Service Delivery Objectives

Resolution 2009-01

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Section 1 - Overview

Clallam County Fire District No.3 (Fire District), located in the eastern portion of the County, is the largest fire service provider in Clallam County. Within its boundaries and contracted areas, the Fire District provides fire and EMS response service to approximately 140 square miles of land and serves an estimated population of 26,000. Because of its layout, the Fire District has approximately 35 miles of tidal waterfront with adjacent salt-water area plus numerous small lakes and ponds. The area is experiencing a steady growth rate.

The Property tax levy for Fire in 2007 was $1.12772 per $1,000 of assessed value, to raise $4,561,412; the Special EMS levy tax for 2007 was $0.27876 per $1,000 of assed value, to raise $1,127,530.

The Fire District responds to all types of fires, medical and related emergencies from 7 stations placed throughout the Fire District. Three stations are considered primary stations and are equipped with a minimum of 1250 GPM class "A" pumpers which range in age from 1 to 4 years old. These pumpers are outfitted with firefighting equipment in accordance with National Fire Protection Association (NFPA) Standard 1901. They have 750 gallon booster tanks, which are considered the primary attack water supply. The remainder of the stations are considered secondary resources and equipped with similar pumpers that are between 4-13 years old. The Fire District has mutual aid agreements with all surrounding fire agencies to supply staffing and equipment on an "as available" basis for any situation deemed necessary. EMS resources consist of 4 Medic units, 4 Aid units, and all staffed engines are equipped with ALS equipment and supplies.

The Fire District also covers a considerable amount of Department of Natural Resources (DNR) land on a contractual basis. Wildland firefighting is a specialty in itself and requires tools and equipment unique to that need. The Fire District maintains 3 Brush Trucks, one of which is four-wheel drive with small pumps and water tanks for off road use. The units currently in use are 17 years old.

In 2007 the Fire District responded to 4,792 events. Broken down these were 3,972 Medical, 454 Fire, 7 Hazmat and 359 Other (Service Calls, Good Intent, False Calls, Severe Weather).

A Glossary of Definitions is included in Appendix E, which define term used within this Standard of Response Coverage.

Purpose

This document serves as the Fire District’s Standard of Response Coverage (hereafter referred to as “This Standard”), a critical element of complying with R.C.W. 52.33 Fire Departments – Performance Measures. The “Standard of Response Coverage” is those written standards that determine the distribution and concentration of the fixed and mobile resources of a fire and EMS organization.

Accuracy of Data

An analysis of the Fire District's present practices and historical response data was the main contributing factor in developing this standard. The results of the analysis were used to make formal statements regarding the level of service that the Fire District should be expected to deliver.

It is anticipated that service level will improve over time as even greater localized data is collected and further research is conducted on fire and emergency medical techniques, providing funding is maintained support the data. The data used to create this document therefore is not to be considered as absolutes but as the most accurate available at the time of adoption.

Existing Standard Statements

The Board of Commissioners through Resolution 2009-01 (Appendix F) adopts this Service Delivery Objectives document.

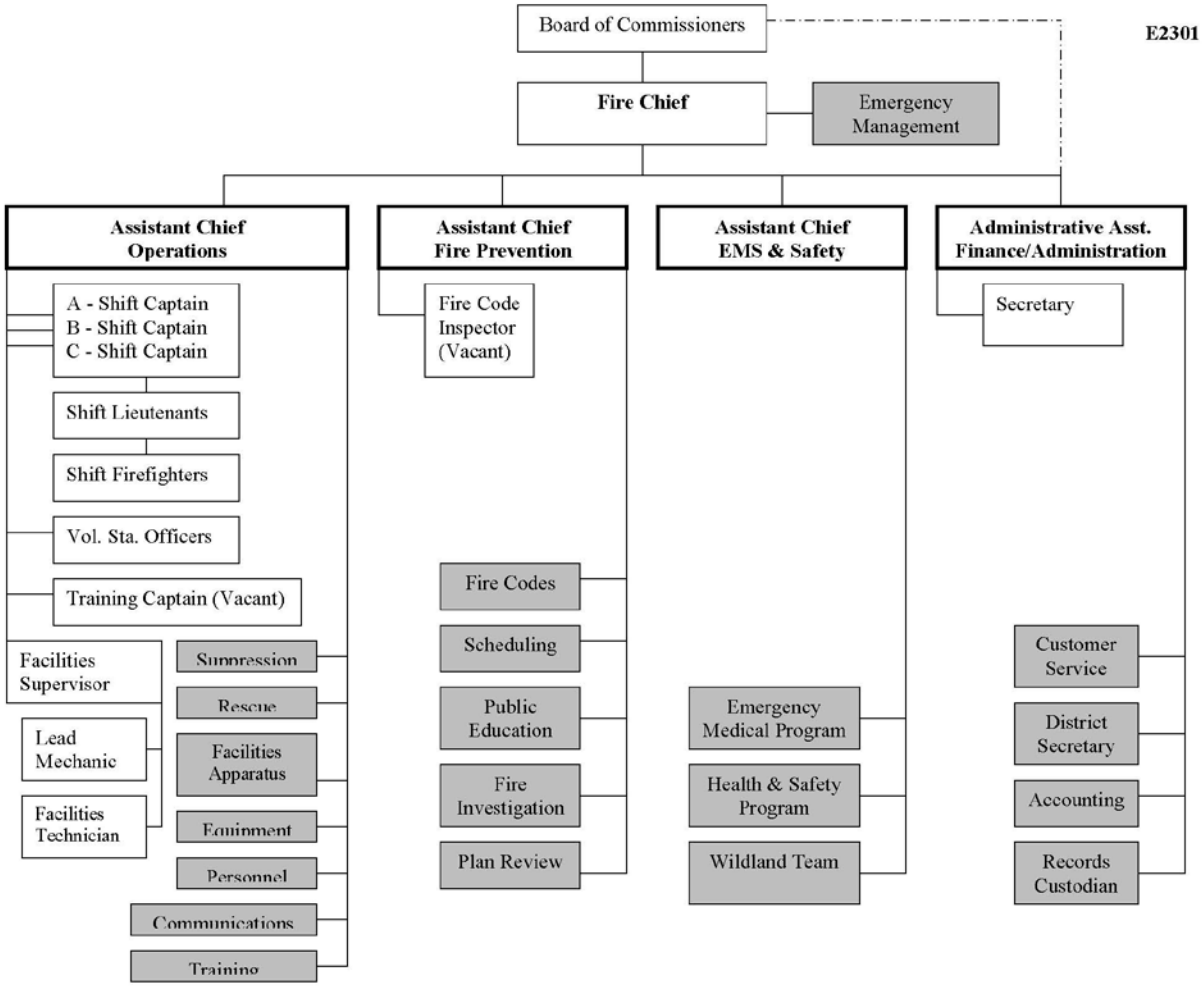
Maintenance of the Standard

An annual review will be conducted to assure that the standard reflects the intent of the Standard, the nature of the community, position of the Commissioners, and meets the current fire service needs.

Services Provided

The board of fire commissioners of Fire Protection District No. 3 of Clallam County is the corporate entity established by law in the state of Washington to provide fire prevention services, fire suppression services, emergency medical services, technical rescue services and hazardous materials services for the protection of life and property in the district. The board of fire commissioners will establish the service levels that will be provided. The fire protection district, a municipal corporation within the laws of the state, possesses all the usual powers of a corporation for public purposes.

Organization Structure



Expected number of fire department employees in 2009 is;

	Actual 2008		Expected 2009	
Position	**Career**	**Volunteer**	**Career**	**Volunteer**
Chief Officers	**4**	**1**	**4**	**0**
Captains	**4**	**3**	**4**	**3**
Lieutenants	**6**	**4**	**6**	**4**
Firefighters	**18**	**65**	**23**	**85**
Administration	**2**	**0**	**2**	**0**
Maintenance	**3**	**0**	**3**	**0**
Totals	**37**	**73**	**42**	**92**

Section 2 - Risk Assessment

There exists in every community, whether specifically stated or not, a level of risk and corresponding loss accepted by the community and the Fire District itself. In our present society, as long as there are people in the community and materials to burn, there will be injuries, illnesses and fires with resultant loss of life and property. While an admirable goal, it is unrealistic to expect to curtail all fire and medical losses; thus a risk/loss management system is established to identify the boundaries of acceptable risk/loss.

This Standard considered the risks to its community and itself at any given moment (based on assessments) and established acceptable standard, which will yield the best possible overall standard level of response coverage with its available resources.

Risk to Fire District

In the future this Standard will establish the Fire District's acceptable risks as an organization and its members. An evaluation to determine the level of risk will be conducted by the Fire District. The evaluation performed will assess each Emergency Services Zone (ESZ) for fire, EMS, and non fire risk potential exposure to the Fire District. The evaluation will also review alarm data, fire risk(s), and area of responsibility, demographics, economic indicators, fire loss data, water supply and automatic fire protection system information. A risk classification as defined in section 3 of the CFAI manual will be assigned to every ESZ.

Risk to Members

This Standard further recognizes that the vast majority of emergency scenes where our members can get in trouble are emergencies, which are very complex in nature, and can develop and change rapidly. The Fire District understands that because structure fires, haz-mat, specialty rescues, etc. are high priority, the best possible resources must be made available to mitigate these types of emergencies.

Fire fighting itself has become a science and it is difficult to maintain the high level of skills required to mitigate emergencies. The fire service is in continuously changing conditions that are many times unpredictable, volatile, ill-defined, with immense time pressures, and severe consequences that can occur if things are not done right.

The evaluation determined it is imperative the Fire District utilizes its resources wisely when dealing with emergencies. The Fire District distinguishes that there are degrees (Priorities) of emergencies (or events). The Fire District's evaluation in conjunction with Washington State Administrative Code (WAC) and the NFPA's adoption of 1710 reveal there are distinct degrees of emergency events and that the Fire District should make a clear distinction between. This Standard addresses such issues and introduces those degrees of emergencies throughout this Standard. Care in this Standard was given not to unnecessarily place our highly skilled resources on non-priority events as much as possible. This would make no sense when placed under the microscope of risk assessment, yet conversely makes good sense when viewed from a reliability perspective when high priority events occur.

Risk to Citizen

This standard also divides the Fire District into 2 risk categories to the citizen: Geographical and Event. The Geographical category is divided into suburban and rural. The Event category is divided into Priority and Non-Priority events. Because service levels are based upon the community's ability to fund it, rural areas will have increased response times. Non-priority events because of their decreased risk to life and property will also have increased response times. This standard will be measured according to these categories.

Washington State Administrative Code (WAC) 296-305 and National Fire Protection Association (NFPA) 1710 have been referenced for developing the statistical probable emergency and critical tasking. Specific management plans have been established for emergencies involving the larger or high-risk structures and non-fire emergencies through the pre-planning processes and specific emergency operating procedures.

It is the community through its elected officials that determines the acceptable risk/loss to a community and the standard that will be adopted. By its economic decisions with respect to taxation, the community buys a level of "fire and life safety protection" that is consistent with its perceived needs and its available resources. While these decisions may be influenced by such factors as the State Initiative I-747, Washington State Survey and Rating Bureau (WSSRB), NFPA 1221/1710, etc. the level of protection in any community beyond that which is protected under the Revised Code of Washington (RCW) 52 and the WAC 296-305 is a local decision that should be made only after rigorous studies of local needs, resources and abilities.

