resolution.

Future enterprises may benefit from a single RMS including recruit training, career development, in-service, officer, and specialized training programs. An RMS for training will aid department officers in budget planning, training delivery, and with resource and risk management.

Guidance

- Establish a work group including at least one representative from each department.
 - Identify system requirements and needs of involved departments.
 - Evaluate the RMS used by each department, including justification for their use.
 - Evaluate other available RMS systems.
 - Select an RMS that most adequately satisfies mutual requirements, needs, and budget.
- Each department should share in the cost of an individual to administer and manage the training RMS. Including:
 - Training RMS management.
 - Oversight of hardware and software installation.
 - Providing for the initial and ongoing RMS training for end users.
- Determine server requirements for training RMS.
- Use existing or establish an Intranet or Internet network.
- Provide for RMS maintenance and troubleshooting services.
- Acquire technical assistance for RMS programming.
- Provide for a periodic appraisal of the RMS.

Fiscal Considerations

- A reduction in duplicated effort (reduces soft costs) in acquiring, learning, and maintaining, individual systems
- Economies of scale in the collective purchase, use, and maintenance of a single RMS
- Cost to purchase, administer, maintain, or modify existing network
- Personnel costs associated with RMS committee, training, and implementation

Findings, Recommendations and Plan of Implementation

The success of adopting and implementing change, improvement, or cooperative opportunities depends on many things. In our experience with dozens of functional, operational, and legal unifications, leadership is the single factor that most frequently determines success. Nearly always, a key staff, councilor, or board member champions the concept garnering the support of the various affected groups (political, labor, member, and community). In addition, good leadership fosters an organizational culture receptive to planning, calculated risk taking, and flexibility. The manner in which leaders promote a trusting relationship between all groups and aid two-way communication between them is essential.

The following list is a compilation of short and mid-term recommendation found throughout the body of this report.

- Danvers and Clontarf should correct their complete lack of foundational policy documents. A basic set of administrative and operating policies and procedures could be developed using model documents available from industry organizations..... 2
- Each department need to ensure that both administrative and operational policies are kept updated and written in a complete and professional format. 2
- The four departments need to improve the quality and content of their standard operating guidelines, particularly in the area of response operations. Additional guidelines are needed to guide tactics, fire stream operations, pumping operations, ladders and ventilation, and other operational functions. 2
- Each department should institute a process that ensures that each member receives the necessary communications about department operations. 2
- Clontarf FD and Danvers FD should develop and implement a formal disciplinary policy..... 4
- Each department should implement a system of periodic competency testing of members to ensure that each member is continuously capable of performing critical tasks. 4
- Each department should implement a formal performance evaluation system to provide performance feedback to all personnel and develop a plan of improvement for the future. 4
- Danvers and Clontarf should correct their complete lack of foundational policy documents. A basic set of administrative and operating policies and procedures could be developed using model documents available from industry organizations..... 21
- Each department need to ensure that both administrative and operational policies are kept updated and written in a complete and professional format. 21
- The four departments need to improve the quality and content of their standard operating guidelines, particularly in the area of response operations. Additional guidelines are needed to guide tactics, fire stream operations, pumping operations, ladders and ventilation, and other operational functions. 21
- Each department should institute a process that ensures that each member receives the necessary communications about department operations. 35

