



RFP #823
PROFESSIONAL, TECHNICAL AND EXPERT SERVICES

Clark County Washington

RELEASE DATE: WEDNESDAY, APRIL 20, 2022
DUE DATE: WEDNESDAY, MAY 18, 2022 by 1:30 pm

Request for Proposal for:

Clark Regional Emergency Services Agency (CRESA)
**SERVICE, STAFFING and INFRASTRUCTURE
ASSESSMENT**

SUBMIT:

One (1) Original
Four (4) Complete Copies

of the Proposal to:

<u>Shipping Method of your Choice or Hand Delivery</u>	<u>United States Postal Service</u>
Clark County ATTN: Office of Purchasing 1300 Franklin Street, 6 th Floor, Suite 650 Vancouver WA 98660 564-397-2323	Clark County ATTN: Office of Purchasing PO Box 5000 Vancouver WA 98666-5000 564-397-2323

Office Hours: 8:00 am – 3:00 pm, Monday – Friday, except Legal Holidays.

No electronic submissions.

****Proposals must be delivered to the Purchasing office – No Exceptions.**

****Proposals must be date and time stamped by Purchasing staff before 1:30 pm on due date.**

Refer Questions to Project Manager:

Doug Smith-Lee
Program Manager/Clark Regional Emergency
Services Agency
Doug.SmithLee@clark.wa.gov
360-992-6276

ADMINISTRATIVE REQUIREMENTS - Contractors shall comply with all management and administrative requirements established by Washington Administrative Code (WAC), the Revised Code of the State of Washington (RCW), and any subsequent amendments or modifications, as applicable to providers licensed in the State of Washington.

ALL proposals submitted become the property of Clark County. It is understood and agreed that the prospective Proposer claims no proprietary rights to the ideas and written materials contained in or attached to the proposal submitted. Clark County has the right to reject or accept proprietary information.

AUTHORSHIP - Applicants must identify any assistance provided by agencies or individuals outside the proposers own organization in preparing the proposal. No contingent fees for such assistance will be allowed to be paid under any contract resulting from this RFP.

CANCELLATION OF AWARD - Clark County reserves the right to immediately cancel an award if the contractual agreement has not been entered into by both parties or if new state regulations or policy make it necessary to change the program purpose or content, discontinue such programs, or impose funding reductions. In those cases where negotiation of contract activities are necessary, Clark County reserves the right to limit the period of negotiation to sixty (60) days after which time funds may be unencumbered.

CONFIDENTIALLY - Proposer shall comply with all applicable state and federal laws governing the confidentiality of information.

CONFLICT OF INTEREST - All proposals submitted must contain a statement disclosing or denying any interest, financial or otherwise, that any employee or official of Clark County or the appropriate Advisory Board may have in the proposing agency or proposed project.

CONSORTIUM OF AGENCIES - Any consortium of companies or agencies submitting a proposal must certify that each company or agency of the consortium can meet the requirements set forth in the RFP.

COST OF PROPOSAL & AWARD - The contract award will not be final until Clark County and the prospective contractor have executed a contractual agreement. The contractual agreement consists of the following parts: (a) the basic provisions and general terms and conditions, (b) the special terms and conditions, (c) the project description and goals (Statement of Work), and (d) the budget and payment terms. Clark County is not responsible for any costs incurred prior to the effective date of the contract. Clark County reserves the right to make an award without further negotiation of the proposal submitted. Therefore, the proposal should be submitted in final form from a budgetary, technical, and programmatic standpoint.

DISPUTES - Clark County encourages the use of informal resolution to address complaints or disputes arising over any actions in implementing the provisions of this RFP. Written complaints should be addressed to Clark County – Purchasing, P.O. Box 5000, Vancouver, Washington 98666-5000.

DIVERSITY IN EMPLOYMENT AND CONTRACTING REQUIREMENTS - It is the policy of Clark County to require equal opportunity in employment and services subject to eligibility standards that may be required for a specific program. Clark County is an equal opportunity employer and is committed to providing equal opportunity in employment and in access to the provision of all county services. Clark County's Equal Employment Opportunity Plan is available at <http://www.clark.wa.gov/hr/documents.html>. This commitment applies regardless of race, color, religion, creed, sex, marital status, national origin, disability, age, veteran status, on-the-job injury, or sexual orientation. Employment decisions are made without consideration of these or any other factors that are prohibited by law. In compliance with department of Labor Regulations implementing Section 504 of the rehabilitation Act of 1973, as amended, no qualified handicapped individual shall be discriminated against in admission or access to any program or activity. The prospective contractor must agree to provide equal opportunity in the administration of the contract, and its subcontracts or other agreements.