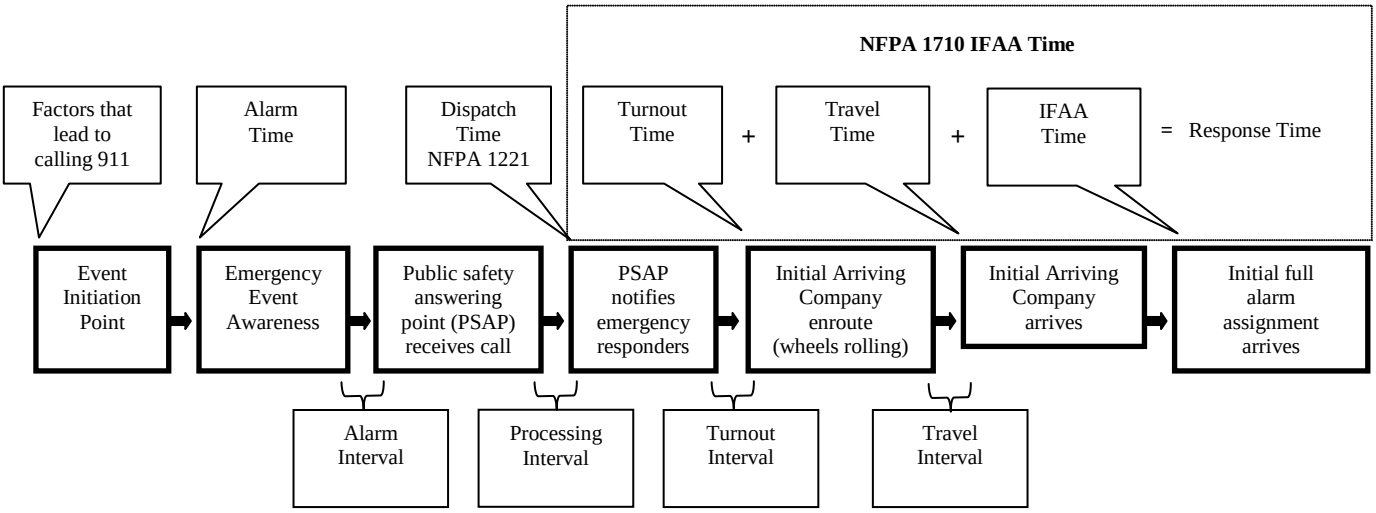
Section 3 – Cascade of Events

The NFPA has defined response time elements as a cascade of events. This cascade is similar to that used by the medical community to describe the events leading up to the initiation, mitigation, and ultimate outcome of a cardiac arrest. It is imperative to keep in mind that certain intervals described can be directly influenced by the fire service (turnout and travel time). Others factors can be influenced indirectly such as the alarm interval through public education and engineering initiatives. The fire service can also influence the call-processing interval through its ability to define standards and compel performance by its dispatch centers.

Measures

Careful definition of terminology is essential to any conversation about response performance standards. It becomes even more critical when an organization attempts to benchmark its performance against other providers. The following definitions are standardized for discussion of response performance parameters within the Fire District.

Below shows the Cascade of Events in a general overview diagram.



Cascade of Events (1)

FINITION OF CASCADE EVENTS *(see appendix E for more)*

Event Initiation Point - The point at which factors occur that may ultimately result in an activation of the emergency response system. Precipitating factors can occur seconds, minutes, hours, or even days before emergency event awareness is reached. An example is the patient who ignores chest discomfort for days until it reaches a critical point at which he/she makes the decision to seek assistance (emergency event awareness). It is rarely possible to quantify the point at which event initiation occurs.

Emergency Event Awareness - The point at which a human being or technologic "sentinel" (i.e., smoke detector, infrared heat detector, etc.) becomes aware that conditions exist requiring and activation of the emergency response system. This is considered the emergency event awareness.

Alarm Interval - Measured time between emergency event awareness and the alarm time.

Alarm Time - The point of receipt of the emergency event at the public safety answering point (PSAP) to the point where sufficient information is known to the dispatcher to deploy applicable units to the emergency. (Time-stamp)

Call Processing Interval - The first ring of the 9-1-1 telephones at the dispatch center and the time the CAD operator activates station and/or company alerting devices. This can, if necessary, be broken down into two additional parameters: "*call taker interval*" (the interval from the first ring of the 9-1-1 telephone until the call taker transfers the call to the dispatcher) and "*dispatcher interval*" (the interval from the time when the call taker transfers the call to the dispatcher until the dispatcher (CAD operator) activates station and/or company alerting devices. This time shall be 60 seconds. (Measured time between alarm time and dispatch time)

Dispatch Time - Is the time when the dispatcher, having selected appropriate units for response with assistance from the CAD system, initiates the notification of response units. (Time-stamp)

Turnout Interval - Measured time between dispatch time and turnout time.

Turnout Time - When units acknowledge notification of the event to the beginning point of response time (wheels rolling). The turnout time shall be 60 seconds. (Time-stamp)

Travel Interval - Measured time between turnout time and on scene time of initial company.

Initial Company Time - The point at which the initial company arrives on scene. (Time-stamp)

Initiation of Action - The point at which operations to mitigate the event begin. This may include available to respond to another request for service.

Initial Full Alarm Assignment Interval - Measured time between initial company on scene time and Initial Full Alarm Assignment is completed.

Initial Full Alarm Assignment - Time when all of the personnel, equipment, and resources ordinarily dispatched upon alarm arrives on the scene. (Time-stamp)

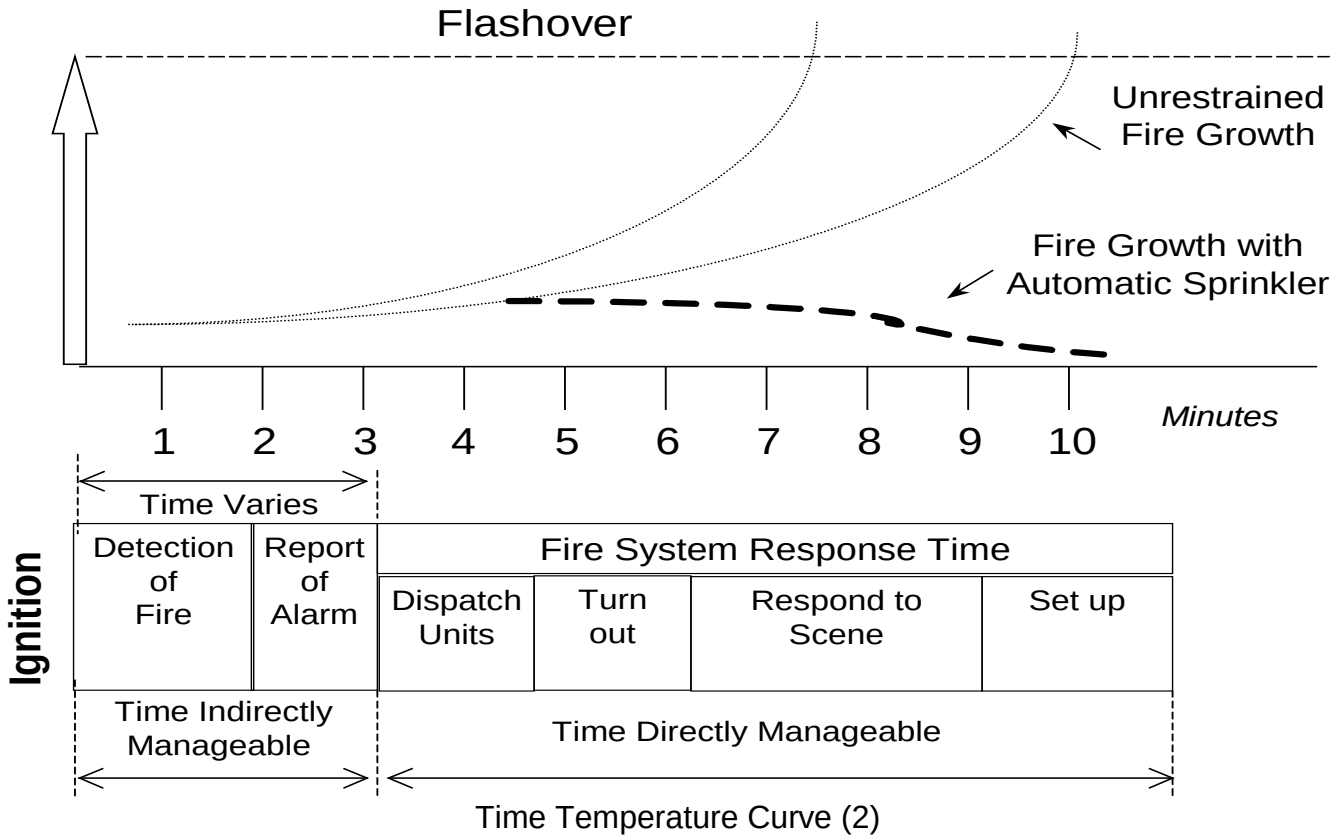
Response Time - The combined measured time from dispatch time and includes turnout and travel intervals to initial company arrival time. (Time-stamp)

Controlled Time - Time when the forward progress of the fire has been stopped or when ABC's have been addressed and managed. (Time-stamp)

Termination of Event - The point at which unit(s) have completed the assignment and are available to respond to another request for service. (Time-stamp)

Time – Temperature Standard

The “time-temperature curve” standard in figure 2 is based on data from the National Fire Protection Association (NFPA) and the Insurance Services Organization (ISO), which have established that a typical point source of ignition in a residential house will “flash over” at some time between 5 and 10 minutes after ignition, turning a typical “room and contents” fire in to a structural fire of some magnitude.



Time Temperature Curve (2)

The utility of the time-temperature curve for fire station placement is limited a number of factors.

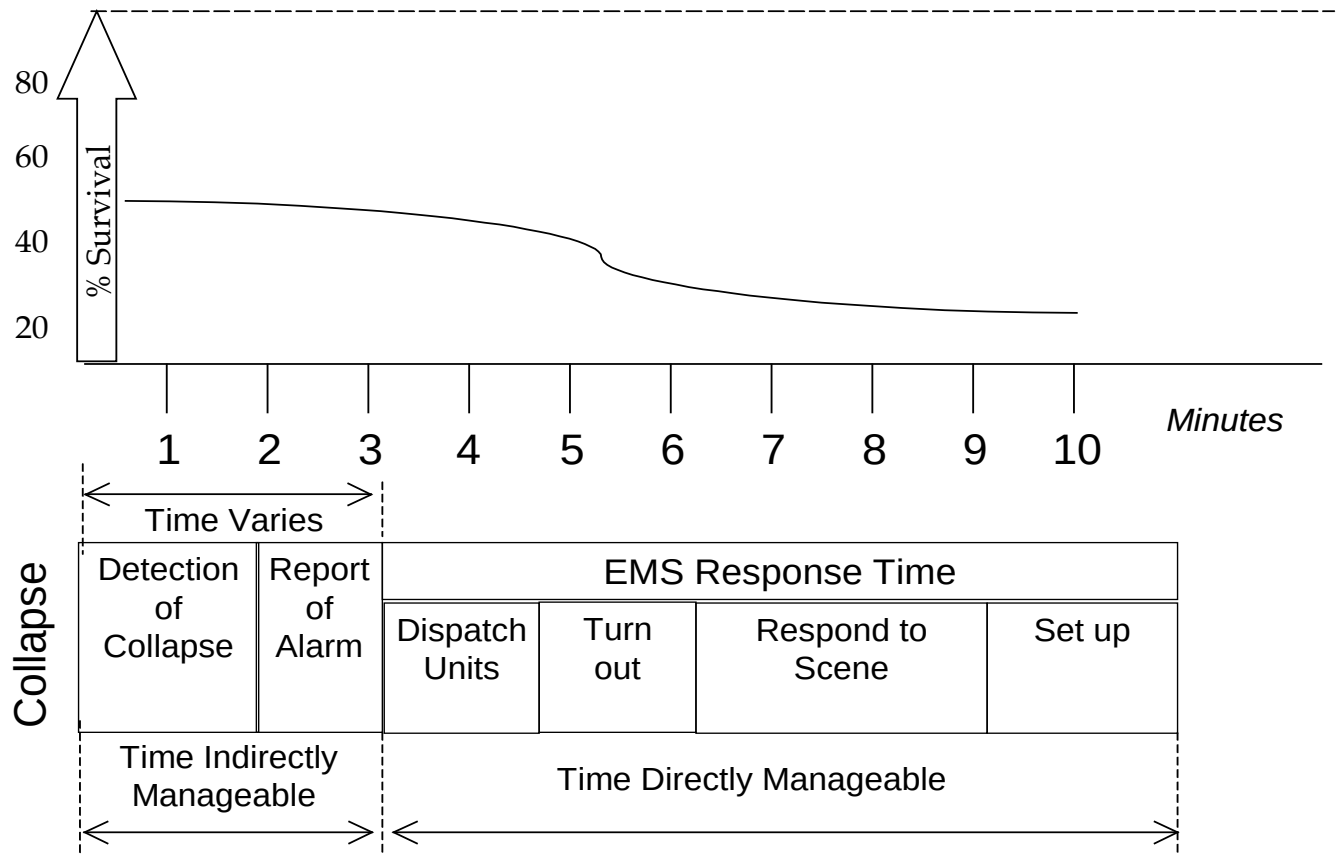
1) It does not account for the time required for the existence of a fire to be “discovered” and reported to the Fire District’s via our 911 system.

2) The time from ignition to flashover varies widely (5-30 minutes depending on building characteristics); thus it cannot provide a valid basis for the allocation of resources.

3) The curve is constantly shifting, given the numerous changes in building construction, built in suppression systems, the increased use of fire resistive materials for furniture and other items typically found in the interior of occupied buildings.