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- Each department should work with local public and mental health organizations to establish a mechanism by which members can receive the benefits of an Employee Assistance Program (EAP) and Critical Incident Stress Debriefing (CISD) when necessary. 66
- Clontarf FD and Danvers FD should develop and implement a formal disciplinary policy..... 67
- Clontarf FD and Danvers FD should develop and implement a formal disciplinary appeals process..... 67
- Each department should implement a system of periodic competency testing of members to ensure that each member is continuously capable of performing critical tasks. 71
- Each department should implement a formal performance evaluation system to provide performance feedback to all personnel and develop a plan of improvement for the future. .. 71
- Each department should develop minimum requirements for each position and implement a process whereby members test and compete for promotions to higher rank..... 71
- Clontarf FD and DeGraff FD should map all pressurized and dry hydrant locations and keep map books in each apparatus..... 83
- Each department should adopt formal response performance objectives in order to track historic response performance and set goals for future improvements. 83
- Each department should work collectively to ensure that a minimum number of command staff are present within the region at all times. 83
- Each department should provide command officers with formal strategy and tactics training. 83
- Clontarf FD, Danvers FD and DeGraff FD should obtain hazardous materials operations level training for all personnel as required by OSHA 1910.120. 83
- Clontarf FD should work to ensure that a safety office is designated on all working incidents. 83
- Clontarf FD, Danvers FD and DeGraff FD should develop and implement a policy adhering to the “Two-in Two-out” rule as established by OSHA..... 83
- Each department should ensure that new members receive formal basic safety training prior to being allowed to respond to emergency incident scenes, regardless of their limited role... 88
- Danvers FD and DeGraff FD should establish minimum training requirements for new personnel to leave probationary status. 88
- Clontarf FD and DeGraff FD should establish minimum annual training requirements for all members..... 88
- Each department should provide specific training for all officers and driver/operators. 88
- Each department should develop an annual training plan that allows members to plan and attend those sessions most pertinent..... 88
- Clontarf FD and DeGraff FD should implement an electronic training records management system to increase efficiency in recordkeeping and training documentation. 88
- Each department should develop and follow formal lesson plans for all training sessions, particularly those that are manipulative in nature. 88
- Each department should increase the amount of multi-company drills conducted with surrounding agencies to enhance the cooperative and coordinated efforts already in place. . 88
- Each department should implement a periodic physical performance evaluation to ensure personnel are physically capable of performing critical tasks. 88
- Each department should implement a program to periodically evaluate member skill competency to ensure that personnel are continually able to perform critical tasks..... 88
- Clontarf FD, Danvers FD and DeGraff FD should provide for post-incident analysis, particularly given the low call volume of the three agencies..... 88

- Danvers FD and DeGraff FD should implement a system whereby an officer is charged with maintaining and monitoring recertification requirements of members..... 88

The remainder of this report describes a recommended process for moving forward with the potential implementation of a cooperative service delivery effort. The word potential is used here because a part of this process includes the policy decisions necessary to determine, based on the results of the study, whether there is sufficient desire among the political bodies of the organization to continue with the process or not. The implementation begins with that step.

Conduct Vision Session(s) with Policy-makers

The initial stage of implementation begins with the most elementary decision: “Do we want to move forward or not?” It is extremely important that at this stage of the process it is clearly recognized that this is a public policy decision on the part of the governing entities involved. A decision to consider altering the way in which a critical public safety service is provided, in some cases even permanently altering the governance of those services, is clearly in the purview of the elected bodies. While senior management input should be considered, the final decision should not rest at any level lower in the organization than those who are elected to represent the customers.

For this reason, it is recommended that the elected bodies meet together for the initial discussion of the feasibility study and its projected operational and fiscal outcomes. Depending on the number of elected officials, the policy-makers can decide whether to include all elected officials or a representative group assigned to represent each governing entity. During this policy stage, involvement by additional staff should be kept to a minimum, perhaps at the senior management level and then for the sole purpose of providing technical support. It is important to limit the ability for the process to be “hijacked” at this point by strenuous arguments for or against the idea from those operations level personnel whose opinions may be influenced by turf, power, or control issues. Stakeholder input is important, but plentiful opportunity can be provided for this once the policy-makers have determined what is in the best interest of their citizens as a matter of public policy.

It is equally important that the policy-makers recognize exactly what decision is being considered in the initial vision meetings. The purpose is to weigh the strategies, operational advantages, fiscal outcomes, and potential impediments of the feasibility to determine whether to commit local resources to move the process forward. The decision is not, at this point, a final decision to “flip the switch”. The final

commitment to take legal actions necessary to finalize implementation of any given strategy will come much further into the process.