ENVIRONMENTALLY RESPONSIBLE PURCHASING PROGRAM - Clark County has implemented an Environmentally Responsible Purchasing Policy with a goal to reduce negative impacts on human health and the environment. Negative environmental impacts include, but are not limited to, greenhouse gases, air pollution emissions, water contamination, waste from the manufacturing process and waste in packaging. This policy also seeks to increase: 1) water and energy efficiency; 2) renewable energy sources; 3) use of products with recycled content; 4) product durability; 5) use of products that can be recycled, reused, or composted at the end of its life cycle. Product criteria have been established on the Green Purchasing List <https://clark.wa.gov/sites/default/files/dept/files/general-services/Purchasing/ERP%20Policy.pdf>

INDEPENDENT PRICE DETERMINATION - The prospective contractor guarantees that, in connection with this proposal, the prices and/or cost data have been arrived at independently, without consultation, communication, or agreement for the purpose of restricting competition. This does not preclude or impede the formation of a consortium of companies and/or agencies for purposes of engaging in jointly sponsored proposals.

INTERLOCAL AGREEMENT - Clark County has made this RFP subject to Washington State statute RCW 39.34. Therefore, the proposer may, at the proposers option, extend identical prices and services to other public agencies wishing to participate in this RFP. Each public agency wishing to utilize this RFP will issue a purchase order (or contract) binding only their agency. Each contract is between the proposer and the individual agency with no liability to Clark County.

LIMITATION - This RFP does not commit Clark County to award a contract, to pay any costs incurred in the preparation of a response to this RFP, or to procure or contract for services or supplies.

LATE PROPOSALS - A proposal received after the date and time indicated above will not be accepted. No exceptions will be made.

ORAL PRESENTATIONS - An oral presentation may be required of those prospective contractors whose proposals are under consideration. Prospective contractors may be informed that an oral presentation is desired and will be notified of the date, time and location the oral presentation is to be conducted.

OTHER AUDIT/MONITORING REQUIREMENTS - In addition, auditing or monitoring for the following purposes will be conducted at the discretion of Clark County: Fund accountability; Contract compliance; and Program performance.

PRICE WARRANT - The proposer shall warrant that the costs quoted for services in response to the RFP are not in excess of those which would be charged any other individual or entity for the same services performed by the prospective contractor, in a similar socioeconomic, geographical region.

PROTESTS - Must be submitted to the Purchasing Department.

PUBLIC SAFETY - May require limiting access to public work sites, public facilities, and public offices, sometimes without advance notice. The successful Proposer's employees and agents shall carry sufficient identification to show by whom they are employed and display it upon request to security personnel. County project managers have discretion to require the successful Proposer's employees and agents to be escorted to and from any public office, facility or work site if national or local security appears to require it.

REJECTION OF PROPOSALS - Clark County reserves the right to accept or reject any or all proposals received as a result of this RFP, to negotiate with any or all prospective contractors on modifications to proposals, to waive formalities, to postpone award, or to cancel in part or in its entirety this RFP if it is in the best interest of Clark County to do so.

SUBCONTRACTING - No activities or services included as a part of this proposal may be subcontracted to another organization, firm, or individual without the approval of Clark County. Such intent to subcontract shall be clearly identified in the proposal. It is understood that the contractor is held responsible for the satisfactory accomplishment of the service or activities included in a subcontract.

VERBAL PROPOSALS - Verbal proposals will not be considered in making the award of any contract as a result of this RFP.

WORKERS COMPENSATION INSURANCE – The contractor shall comply with R.C.W. Title 51- with minimum coverage limits of \$500,000 for each accident, or provide evidence that State law does not require such coverage.

FOR ALTERNATIVE FORMATS
Clark County ADA Office: V: 564-397-2322
ADA@clark.wa.gov

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CRESA Service, Staffing and Infrastructure Assessment

Part I Proposal Requirements

Section IA General Information

1. Introduction

The purpose of this RFP is to solicit proposals for professional services related to recommending appropriate service levels for Clark Regional Emergency Services Agency (CRESA), as well as determining the staff and resources needed to support those service levels based on an assessment of current and future workload.

CRESA has historically provided a high level of service to our community and user agencies. It's our desire to proactively define the components of service in order to continually provide that high level of service in the future. Ongoing changes in higher call volumes; changing demands in processing 911 and 311 calls; and technology requires that we anticipate now, what the agency will need in the future for staffing and infrastructure. These demands are even greater due to the fact that CRESA has not added dispatcher positions since 2006, or call-takers since 2016.

Based on historic call volumes and projected population growth rates, CRESA will continue to see an increase in emergency and non-emergency calls. Both of which come with a corresponding increase in the number of emergency responders tracked and supported by CRESA. In addition, recent changes in the law in Washington State, require longer times on task for the call takers to determine if a law response is warranted, or response or referral to a mental health or "crisis responder" (yet to be determined).

By establishing an agreed upon approach for determining service levels, staffing and infrastructure needs, CRESA can develop a long term plan with identified decision points indicating when change needs to occur. Without a long term plan, CRESA will see a decrease in service as insufficient staffing leads to burnout, which leads to increased sick leave and employee turnover, which leads to increased overtime which exacerbates burnout, employee turnover and lower staffing levels.