Cardiac Arrest Survival Standard

In communities like the Fire District where the fire service is the principal provider of EMS first response, the “chain of survival” standard shown in figure 3 was developed by the American Heart Association often is used to provide guidance for distribution of resources. The chain of survival suggests that basic life support (CPR and defibrillation) should be available to the victim of a cardiac arrest within 4 minutes of the event, and that advanced life support (paramedic service) should be available within 8 minutes or less of the event. Early notification, distribution and concentration of emergency response services are thus paramount to successful resuscitation efforts.



Cardiac Arrest Survival (3)

The Golden Hour Standard

In trauma events, the golden hour is the historic benchmark applied to victims with significant critical traumatic injuries. The golden hour reflects the concept that survivability decreases significantly if the patient isn’t in the operating room within one hour of receiving a critical traumatic injury. The Fire District facilitates this by using helicopter air transportation to the Region level 1 verified trauma center in Seattle Washington.

Section 4- Response Performance Standards

Response times and intervals are critical elements in determining optimal fire station distribution. Statistical analysis generally focuses on the travel time for the initial company to arrive. While this is certainly an important factor, other factors are equally significant, such as dispatch and turnout times and others.

The Fire District is comprised of 65% rural and 35% suburban areas. These areas have been designated as urban growth or rural areas. All urban growth areas meet the criteria for suburban as outlined in the benchmarking survey manual from the CFAI. This standard divides the Fire District into 2 classifications, which measure performance reflective of the demographical areas: suburban and rural.

Performance measures are assessed by events that have a risk of life or significant property loss. This Standard considers these types of events “Priority Events”. For the purpose of what constitutes a priority event this Standard considers Priorities 1 and 2 of Appendix C. Definitions of priorities 1 and 2 are can be viewed in Appendix D.

Turnout Time

The Fire District has adopted a turn out time standard of 60 seconds from 0700 to 22:00 and 90 seconds from 22:00 to 07:00, which the department should meet 90% of the time of all priority 1, 2 events (see Appendix C)

Initial Company (Priority)

a) The Fire District’s response interval goal shall be to have the first arriving companies arrive at 90% of all priority 1, 2 events (see Appendix C) in each category as described in figure 4:

Response Category	Service Level Response Time
Suburban	6 minutes (360 seconds)
Rural	14 minutes (840 seconds)

Initial Company Response- Priority (4)

Initial Company (Non-Priority)

b) The Fire District’s response interval goal shall be to have the first arriving companies arrive at 90% of all non-priority 3, 4, 5 events (see Appendix C) in each category as described in figure 5:

Response Category	Service Level Response Time
Suburban	9 minutes (540 seconds)
Rural	17 minutes (1020 seconds)

Initial Company Response- Non-priority (5)

Initial Full Alarm Assignment (Fire)

c) The Fire District's standard will be to maintain sufficient personnel and equipment, strategically distributed and concentrated, such that the initial full alarm assignment can reach 90% of fire events (except special operations) in each category as described in figure 6:

Response Category	Service Level Response Time
Suburban	25 minutes
Rural	30 minutes

Initial Full Alarm Assignment- All (6)

Initial Full Alarm Assignment (EMS)

d) The Fire District's standard will be to maintain sufficient personnel and equipment, strategically distributed and concentrated, such that the initial full alarm assignment can reach 90% of EMS events in each category as described in figure 7:

Response Category	Service Level Response Time
Suburban	19 minutes
Rural	27 minutes

Initial Full Alarm Assignment- All (7)

Special Operations

e) The Fire District's goal will be to maintain mutual aid agreements with sufficient personnel and specialized equipment, where they can reach 90% of all special operation events within figure 8 from the time of request:

Response Event	Service Level Response Time	
	Suburban	Rural
Hazardous Materials	90 minutes	100 minutes
Marine Rescue	30 minutes	60 minutes
Technical Rescue	30 minutes	60 minutes
Aircraft Firefighting	10 minutes	30 minutes
Wildland Firefighting	10 minutes	30 minutes

Special Operations (8)

Section 5- On Scene Operations and Critical Tasking

On-scene operations and critical tasking are ultimately the elements that determine staffing levels, number of units needed, and duties to be performed on the emergency scene. The Fire District has determined the tasks needed on an emergency scene based on WAC 296-305 and NFPA 1710. Together these two standards help determine and ensure a positive outcome of a situation, the number of personnel and apparatus required to complete tasks.

The variable of fire growth dynamics and property and life risk determines the tasks that must be accomplished to mitigate life and property loss. These tasks are interrelated, but can be separated into two basic types: fire flow and life safety. Fire flow tasks are those related to getting water on the fire. Life safety tasks are those related to finding trapped victims, safely removing them from the building and providing emergency medical care for victims of illnesses or injuries.

Several critical tasks need to be performed during the initial stages of a structural fire or medical event. In a structure fire event, it's the placement of fire personnel in a two in two out law as identified in WAC 296-305 for initial attack and or initial management of a fire scene. Clallam County Fire District No.3 goes beyond WAC compliance and recognizes the value of the NFPA 1710 deployment standard, which addresses the use of additional resources such as back-up lines, Rapid Intervention Crews (RIT), ventilation, ladder placement to upper floors and roof, water supply, and search/rescue. Because of this, the Fire District deploys a minimum of three more fire fighters beyond just the WAC requirement. Medical events also have critical tasks that must be performed. The accomplishment of these combined tasks requires the full compliment of apparatus (see figures 10, 12, 14) and staffing assigned to the initial full alarm assignment (see figures 9, 11, 13), which will be dispatched through Peninsula Communications located in Port Angeles, Washington. More severe events or complex events require that additional alarms are called to ensure adequate personnel, apparatus, and equipment is on scene to effectively mitigate the event.

Mandates from the Washington Industrial Safety and Health Administration (WAC 296-305) have placed restriction on many of the actions of firefighters, resulting in required assignments or tasks. These restrictions are to ensure firefighter safety, but place a greater importance on the timeliness of assembling all personnel on the scene, not just the initial company.

Single-family dwelling fires are the moderate average fire types. Critical tasks in this standard are outlined for this type of response. These tasks must be conducted in a timely manner by firefighters in order to control the fire prior to flashover or to extinguish the fire in a timely manner. The Fire District is responsible for assuring that responding companies are capable of performing all of the described tasks in a prompt and efficient manner.

ALS and BLS medical events are the moderate average medical type. Critical tasks in this standard are outlined for this type of response. These tasks must be conducted in a timely manner by firefighters in order to maintain adequate airway, breathing and circulation prior to brain death or irreversible shock. The Fire District is responsible for assuring that responding companies are capable of performing all of the described tasks in a prompt and efficient manner.

Structure Fire Response

An Initial Full Alarm Staffing Assignment for structure fires has been determined as identified in figure 9, based on fire flow capabilities, critical fireground tasking and WAC 296-305-05001.

Responsibility/Position	Residential
Incident Commander (with Aide)	1
Initial Company with minimum 400 gpm uninterrupted water supply pump operator	1
One attack line with minimum 185-200 gpm flow	2
One Back-up line with minimum 185-200 gpm flow	2
Support person for each attack line and backup line (hydrant hookup, help lay line, utility control, forcible entry)	2
Victim Search and Rescue Team	2
Initial Rapid Intervention Crew (IRIT)	2
Ventilation Team	2
If an aerial device is in operation	1
If non-hydranted area	1
TOTAL	**14-16**

Initial Full Alarm Staffing Assignment- Fire (9)

An Initial Full Alarm Unit Assignment for structure fires has been determined as identified in figure 10, based on fire flow capabilities, critical fire ground tasking as indicated in figure 9.

Unit	Residential
Duty Chief	1
Engines	3
Medic/Aid	3
Tenders	1
Truck	1
Rescue	1

Initial Full Alarm Unit Assignment- Fire (10)

EMS Response

An ALS Initial Full Alarm Staffing Assignment for personnel response has been determined as shown is figure 11, based on critical EMS tasking.

Responsibility/Position	Number
ALS- Intubations, IV access, Drug admin, Documentation, Overall Management of the patient, and carrying patient to transport unit.	1
ALS Support- IV set up, Drug Admin, Documentation, CPR, carrying patient to transport unit.	3
TOTAL	4

Initial Full Alarm Staffing Assignment- ALS (11)

An ALS Initial Full Alarm Unit Assignment for units has been determined to be as shown in figure 12.

Unit	Number
ALS Unit	1
BLS Unit	1
TOTAL	2

Initial Full Alarm Unit Assignment- ALS (12)

A BLS Initial Full Alarm Staffing Assignment for personnel response has been determined as shown is figure 13, based on critical EMS tasking.

Responsibility/Position	Number
BLS - Overall Management of the patient, and carrying patient to transport unit, Documentation.	2
TOTAL	2

Initial Full Alarm Staffing Assignment- BLS (13)

A BLS Initial Full Alarm Unit Assignment for BLS Events has been determined to be as shown in figure 14.

Unit	Number
BLS Unit	1
TOTAL	1

Initial Full Alarm Unit Assignment- BLS (14)

Special Operations Response

For special risks or hazards, responding company or command officers based upon the pre-incident plan specific to the hazard may augment the initial standard response. Augmentation may include the dispatch of any district, mutual aid, regional response through the Fire Resource Plan, or the Washington State Fire Resource Mobilization Plan. Through these mechanisms, an almost unlimited number of resources are available to the Fire District to mitigate emergencies.

Where event notification clearly indicates that the event involves special operations beyond the management capability of an initial response, a mutual aid Special Operations Team may be dispatched through the Peninsula Communications Dispatch Center (PenCom).

Non-Hydranted Water Supply Response

Because the Fire District has large areas that are non or partially hydranted, an analysis of non-hydranted fire flow critical tasking was needed to establish the number of tenders needed to meet a specific fire flow as identified in NFPA 1710.

The specific fire flow requirement was developed through a risk assessment evaluating the Uniform Fire Code Appendix III A, land use and the isolation of structures in these rural zones, and the Fire District's ability to provide fire flow through tender operations. Table "III A" establishes a fire flow of 1000 GPM for 2 hours for the standard structure type in these areas, wood framed, single family dwellings for all new construction.

Within this assessment Section 3.1 of the UFC, Appendix III was consulted which states, "Fire flow requirements may be modified downward by the chief for isolated buildings or groups of buildings in rural areas or small communities where the development of full fire-flow is impractical."

Because the UFC allows for the "Fire flow requirements may be modified downward by the chief…" and based upon NFPA 1710, the Fire District established 400 gpm as the initial fire flow for these types of alarms.

An analysis was conducted to determine the actual fire flow available with tender operations. Two different tenders in two different ESZ's that represent our current apparatus and topography within the Fire District were used. The analysis measured the turnaround time for a tender to depart, refill and return to the fire scene for both mixed and non-hydrant areas.

A It has been determined that a mixed hydrant area would be defined as an area having hydrants approximately 1.5 miles apart within most regions of the zone. A non-hydrant area would be defined as an area having hydrants approximately 3.0 miles apart within most regions of the zone.

Based upon the information identified in figure 15 the number of tenders needed to support a sustained fire flow.

Mixed Hydrant Area – 1.5 miles – Avg. turn around time of 20 minutes	
Sustained Flow for thirty minutes	Tenders Required
400 gpm	3

Non-Hydrant Area – 3 miles – Avg. turn around time of 26 minutes	
Sustained Flow for thirty minutes	Tenders Required
400 gpm	4
Number of tenders based on 3000-gallon average capacity	

Required Tenders at Structure Fire (15)

Because a majority of structure fire responses in these areas are minor alarms requiring little or no tank water, three tenders are initially dispatched to the event. When it is determined that the event is a working structure fire, the Incident Commander shall request additional tenders. The initial full alarm assignment has enough water to sustain an attack for at least 28 minutes. Within this time period the additional needed tenders can easily be dispatched and arrive on the scene.

Section 6 – Distribution, Concentration and Reliability of Resources

The risk of fire, medical emergency, or other emergency events cannot be held to zero. Thus, the objective of this standard is to identify a balance among distribution, concentration, and reliability that will keep fire and medical risk at a reasonable level while yielding the maximum savings of life and property.

Distribution and Concentration studies shall be analyzed to determine the impact that adjacent resources have on each other. When local resources are out of service the ability to fill out responses from other adjacent resources becomes an important factor in determining adequate protection.

Distribution

The term “Distribution” describes the resource locations needed to minimize and terminate emergencies by assuring a sufficiently rapid first due response deployment. Distribution is measured by the percent of the jurisdiction covered by first due units within the adopted response time goals.