This initial vision meeting can be likened to the court process known as a probable cause hearing. The purpose of such a hearing is for a judge or grand jury to determine if sufficient evidence exists to warrant an arrest and a trial. The probable cause hearing does not determine the final verdict or sentence. That occurs after the much more thorough process and deliberation of the trial. Likewise, the vision meetings are for the policy-makers to judge whether sufficient evidence exists to warrant moving forward. The final verdict on whether to take legal or contractual actions to implement will come after weeks, months, or even years of additional detailed planning work involving stakeholders, operations staff, legal counsel, finance personnel, and others. As this actual implementation planning work moves forward, there may be several points at which new information or undefeatable obstacles arise that cause one community or the other to decide not to finalize and implement the plan.

The term “vision session” is used here because the policy-makers will be determining their joint decision on a future vision toward which the additional work of implementation will be directed. In many cases, several legal, operational, or functional strategies are presented as being feasible in the study. These may involve various options for governance, finance, and organizational structure. Which one or ones should the entities pursue, if any? This will become the joint vision of the policy-makers.

One of the best methods for initiating this vision process is to begin with policy-makers sharing an open discussion of critical issues. Each entity’s representative can present a short description of those critical issues, service gaps, or service redundancies that might be concerning them relative to their provision of public safety services. As each entity takes its turn presenting these issues, a picture typically emerges of those shared critical issues that two or more of the entities have in common. This assists in focusing the discussion on which of the feasible options from the study best address those critical common issues and how.

As the discussion focuses on those feasible options with the greatest opportunity to positively impact shared critical issues, the discussion can expand to the strengths and weakness of the strategies relative to the conditions, financial abilities, and cultural attitudes of the communities involved. There should be a concerted effort to remain at a policy level without becoming overly embroiled in operational discussions of implementation details. Those will be addressed once a common vision has been established for a future strategy that is in the best interest of all the communities involved.

This is also the time that communities may make the decision to opt out of further involvement. This may occur for a number of reasons. There may be legitimate concern that an individual community does not truly share an adequate number of common critical issues with the other communities. There may also be a legitimate concern that the feasible strategies do not do enough to benefit a given community and would leave it with too many remaining critical issues. And, of course, there is always the possibility that a given community will not feel that the projected financial outcome is within their ability or provides a cost-benefit that is better than their current situation. Any such decisions by one or more communities should not be considered a discouraging factor, for that is the very purpose of the vision sessions. In many cases, other remaining entities continue moving forward with a shared vision for cooperative service delivery even after one or more communities determine not to.

The goal of the vision session(s) is to develop a decision by the policy-makers on whether to continue with the next steps and, if so, what direction those steps should take. The vision should be sufficiently decisive as to be actionable by senior appointed officials and staff. While there will be many, many details to work out in the implementation process, the vision should clearly articulate the intention of the agreeing policy bodies on the desired outcome from the specified cooperative service strategy or strategies. Once this occurs, the real work begins.

After setting the joint vision, this policy-maker group should meet together at set intervals or as needed to hear the progress of the Joint Implementation Committee and its Working Groups and refine direction when necessary. The appropriate interval will depend on the situation and the complexity and length of the process itself, but often a quarterly meeting is sufficient.