Currently, the Fire District operates out of 7 stations. These include: 3 stations staffed with career and volunteer personnel. Career staffing ranges from 2 to 6 personnel at each station depending on station location and time of day. Stations 33, and 34 mainly cover the suburban area, thus have the increased staffing. Volunteer companies operate 4 stations.

Enclosed are maps (see Appendix A) showing the time/distance studies conducted from each station. Lines are drawn showing the 4, 8 and 12 minute travel time boundaries for analysis of distribution. From these maps we can see that most areas have stations distributed adequately to meet the standard response objective for the initial company response.

Concentration

Concentration is the spacing of multiple resources within sufficient proximity so that an initial full alarm assignment can be assembled on scene within prescribed time frames.

In determining desired levels of resource concentration, the Fire District looks at risk assessment, event volume, population, critical tasking and reliability. The number of units (determined via critical tasking analysis) needed for an initial full alarm assignment for each risk/response, are dispatched as described in figures 9-14.

Consideration of unit concentration must also take into account the substantial reliance of all of the adjacent fire service organizations on Mutual Aid and Automatic Aid agreements.

Reliability

Response reliability is the probability that the required amount of staff and apparatus will be available when a fire or medical event is dispatched. Response reliability would be 100% if every company was available and in place every time an event was dispatched. In reality, there are times when an event is dispatched when the initial company is unavailable. This requires a later-due company to be assigned. If the later-due company is too far away, the event cannot be handled within the prescribed travel time.

As the number of emergency events per day, training demands, and other activities increase, so does the probability that the prescribed company will be unavailable when an event is dispatched. This causes decreased reliability. Reliability is managed on a day-to-day basis by the Duty Chiefs. They are responsible to implement the mission, goals, and objective while using good judgment concerning response coverage and still accomplish the other duties of the organization.

Another aspect of reliability that is important to keep in mind is the judgment of the officer in charge of a unit making good decisions. When a company is out of its area and an alarm is dispatched in which they are closest, the Officer will respond the unit. If they are responding to an alarm and another alarm of a more critical nature of which they are closest occurs, they will divert to the more critical alarm and dispatch another unit to the initial, less critical alarm. As a result, critical alarms are given priority.

Secondary Support

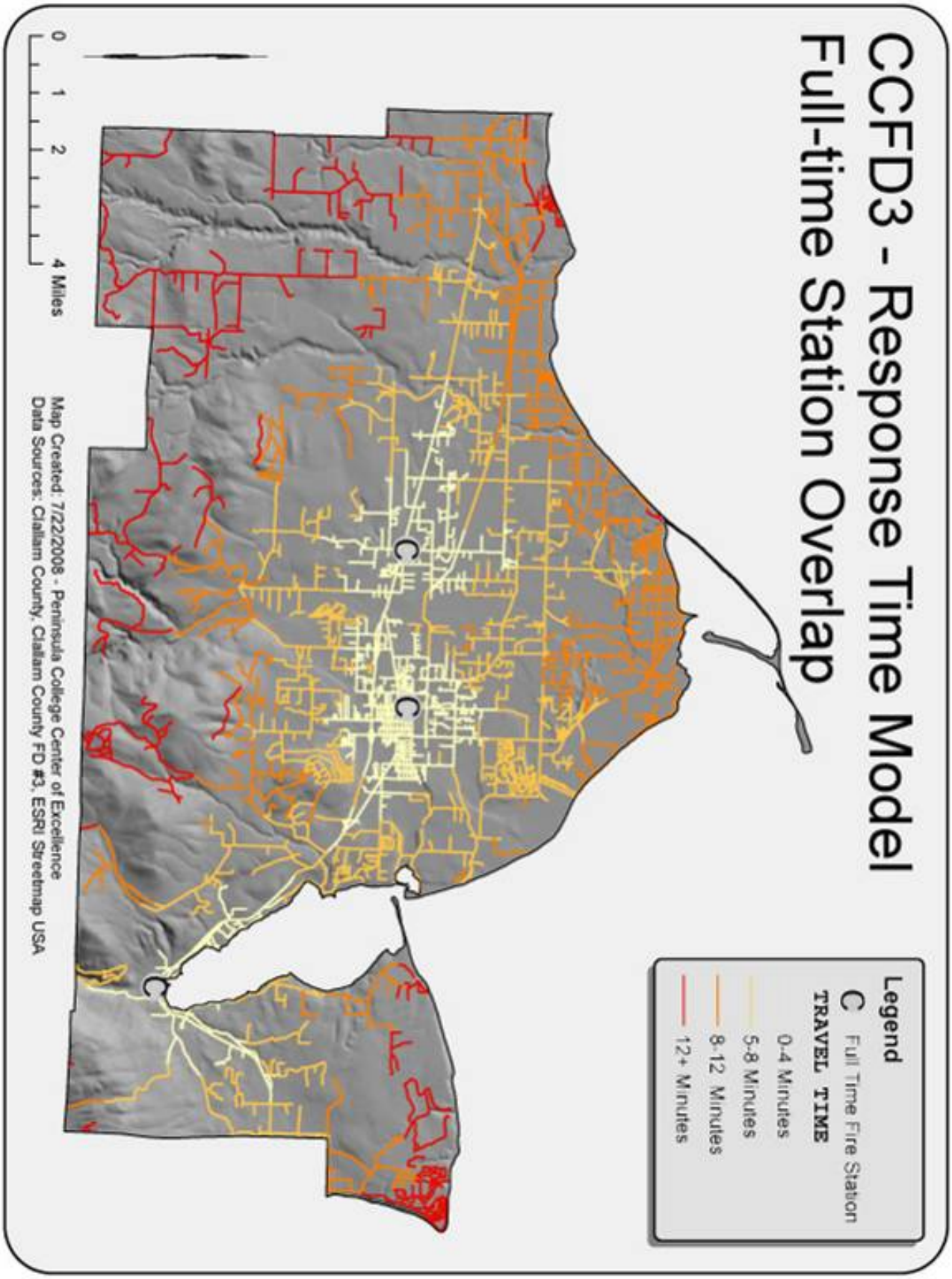
Secondary support functions may be performed by the initial response personnel being "recycled" after the completion of an initial assignment, by volunteers who respond via Private Occupancy Vehicle (POV) who are dispatched as part of the initial full alarm assignment to all structure fires, or by units special called for that purpose when directed by the situation (e.g., extremely hot weather). Tasks of secondary support functions include relief of initial crews, salvage, overhaul, staffing of the Rehabilitation group, air supply, etc.

At all second alarms or greater emergencies, an off-shift paging and toning system shall be used to automatically alert all career and volunteer personnel to report to their stations for staffing. The Duty Chief may also utilize the paging systems anytime it seems warranted to alert off shift career and volunteer personnel to staff their stations.

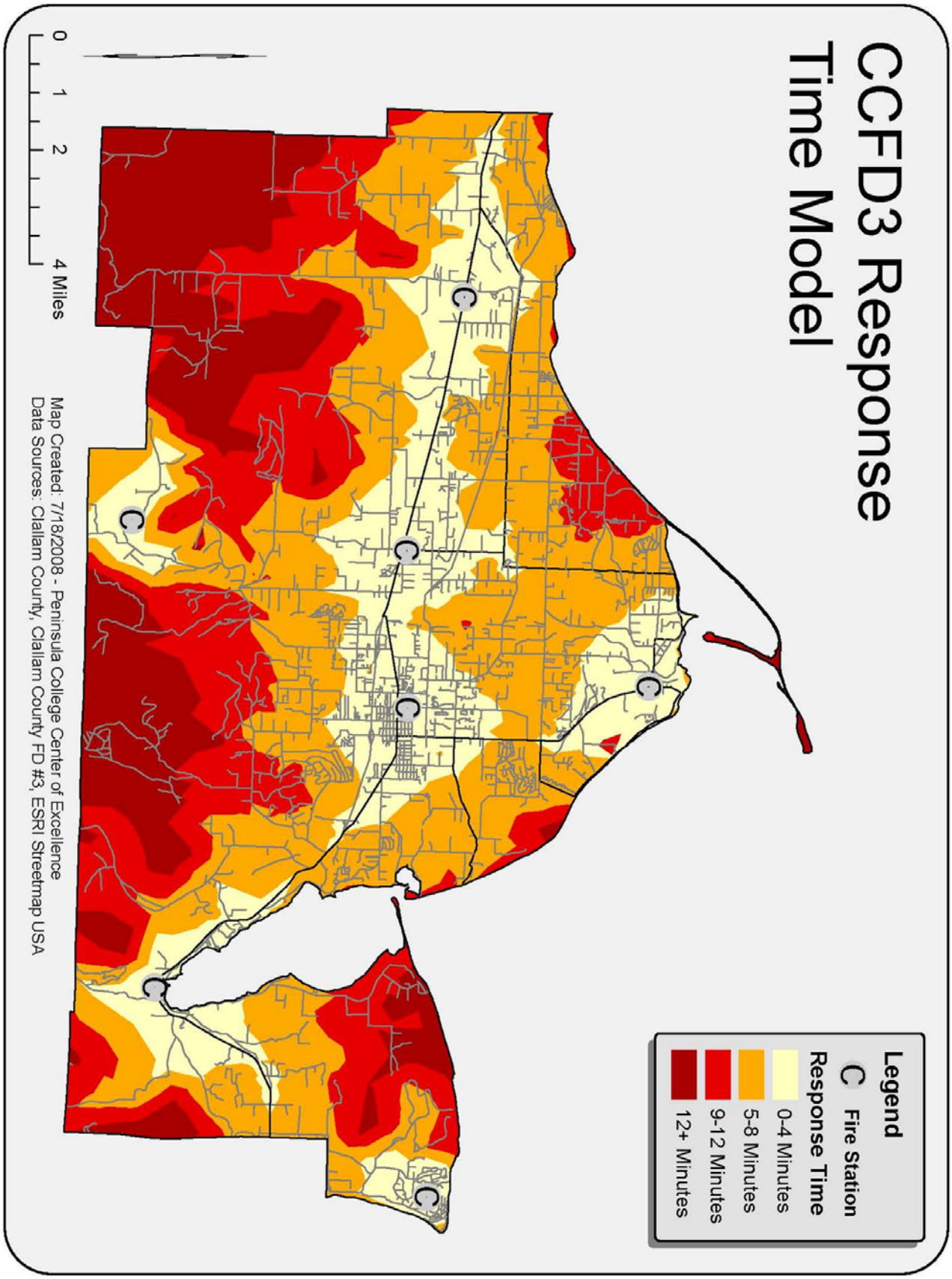
Appendix A - Time/Distance and Hotspot Maps

See next Page

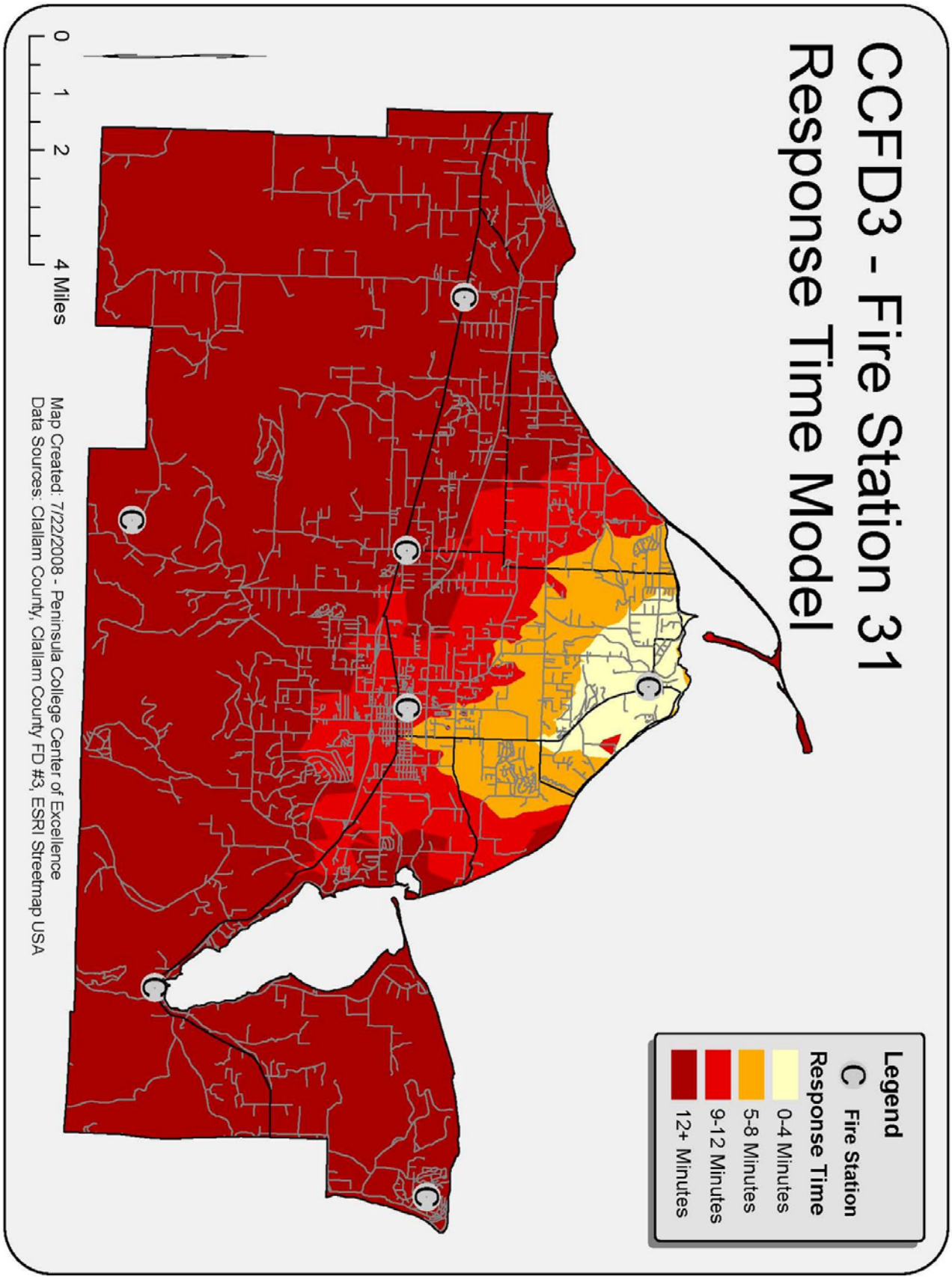
APPENDIX A1


CCFD3 - Response Time Model
Full-time Station Overlap
Legend
Full Time Fire Station
TRAVEL TIME
0-4 Minutes
5-8 Minutes
8-12 Minutes
12+ Minutes
0
1
2
4 Miles
Map Created: 7/22/2008 - Peninsula College Center of Excellence
Data Sources: Clallam County, Clallam County FD #3, ESRI Streetmap USA

APPENDIX A2


CCFD3 Response Time Model
Legend
Fire Station
Response Time
0-4 Minutes
5-8 Minutes
9-12 Minutes
12+ Minutes
0
1
2
4 Miles
Map Created: 7/18/2008 - Peninsula College Center of Excellence
Data Sources: Clallam County, Clallam County FD #3, ESRI Streetmap USA

APPENDIX A3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Response Time Model
Legend
Fire Station
Response Time
0-4 Minutes
5-8 Minutes
9-12 Minutes
12+ Minutes
0
1
2
4 Miles
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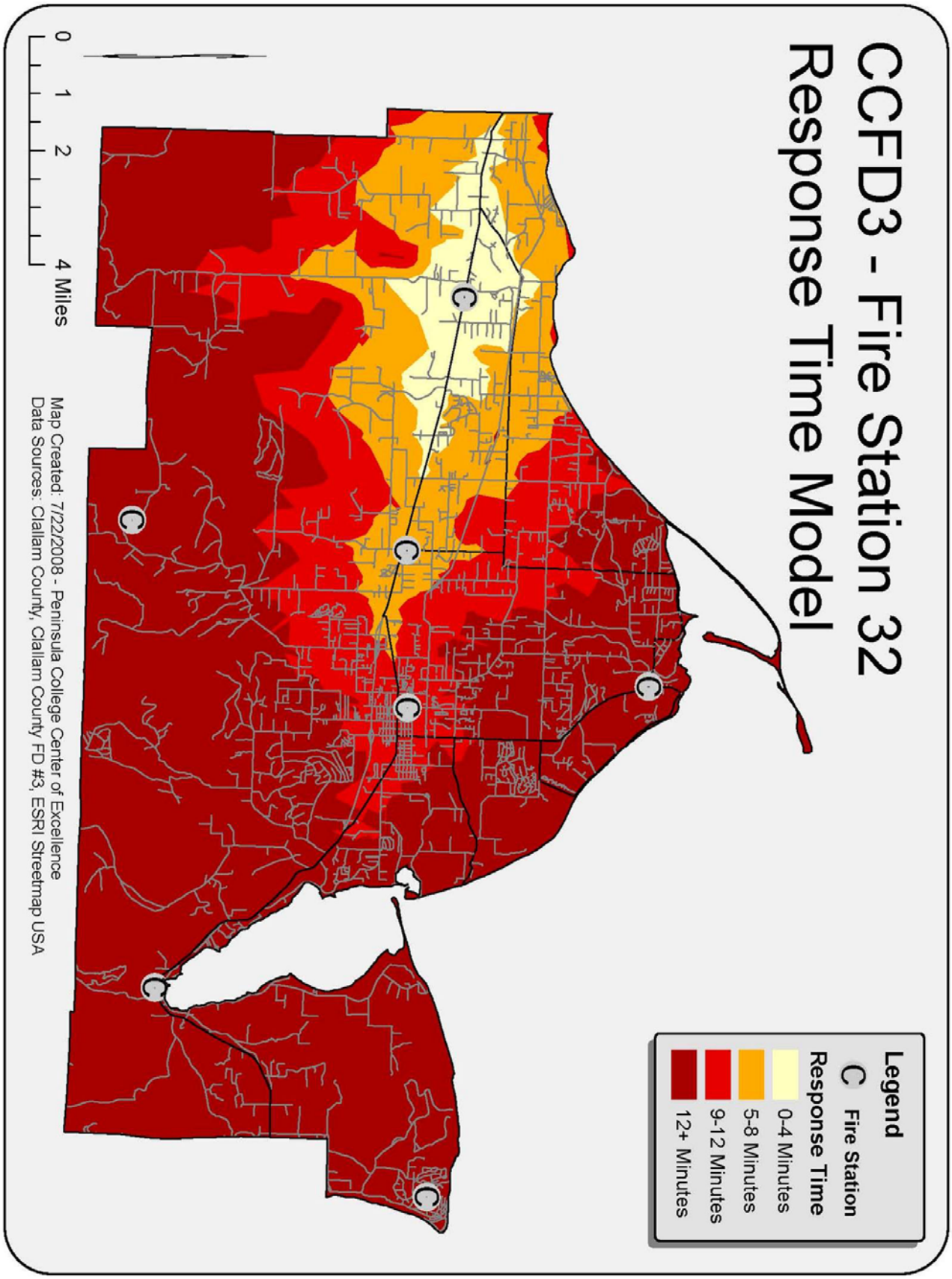
Data Sources: Clallam County, Clallam County FD #3, ESRI Streetmap USA

APPENDIX A4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Legend
Fire Station
Response Time
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9-12 Minutes
12+ Minutes
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1
2
4 Miles
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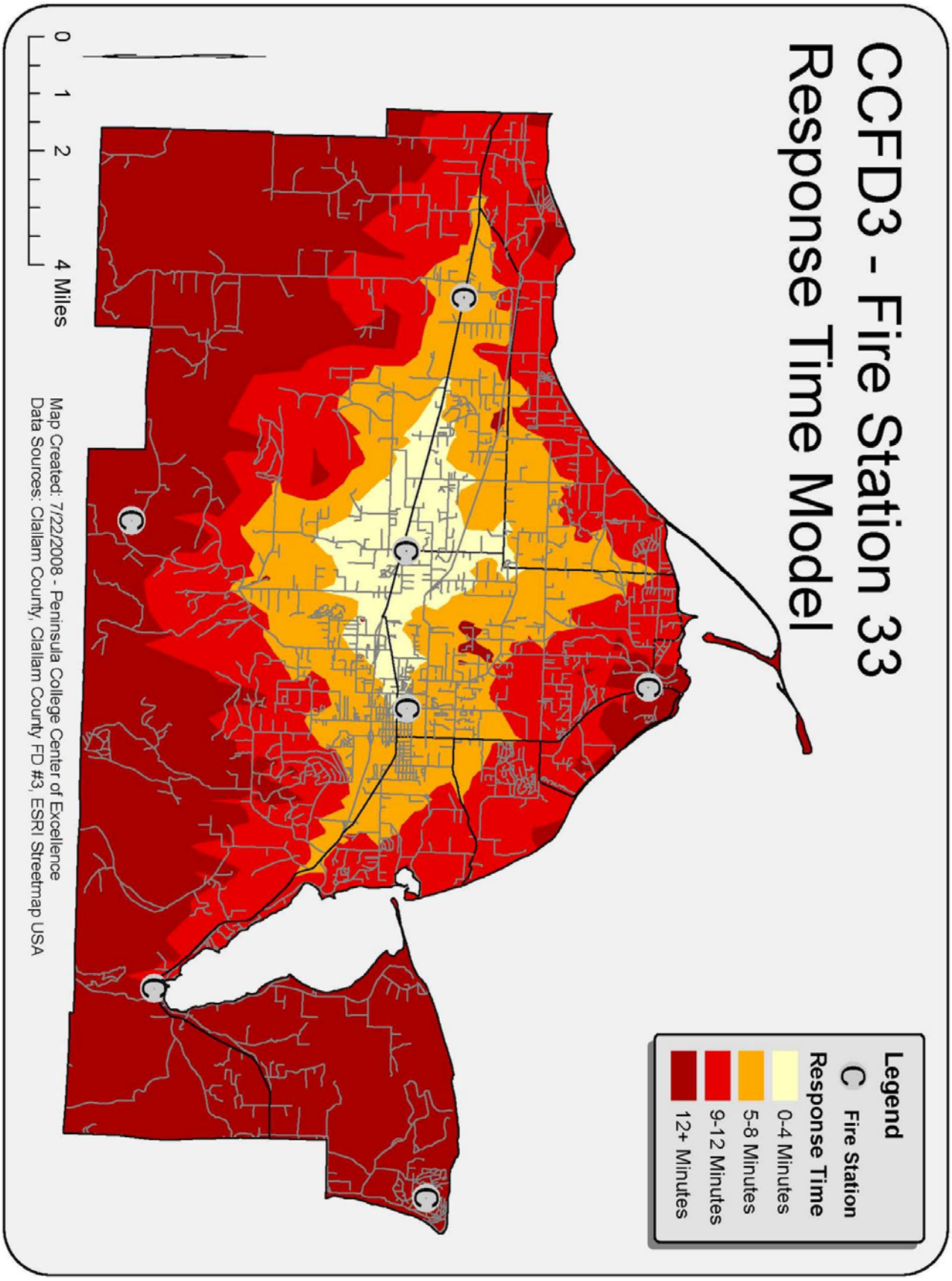
APPENDIX A5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Response Time Model
Legend
Fire Station
Response Time
0-4 Minutes
5-8 Minutes
9-12 Minutes
12+ Minutes
0
1
2
4 Miles
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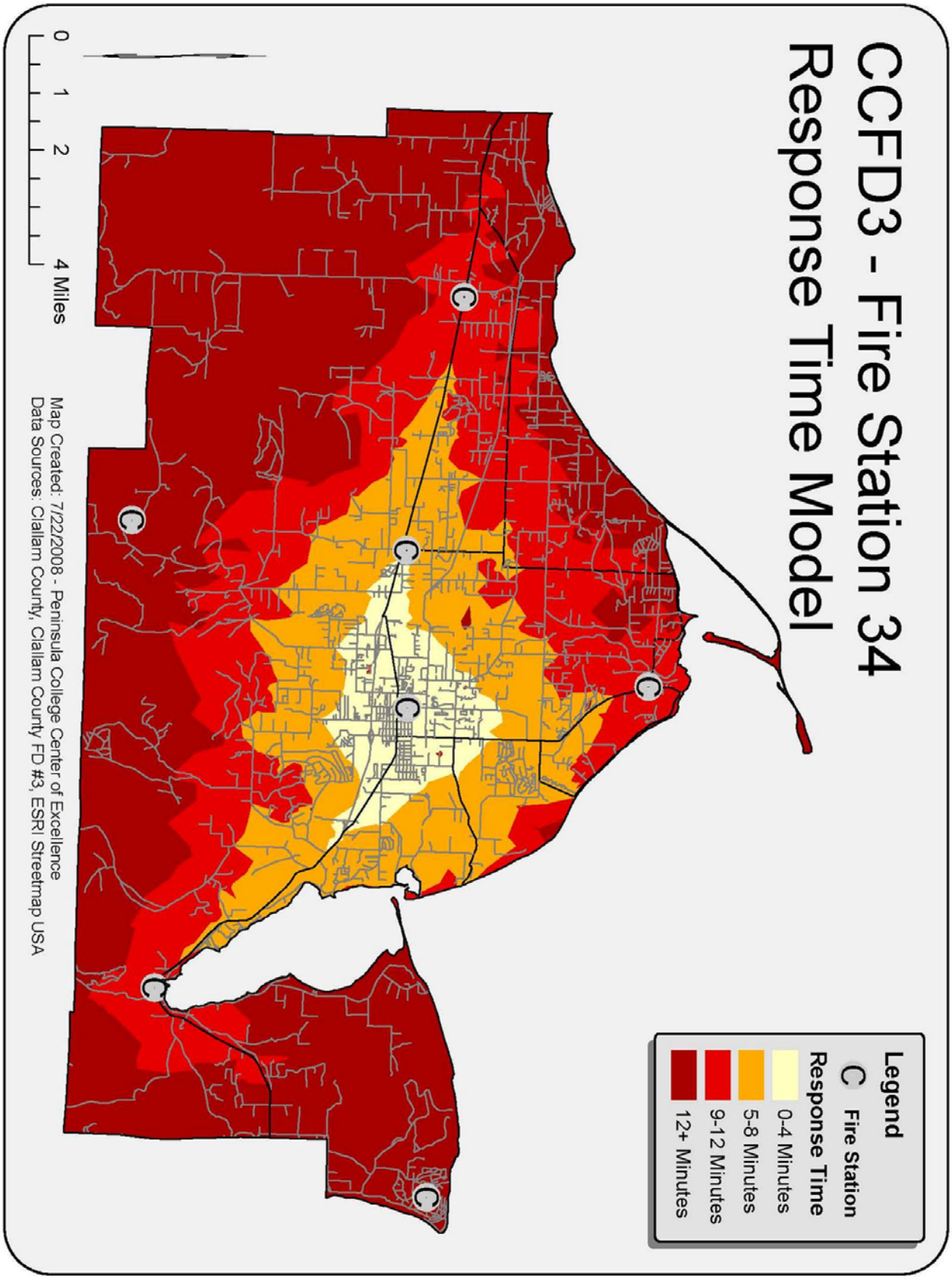
Data Sources: Clallam County, Clallam County FD #3, ESRI Streetmap USA