Establish a Joint Implementation Committee

The next step in the process is to establish a Joint Implementation Committee that will be given the overall responsibility with leadership and management of the planning and implementation process. This will be the “nuts and bolts” group that works through the details, overcomes the challenges, reacts to new information, and makes many of the actual decisions on the implementation plan. This group should have much wider representation from stakeholders both inside and outside of the individual organizations involved. Membership in the Joint Implementation Committee may include senior management personnel and, where appropriate, labor representatives. The following is an example of a Joint Implementation Committee:

- City/District Manager (or equivalent) from each community

- Fire Chief from each community
- Finance Director from each community
- Labor Representative from each bargaining group involved
- Volunteer Representatives from each volunteer organization involved
- Community Representative from each community (Chamber of Commerce or similar)

The Joint Implementation Committee should select a chair or co-chairs to function as organizers and facilitators for the committee meetings. In addition, their first order of business should be to determine the rules and procedures of this committee. This should include such items as:

- How often does this group meet (monthly is typical)?
- How are absences handled (assigned alternates are recommended)?
- How does communication (occasionally secure) within this committee take place?
- How will meetings be conducted? Are there “rules of conduct” for the meetings?
- Under what circumstances will the meetings be opened to attendance by non-members?
- How will the group pursue consensus? When voting is necessary and how will that occur?

Develop an Implementation Strategic Plan

Once the ground rules have been set, the Joint Implementation Committee should schedule a strategic planning process. Consideration should be given to having this strategic planning process directed by neutral outside professionals trained in strategic planning facilitation. The strategic planning process should be held in a neutral setting away from the daily activities and noise of the usual office environment. It need not be an expensive retreat, but it should be organized in a way to focus energy and attention exclusively to the planning process for its duration. The purpose of the initial strategic planning session should be as follows:

- To further articulate and refine the joint vision set by the policy bodies.
- To identify critical issues that will be met as the implementation process unfolds.
- To identify potential impediments to implementation from:
 - Organizational culture
 - Availability of data and information
 - Lack of sufficient staff to carry through implementation processes
 - Outside influences and time demands
- To set the specific goals and objectives of the implementation process and the timelines for accomplishment.
- To establish the necessary Implementation Working Groups.

This process should result in the preparation of an implementation planning document that can be shared with the policy body, stakeholders, and others who will be involved in or affected by the implementation process. The document should provide the joint vision, describe the cooperative service strategy or strategies being pursued, the desired outcome, the goals that must be met in order for implementation to be achieved and the individual objectives, tasks, and timelines for accomplishment. When fully and adequately prepared, this document will serve as the master “road map” for the process and will help guide the next steps of developing working groups and assigning responsibilities.

Establish Implementation Working Groups

As part of the implementation strategic planning process, various Implementation Working Groups should be established that will be charged with responsibility for performing the necessary detailed work involved in analyzing, weighing, and deciding on specific processes. Membership for these Implementation Working Groups should be roughly identified as part of that process as well.

The number and titles of the working groups will vary depending on the type and complexity of the strategies begin pursued. However, the following list provides some typical working groups used in most consolidation processes and a description of some of their primary assigned functions and responsibilities.

Governance Working Group

This group will be assigned to examine and evaluate various governance options for the cooperative service effort. A recommendation and process steps will be provided back to the Joint Implementation Committee and the Policy-Maker Group. Once approved, this working group is typically assigned the task of shepherding the governance establishment through to completion. The membership of this group typically involves one or more elected officials and senior city/district and agency management.

Finance Working Group

This group will be assigned to review the financial projections contained in the feasibility study and complete any refinements or updating necessary. The group will look at all possible funding mechanisms and will work in partnership with the Governance Working Group to determine impact on local revenue sources and options. Where revenue is to be determined by formula rather than a property tax rate, such as in a contractual cooperative venture, this group will evaluate various formula components and model the outcomes, resulting in recommendations for a final funding methodology and cost

distribution formula. The membership of this group typically involves senior financial managers and staff analysts, and may also include representatives from the agencies' administrative staffs.

Legal Working Group

Working in partnership with the Governance Working Group, this group will identify study all of the legal aspects of the selected strategy and will identify steps to ensure the process meets all legal obligations of process and law. Where necessary, this group will oversee the preparation and presentation of policy actions such as ordinances, joint resolutions, dissolutions, and enabling legislation. The group will also be responsible for working with other elected bodies, such as State Legislatures, when necessary to accomplish establishment of local selected governance. The membership of this group typically involves legal counsel from the various entities involved and may also include senior city/district management staff.