APPENDIX A6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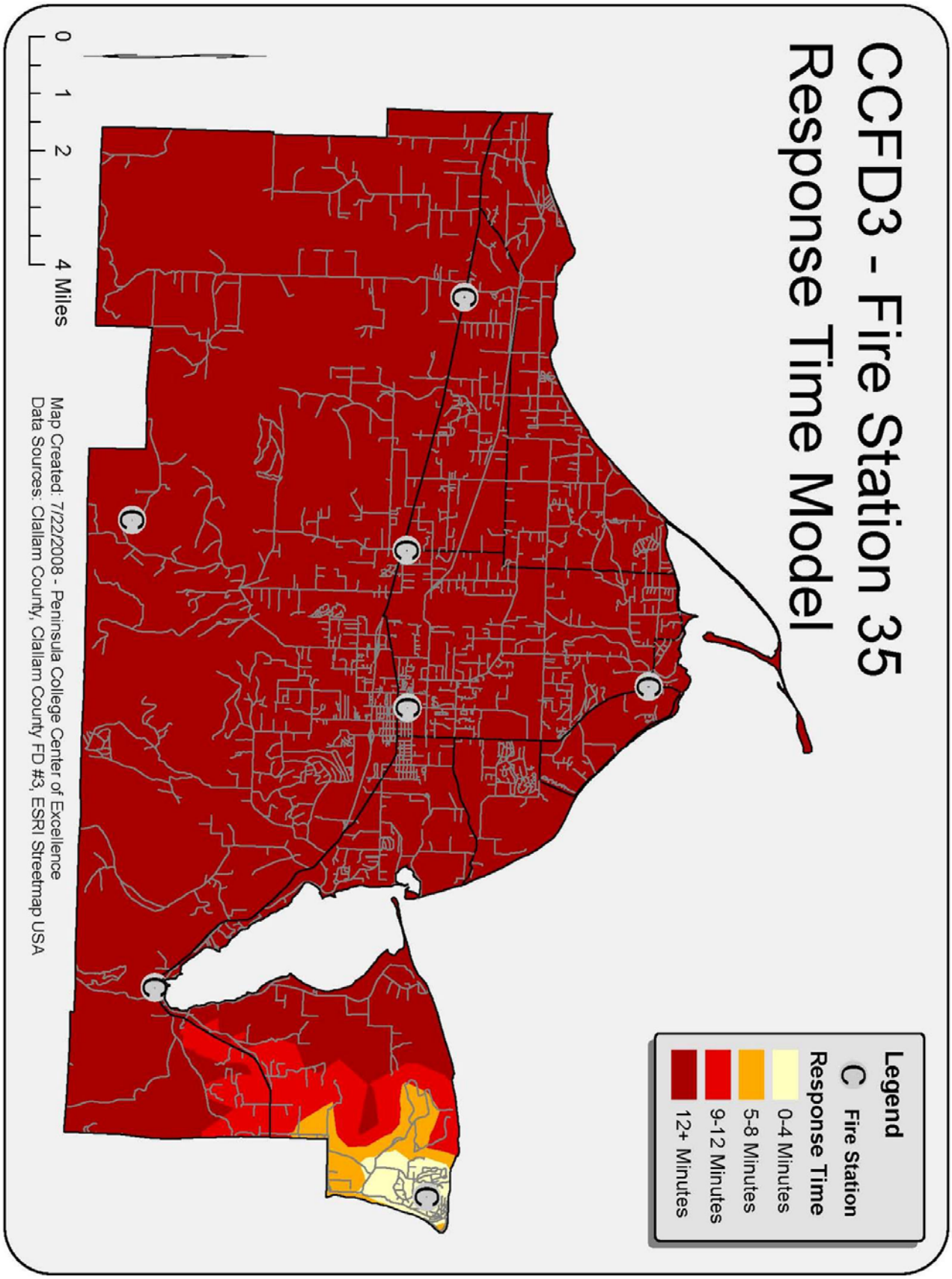
Response Time Model
Legend
Fire Station
Response Time
0-4 Minutes
5-8 Minutes
9-12 Minutes
12+ Minutes
0
1
2
4 Miles
Map Created: 7/22/2008 - Peninsula College Center of Excellence
Data Sources: Clallam County, Clallam County FD #3, ESRI Streetmap USA

APPENDIX A8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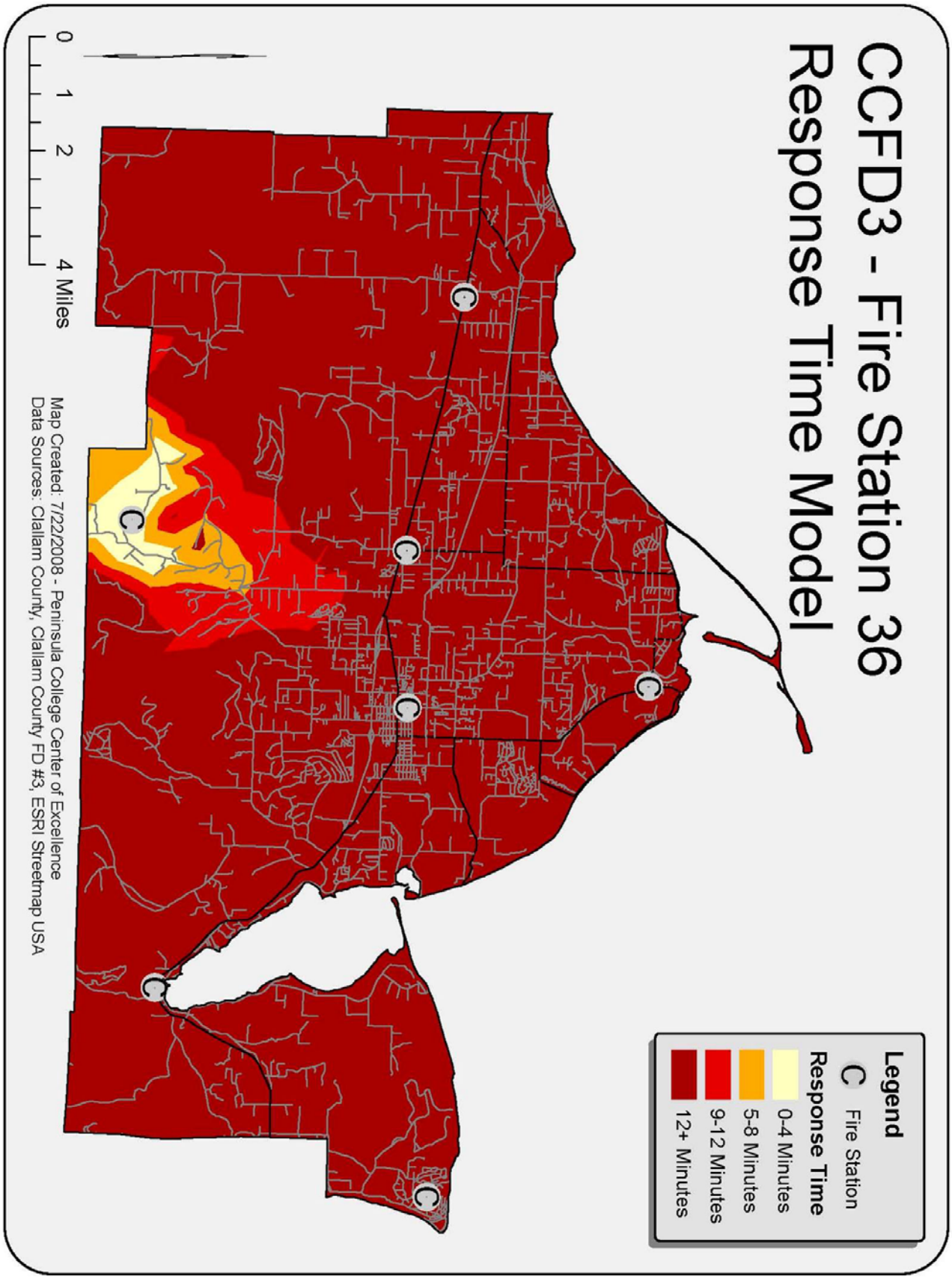
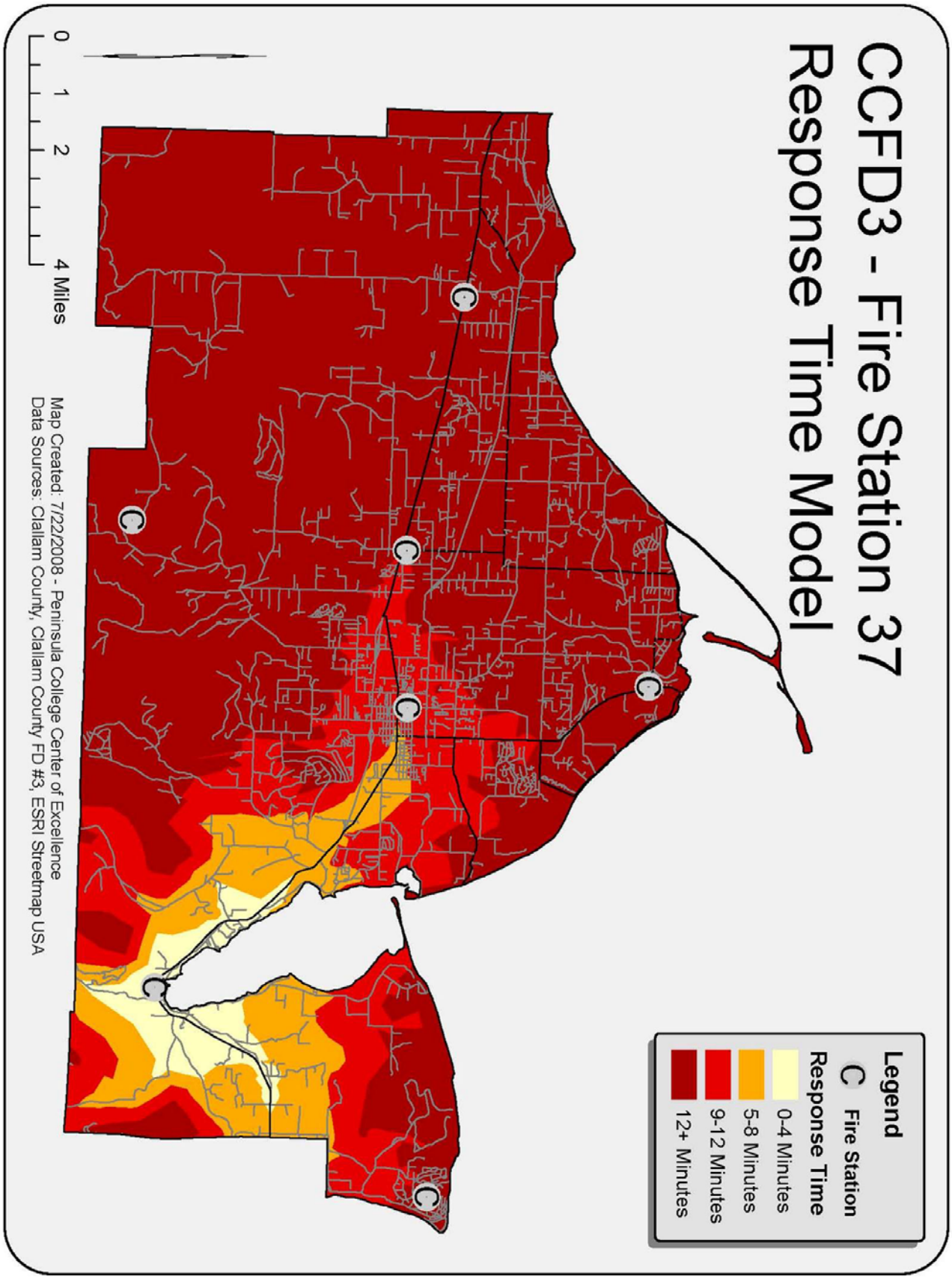
Response Time Model
Legend
Fire Station
Response Time
0-4 Minutes
5-8 Minutes
9-12 Minutes
12+ Minutes
0
1
2
4 Miles
Map Created: 7/22/2008 - Peninsula College Center of Excellence
Data Sources: Clallam County, Clallam County FD #3, ESRI Streetmap USA

APPENDIX A9


CCFD3 - Fire Station 36
Response Time Model
Legend
Fire Station
Response Time
0-4 Minutes
5-8 Minutes
9-12 Minutes
12+ Minutes
0
1
2
4 Miles
Map Created: 7/22/2008 - Peninsula College Center of Excellence
Data Sources: Clallam County, Clallam County FD #3, ESRI Streetmap USA

APPENDIX A10



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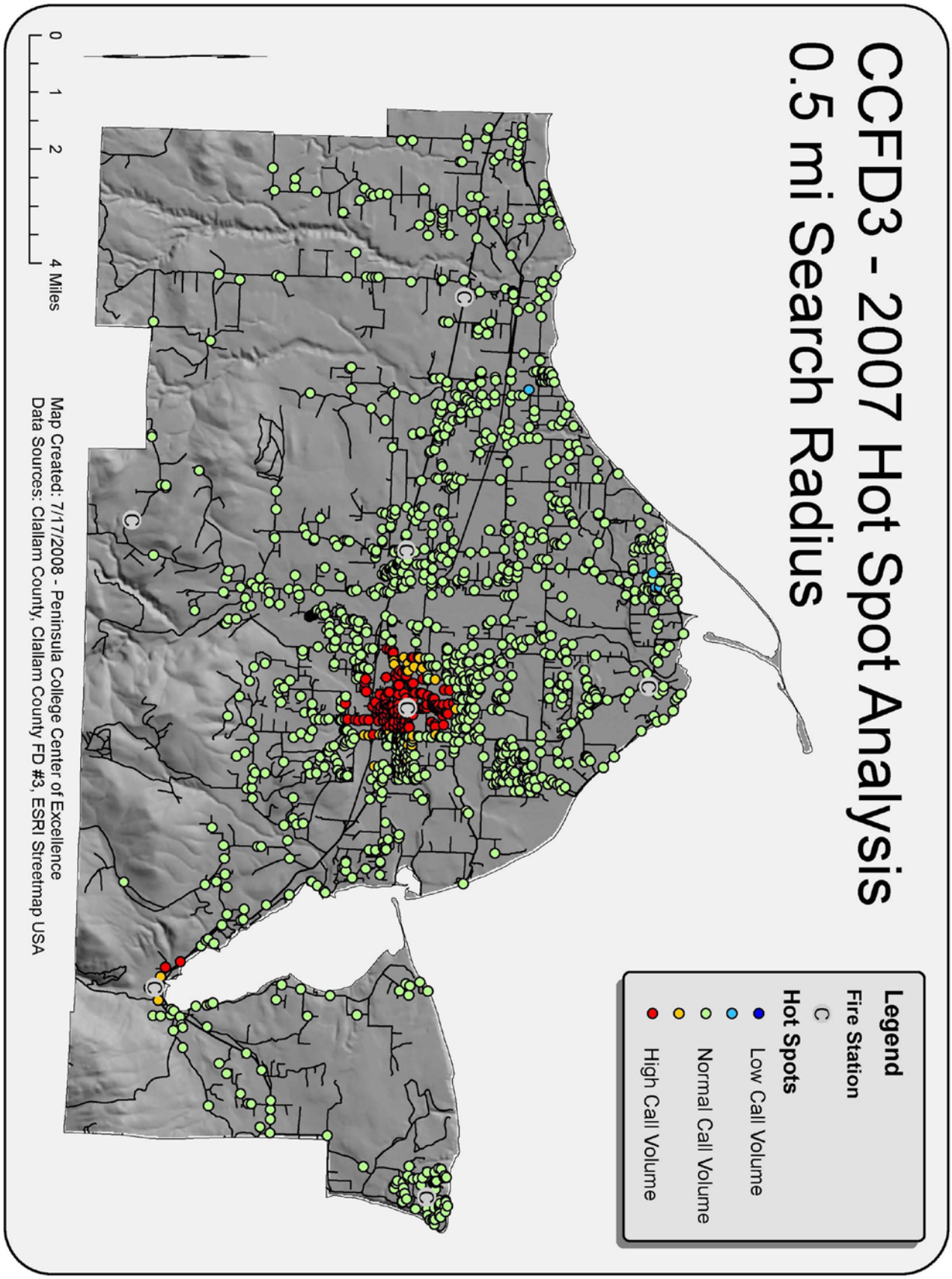

Appendix B - ESZ Risk Classification

ESZ	Description	Classification	Risk
F31E	Dungeness East	Rural	
F31W	Dungeness West	Rural	
F32	Agnew/R-Corner/Blue Mountain/O'Brian	Rural	
F32A	Lake Farm	Rural	
F33	Carlsborg	Suburban	
F34	Sequim	Suburban	
F34E	East Sequim	Suburban	
F35	Diamond Point	Rural	
F36	Lost Mountain	Rural	
F37	Blyn	Rural	
F37E	Sequim Bay	Rural	

Appendix C - Event Priority Codes

Code	Priority	Code	Priority	Code	Priority	Code	Priority

Priority 1	Priority response to a critical incident
Priority 2	Priority response to an urgent incident
Priority 3	Non-priority to non-urgent request which require immediate response
Priority 4	Non-priority which allows for delayed response
Priority 5	Notifications

Appendix D - Event Priority Definitions

Priority One- Immediate Life Threatening or Significant Property Loss

When events are determined to be of immediate life threatening or significant property loss may occur. Priority one is not assigned lightly because in most cases the responding field personnel are placing their lives in jeopardy in an emergency lights and siren run through the streets.

Examples:

Injury motor vehicle collisions (MVCA)
Entrapment collisions (MVCR)
All ALS event types
Structure Fires
Gas leak inside a structure
Major disaster

Priority Two - Potential Danger to Life or Property

Precedence includes those events that demand immediate service, a response with lights and siren, yet the level of skill or number of responders does not require as great an alarm assignment as a priority one event. A priority two incident is often an incident that could escalate to a priority one if not dealt with promptly.

Example:

All BLS event types
Injury motor vehicle collisions (MVCB)
Chimney Fire
Gas leak outside a structure

Priority Three - Property Threat

Precedence includes those events that do not require a lights and siren response. An expeditious response to this type of event should be given. This type of event does not put a life in jeopardy but has the potential to lead to further injury or illness or damage property.

Example:

Fires reported out
BLS Green events
Non-injury motor vehicle collisions (MVCG)
Patient Assist

Priority Four - Harassment/Routine Investigations

Precedence includes those events where a delayed response is permissible and does not require a lights and siren response. This event priority assures that life and property damage is absolute minimal and will not extend due to a delayed response.

Example:

Burn complaints
Smoke investigation
Navigational hazards
Service Events
Wires down (not electrical)

Priority Five - Routine/Citizen/Notifications

All other events and radio transmissions relative to Public Safety Agencies are priority five. It should be understood the priority four dispatches would be placed in a pending mode until a home unit can respond to the event non-code.

Example:

Data requests
Contact requests
Request for social services
Animal problems
Alarm tests
Bomb threat notifications

Appendix E - Definitions of Terms

General Terms. The definitions contained in this section shall apply to the terms as used in this standard. Where terms are not included in this section, common usage of the term shall apply.

Advanced Life Support (ALS). Functional provision of advanced airway management, including intubation, advanced cardiac monitoring, manual defibrillation, establishment and maintenance of intravenous access and drug therapy.

Aircraft Rescue and Fire Fighting (ARFF) Vehicle. A vehicle intended to carry rescue and fire fighting equipment for rescuing occupants and combating fires in aircraft at, or in the vicinity of, an airport.

Aircraft Rescue and Fire Fighting. The fire-fighting actions taken to rescue persons and to control or extinguish fire involving or adjacent to aircraft on the ground.

Alarm Interval. Measured time between emergency event awareness and the alarm time.

Alarm Time The point of receipt of the emergency event at the public safety answering point to the point where sufficient information is known to the dispatcher to deploy applicable units to the emergency.

Alarm. A signal or message from a person or device indicating the existence of a fire, medical emergency, or other situation that requires fire department action.

Apparatus. A motor-driven vehicle or group of vehicles designed and constructed for the purpose of fighting fires.

Approved. Acceptable to the authority having jurisdiction.

Authority Having Jurisdiction. The organization, office, or individual responsible for approving equipment, materials, an installation, or a procedure.

Automatic Aid. A plan developed between two or more fire departments for immediate joint response on first alarms.

Basic Life Support (BLS). Functional provision of patient assessment, including basic airway management; oxygen therapy; stabilization of spinal, musculo-skeletal, soft tissue, and shock injuries; stabilization of bleeding; and stabilization and intervention for sudden illness, poisoning and heat/cold injuries, childbirth, CPR and automatic external defibrillator (AED) capability.

Call Processing Interval. The first ring of the 9-1-1 telephones at the dispatch center and the time the CAD operator activates station and/or company alerting devices. This can, if necessary, be broken down into two additional parameters: "*call taker interval*" (the interval from the first ring of the 9-1-1 telephone until the call taker transfers the call to the dispatcher) and "*dispatcher interval*" (the interval from the time when the call taker transfers the call to the dispatcher until the dispatcher (CAD operator) activates station and/or company alerting devices. This time shall be 60 seconds. (Measured time between alarm time and dispatch time)

Call Processing Time. See definition of Call processing interval.

Company Officer. A supervisor of a crew / company of personnel.

Company. A group of members: (1) Under the direct supervision of an officer; (2) Trained and equipped to perform assigned tasks; (3) Usually organized and identified as engine companies, ladder companies, rescue companies, squad companies, or multi-functional companies; (4) Operating

with one piece of fire apparatus (engine, ladder truck, elevating platform, quint, rescue, squad, ambulance) except where multiple apparatus are assigned that are dispatched and arrive together, continuously operate together, and are managed by a single company officer; (5) Arriving at the incident scene on fire apparatus. "Company," as used in this standard, is synonymous with company unit, response team, crew, and response group, rather than a synonym for a fire department.

Controlled Time. Time when the forward progress of the fire has been stopped or when ABC's have been addressed and managed. (Time stamp)

Dispatch Time. The point of receipt of the emergency event at the public safety answering point to the point where sufficient information is known to the dispatcher and applicable units are notified of the emergency. (Time stamp)

Emergency Event Awareness. The point at which a human being or technologic "sentinel" (i.e., smoke detector, infrared heat detector, etc.) becomes aware that conditions exist requiring and activation of the emergency response system. This is considered the emergency event awareness.