Operations Working Group

This group will be responsible for an extensive amount work and may need to establish multiple sub-groups to accommodate its workload. The group will work out all of the details of necessary operational changes required by the strategy. This involves detailed analysis of assets, processes, procedures, service delivery methods, deployment, and operational staffing. Detailed integration plans, steps, and timelines will be developed. The group will coordinate closely with the Support Services and Logistics Working Group. The membership of this group typically involves senior agency management, mid-level officers, training staff, and labor representatives. This list often expands with the complexity of the services being provided by the agencies.

Support Services and Logistics Working Group

This group will be responsible for any required blending of capital assets, disposition of surplus, upgrades necessary to accommodate operational changes, and the preparation for ongoing administration and logistics of the cooperative effort. The membership of this group typically involves mid-level agency management, administrative, and support staffs. Where involved, support divisions such as Maintenance, Fire Prevention, and others may also be represented.

Labor Working Group

This group will have the responsibility, where necessary, for blending the workforces involved. This often includes the analysis of differences between collective bargaining agreements, shifts schedules,

policies, and working conditions. The process also includes work toward developing a consensus among the various bargaining units on any unified agreement that would be proposed for the future. Often, once the future vision is articulated by the policy-makers, labor representatives are willing to step up and work together as a team to identify challenges presented by differing labor agreements and offer potential consensus solutions. The membership of this group typically involves labor representatives from each bargaining unit, senior agency management and, as needed, legal counsel.

Communications Working Group

Perhaps one of the most important, this group will be charged with developing an internal and external communication policy and procedure to ensure consistent, reliable, and timely distribution of information related to the cooperative effort. The group will develop public information releases to the media and will select one or more spokespersons to represent the communities in their communication with the public on this particular process. The importance of speaking with a common voice and theme, both internally and externally, cannot be overemphasized. Fear of change can be a strong force in motivating a group of people to oppose that which they do not clearly understand. A well informed workforce and public will reduce conflict. The membership of the group typically involves public information officers and senior city or agency management.