Emergency Event. A specific emergency operation.

Emergency Medical Care. The provision of treatment to patients, including first aid, cardiopulmonary resuscitation, basic life support (EMT level), advanced life support (Paramedic level), and other medical procedures that occur prior to arrival at a hospital or other health care facility.

Emergency Operating Procedure. An organizational directive that establishes a standard course of action on emergency scenes.

Emergency Operations. Activities of the fire department relating to rescue, fire suppression, emergency medical care, and special operations, including response to the scene of the incident and all functions performed at the scene.

Event Initiation Point. The point at which factors occur that may ultimately result in an activation of the emergency response system. Precipitating factors can occur seconds, minutes, hours, or even days before an emergency event awareness is reached. An example is the patient who ignores chest discomfort for days until it reaches a critical point at which he/she makes the decision to seek assistance (emergency event awareness). It is rarely possible to quantify the point at which event initiation occurs.

Fire Apparatus. A fire department emergency vehicle used for rescue, fire suppression, or other specialized functions.

Fire Chief. The highest-ranking officer in charge of a fire department.

Fire Protection. Methods of providing for fire control or fire extinguishments.

Fire Suppression. The activities involved in controlling and extinguishing fires.

First Responder (EMS). Functional provision of initial assessment (i.e., airway, breathing, and circulatory systems) and basic first aid intervention, including CPR and automatic external defibrillator (AED) capability.

Forcible Entry. Techniques used by fire personnel to gain entry into buildings, vehicles, aircraft, or other areas of confinement when normal means of entry are locked or blocked.

Hazard. The potential for harm or damage to people, property or the environment.

Hazardous Material. A substance that presents an unusual danger to persons due to properties of toxicity, chemical reactivity, or decomposition, corrosives, explosion or detonation, etiological hazards, or similar properties.

High Hazard Occupancy. Building that has high hazard materials, processes, or contents.

Incident Commander. The fire department member in overall command of an emergency event.

Incident Management System (IMS). An organized system of roles, responsibilities, and standard operating procedures used to manage emergency operations.

Incident Safety Officer. An individual appointed to respond or assigned at an incident sent by the incident commander to perform the duties and responsibilities of that position as part of the command staff.

Initial Attack. Fire fighting efforts and activities that occur in the time increment between the arrival of the fire department on the scene of a fire and the tactical decision by the incident commander that the resources dispatched on the original response will be insufficient to control and extinguish the fire, or that the fire is extinguished.

Initial Company Time. The point at which the initial company arrives on scene. (Time stamp)

Initial Full Alarm Assignment Interval. Measured time between initial company on scene time and Initial Full Alarm Assignment is completed.

Initial Full Alarm Assignment. Those personnel, equipment, and resources ordinarily dispatched upon notification of an alarm.

Marine Rescue and Fire Fighting. The fire fighting action taken to prevent, control, or extinguish fire involved in or adjacent to a marine vessel and the rescue actions for occupants using normal and emergency routes for egress.

Member. A person involved in performing the duties and responsibilities of a fire department under the auspices of the organization.

Mutual Aid. Reciprocal assistance by emergency services under a prearranged plan.

Public Safety Answering Point (PSAP). Any facility where 911 calls are answered, either directly or through re-routing.

Rapid Intervention Team (RIT). A dedicated crew of fire fighters who are assigned for rapid deployment to rescue lost or trapped members.

Related Activities. Any and all functions that fire department members can be called upon to perform in the performance of their duties.

Rescue. Those activities directed at locating endangered persons at an emergency event, removing those persons from danger, treating the injured, and providing for transport to an appropriate health care facility.

Response Time. The time that begins when units are enroute to the emergency event and ends when units arrive at the scene. (Time stamp)

Shall. Indicates a mandatory requirement.

Should. Indicates a recommendation or that which is advised but not required.

Special Operations. Those emergency events to which the fire department responds that require specific and advanced

training and specialized tools and equipment.

Specialized Apparatus. A fire department emergency vehicle that provides support services at emergency scenes, including command vehicles, rescue vehicles, hazardous material containment vehicles, air supply vehicles, electrical generation and lighting vehicles, or vehicles used to transport equipment and personnel.

Standard Operating Procedure. An organizational directive that establishes a standard administrative course of action.

Structural Fire Fighting. The activities of rescue, fire suppression, and property conservation in buildings, enclosed structures, aircraft interiors, vehicles, vessels, aircraft, or like properties that are involved in a fire or emergency situation.

Sustained Attack. The activities of fire confinement, control, and extinguishments that are beyond those assigned to the initial responding companies.

Team. Two or more individuals who have been assigned a common task and are in communication with each other, coordinate their activities as a work group, and support the safety of one another.

Termination of Event. The point at which unit(s) has completed the assignment and are available to respond to another request for service. (Time stamp)

Travel Interval. Measured time between turnout time and on scene time of initial company.

Turnout Interval. Measured time between dispatch time and turnout time.

Turnout Time. The time beginning when units acknowledge notification of the event to the beginning point of response time. (Time stamp)

Appendix F – Service Delivery Objectives Resolution 2005-03

WHEREAS, Clallam County Fire District No.3 has a mission statement and goals and objectives to guide the organization in providing fire and medical services to our community; and,

WHEREAS, Clallam County Fire District No.3 has a Standard of Operating Procedures, Emergency Operating Procedures and Operational Guidelines that establish service level objectives for response to fire and medical emergencies; and,

WHEREAS, Revised Code of Washington (RCW) 52.33 requires the development of Service Delivery Objectives for the deployment of fire department resources; and,

WHEREAS, Washington State Administrative Code (WAC) has adopted 296-305 as a set of minimum standards for the deployment of fire department resources and the health and safety of fire fighters in Washington State,

WHEREAS, the nation's largest fire and life safety code writing organization, National Fire Protection Association (NFPA), has developed and adopted NFPA 1710 as a nationally recognized standard for the deployment of fire department resources in substantially career fire departments; and,

WHEREAS, levels of service delivery for the fire and emergency medical services are established and determined by local jurisdictions; and,

WHEREAS, RCW are laws which are mandatory

WHEREAS, WAC are laws which are mandatory

WHEREAS, NFPA standards are voluntary and must be adopted by local jurisdictions before they become effective; and,

WHEREAS, Clallam County Fire District No.3 has evaluated the elements identified in WAC 296-305 NFPA Standard 1710 and included those provisions deemed appropriate in the District's Service Delivery Objectives document; and,

NOW, THEREFORE BE IT RESOLVED, that Clallam County Fire District No.3 Board of Commissioners hereby adopts the attached Service Delivery Objectives document as the District's official policy for determining Fire District resource deployment; and,

BE IT FURTHER RESOLVED, that the attached Service Delivery Objectives document officially defines the District's written policies and procedures that establish the distribution and concentration of fixed and mobile resources of the Fire District; and,

This resolution was adopted at a regularly scheduled meeting of the Board of Fire Commissioners of Clallam County Fire District No.3 on January 20th 2009.

CLALLAM COUNTY FIRE PROTECTION DISTRICT No.3

WAC 296-305-05001

Emergency fireground operations -- Structural. (1) The fire department shall establish an incident command system (ICS) with written guidelines applying to all members involved in emergency operations. All members involved in emergency operations shall be familiar with the ICS system. Personnel shall be trained and qualified by their department in the incident command system prior to taking a supervisory role at an emergency scene.

(2) At an emergency incident, the incident commander shall be responsible for the overall safety of all members and all activities occurring at the scene.

(3) All emergency incidents shall be managed by an ICS; the incident commander shall establish an organization with sufficient supervisory personnel to control the position and function of all members operating at the scene and to ensure that safety requirements are satisfied.

(4) At an emergency incident, the incident commander shall have the responsibility to:

(a) Assume and confirm command and take an effective command position.

(b) Perform situation evaluation that includes risk assessment.

(c) Initiate, maintain, and control incident communication.

(d) Develop an overall strategy and attack plan and assign units to operations.

(e) Develop an effective incident organization by managing resources, maintaining an effective span of control, and maintaining direct supervision over the entire incident by creating geographical and/or functional areas as appropriate for the scope and size of the incident.

(f) Review, evaluate, and revise the operational plan as required.

(g) Continue, transfer, and terminate command.

(5) The fire department shall develop a risk management policy that can be implemented into the function of incident command and the development of incident strategies.

The risk management policy should include direction and guidance to the incident commander in formulating incident planning relating to the level of risk that may be undertaken in any given incident to save lives and to save property in as safe a manner as dictated by the situation.

(6) The fire department shall establish written procedures and guidelines for tracking all members operating at an emergency incident.

(7) The incident command system shall provide for control of access to hazardous areas of the incident scene by department members.

(8) Fire fighters operating in hazardous areas at emergency structural fire incidents shall operate in teams of two or more.

Team members operating in hazardous areas shall be in communication with each other through visual, audible, physical, safety guide rope, or electronic means, or by other means in order to coordinate their activities. Team members shall be in close proximity to each other to provide assistance in case of emergency.

(9) The fire department shall provide personnel for the rescue of members operating at emergency incidents as the need arises.

(10) Before beginning interior structural fire fighting operations, the incident commander must evaluate the situation and risks to operating teams.

(a) Except as provided in WAC 296-305-05001(11), fire fighters must not engage in interior structural fire fighting in the absence of at least two standby fire fighters.

(b) All standby fire fighters must be fully equipped with the appropriate protective clothing, protective equipment and SCBA.

(c) Standby members must remain aware of the status of fire fighters in the hazardous area.

(d) Standby members must remain in positive communication with the entry team(s), in full protective clothing the SCBA donned in the standby mode.

(e) Standby members may be permitted to perform other duties outside the hazardous area, provided constant communication is maintained between a standby member and the entry team(s), and provided that those duties will not interfere with the standby members' ability to participate in a rescue as appropriate.

(f) Early consideration should be given to providing one or more rapid intervention teams commensurate with the needs of the situation.

(11) In the "initial stage" of a structure fire-incident where only one team is operating in the hazardous area, where additional resources can reasonably be expected, and where exceptional circumstances indicate that immediate action may be necessary to prevent or mitigate the loss of life or serious injury to citizenry or fire fighters, at least one additional fire fighter must be assigned to stand by outside the hazardous area where the team is operating.

(a) The standby fire fighter must remain aware of the status of fire fighters in the hazardous area.

(b) The standby fire fighter must remain in positive communication with the entry team, in full protective clothing with SCBA donned in the standby mode.

(c) The standby fire fighter may be permitted to perform other duties outside the hazardous area, provided constant communications is maintained with the team in the hazardous area, and provided that those duties will not interfere with his or her ability to initiate a rescue as appropriate.

(d) Once additional resources have arrived on the scene, the incident must no longer be considered in its initial stage and all the requirements of WAC 296-305-05001(10) must be met.

Note: Nothing in this section shall prevent activities which may reasonably be taken by members first on the scene to determine the nature and extent of fire involvement.

(12) The fire department shall develop and maintain written guidelines for the safety of members at incidents that involve violence, unrest, or civil disturbance. Such situations may include but not be limited to riots, fights, violent crimes, drug related situations, family disturbances, deranged individuals, and people interfering with fire department operations.

(13) Officers at emergency scenes shall maintain an awareness of the physical condition of members operating within their span of control and ensure that adequate steps are taken to provide for their safety and health. The command structure shall be utilized to request relief and reassignment of fatigued crews.

(14) Wildfire suppression personal protective clothing/equipment shall not be utilized for interior attacks on structures.

(15) Teams in the hazardous area shall have positive communication capabilities with the incident command structure. Incident radio communication capabilities within the incident command structure shall include monitoring of incident-assigned frequencies (including mutual aid radio frequencies).

(16) Prior to overhaul, buildings shall be surveyed for possible safety and health hazards. Fire fighters shall be informed of hazards observed during the survey.

(17) During the overhaul phase officers shall identify materials likely to contain asbestos, limiting the breaching of structural materials to that which is necessary to prevent rekindle.

(18) Floatation devices shall be made available to fire fighters at incidents where drowning is a possibility. This is not intended to include pools and hot tubs.

(19) Fire fighters shall not cut the electrical drip loop providing power to the structure nor pull the electrical meter.

(20) Traffic cones or other traffic control devices shall be utilized when vehicular traffic hazards exist at an emergency operation.

[Statutory Authority: RCW 49.17.040. 99-05-080, § 296-305-05001, filed 2/17/99, effective 6/1/99. Statutory Authority: RCW 49.17.010, [49.17].050 and [49.17].060. 96-11-067, § 296-305-05001, filed 5/10/96, effective 1/1/97.]