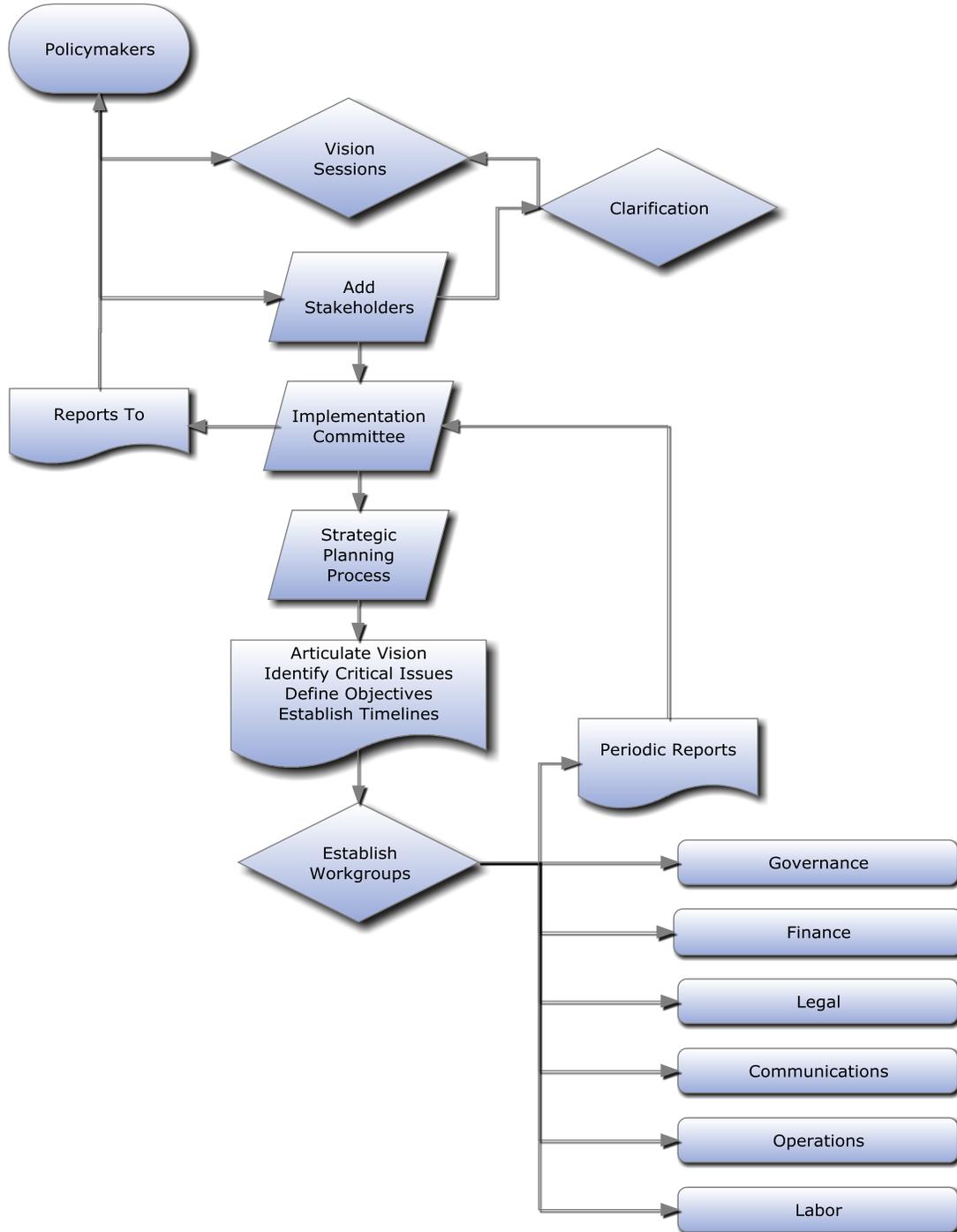
Meet, Identify, Challenge, Refine, and Overcome

Once the working groups are established, meeting, and completing their various responsibilities and assignments, it will be important to maintain organized communication up and down the chain. The working group chairs should report regularly to the Joint Implementation Committee. When new challenges, issues, impediments, or opportunities are identified by the working groups, this needs to be communicated to the Joint Implementation Committee so that the information can be coordinated with findings and processes of the other working groups. Where necessary, the Joint Implementation Committee and a working group chairperson can meet with the policy-makers to discuss significant issues that may precipitate a refinement of the original joint vision.

The process is continual as the objectives of the strategic plan are accomplished one by one. When sufficient objectives have been met, the Joint Implementation Committee can declare various goals as having been fully met until the point comes when the actual implementation approval needs to be sought from the policy bodies. This formal “flipping of the switch” will mark the point at which

implementation ends and integration of the agencies begins. The following flowchart is provided as an example of how the implementation of this process should work.

Figure 54: Example Implementation Flowchart



As an additional guideline, the implementation process and flowchart provided above have been broken down into a potential timeline for implementation. This is provided only as an example as implementation for any specific agency will be highly variable and depend on a number of factors including willingness of stakeholders to proceed, fiscal resources, timing, etc.

Conclusion

The ESCI project team began collecting information concerning the fire and emergency services for Benson, Clontarf, Danvers, and DeGraff in May 2011. The team members recognize that the report contains a large quantity of information and ESCI would like to thank the elected officials of each organization involved as well as the officers, employees and volunteers of the four fire departments for their tireless efforts in bringing this project to fruition. ESCI would also like to thank the various individuals and external organizations for their input, opinions, and candid conversations throughout this process. It is ESCI's sincere hope that the information contained in this report is utilized to its fullest extent and that the emergency services provided to the citizens of Swift County are improved by its implementation.



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