Proposers shall respond to all sections to be considered.

Clark County has made this Request for Proposal subject to Washington State statute RCW 39.34. Therefore, the proposer may, at the proposers' option, extend identical prices and services to other public agencies wishing to participate in this RFP. Each public agency wishing to utilize this proposal will issue a purchase order (or contract) binding only their agency. Each contract is between the proposer and the individual agency with no liability to Clark County.

2. Background

CRESA was first organized under the Interlocal Cooperation Act of the State of Washington (R.C.W. 39.34) in 1976. In 2017, CRESA began the process to become a public corporation organized under the state's Public Development Authority laws (R.C.W. 35.21.730 – 35-21-759). CRESA contracts with Clark County, Washington for certain services including purchasing.

CRESA is a regional public safety agency that provides: 1) 9-1-1 dispatch services; 2) public safety 800 MHz radio system and services; and 3) emergency management services.

CRESA provides such services to: Clark County, the Cities of Battle Ground, Camas, La Center, Ridgefield, Vancouver, Washougal, and Yacolt, and Clark County Fire District's 3, 6, 9 (dba, East County Fire and Rescue), 10, 11 (dba, Clark County Fire and Rescue), 13, North Country EMS and Cowlitz-Skamania Fire District #7.

CRESA also hosts the Region IV Homeland Security Office which coordinates homeland security efforts with the four SW Washington Counties of Clark, Cowlitz, Skamania and Wahkiakum.

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In 2020, CRESA served approximately 500,000 citizens in Clark County handling an estimated 411,000 calls for service and generated around 383,000 events (See [Attachment D](#) “CRESA’s Vital Statistics” for further details). Based on a 2017 environmental scan done by staff, CRESA projects a 31% growth in population and a 23% increase in calls for service over the next 25 years (see [Attachment E](#) for “2017 Environmental Scan” for further details). CRESA is located in a 23,852 square foot facility that includes 9-1-1 operations, a regional Emergency Operations Center (EOC), a radio and telephone room, a training room and administrative office space. CRESA’s 9-1-1 operations has # consoles all of which are capable of receiving 9-1-1 calls and dispatching.

3. Scope of Project

CRESA desires to proactively define the components of service in order to continually provide that high level of service in the future. Changes in population and technology; and changes within the agencies that CRESA serves requires the agency to anticipate what it will need in the future regarding staffing, infrastructure, funding and governance.

Based on historic call volumes and projected population growth rates, CRESA will continue to see an increase in emergency and non-emergency calls. Both of which come with an anticipated increase in the number of emergency responders that need to be tracked and supported by CRESA. In addition, recent changes to the law in Washington State, have required longer times on task for the call takers to determine if a law response is warranted, vs. response or referral to a mental health or “crisis responder” (yet to be determined).

The successful proposer will work with the CRESA Board and client agencies to: 1) determine which of the two proposed governance models¹ provide the greatest benefit to our participating jurisdictions and user agencies as well as CRESA; 2) develop meaningful performance measurements; and 3) define appropriate service levels. It is important to work with these agencies since their staffing and performance goals have a direct impact on CRESA’s resources. The successful bidder will also compare CRESA’s current work processes to other public safety communication centers and industry standards to identify any process changes that may enhance the effective and efficient delivery of services.

Based on the defined service levels, the successful proposer will then work with CRESA’s stakeholders and staff to establish an agreed upon approach for determining appropriate staffing levels and infrastructure needs. This approach will include the development of a plan with identified funding requirements and decision points indicating when change needs to occur.

Specific tasks of this project will be based on the awarded contract and may include, but are not limited to:

1. **Project Kick-Off** - Meet with CRESA staff to get a shared understanding of the project’s: purpose, objectives, RAID (risks, assumptions, issues and dependencies) scope, timeline and communications plan.
2. **Governance Model** - Examine the two governance models; and meet with CRESA staff and stakeholders to determine what legal structure will provide the greatest benefit to CRESA and its signature agencies.

¹ CRESA is currently a separate legal entity authorized under state’s Interlocal Cooperation Act (RCW 39.34.030(3)(b)). From November 2016 through March 2018, CRESA worked with the participating jurisdictions in becoming a Public Development Authority authorized under RCW 35.21.730, et seq. In August of 2018, the work was tabled due to various issues raised by the City of Vancouver.

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CRESA Service, Staffing and Infrastructure Assessment

3. **Current Workload Assessment & Staffing Analysis:**
 - a. Determine CRESA 9-1-1 Operations workload demand and staffing needs by:
 - i. Comparing System Design, Workflow and Time-on-Task - Compare CRESA's current system design and work processes to other similar and larger sized public safety communication centers to identify any enhancements which may increase the effective and efficient delivery of services.
 - ii. Projecting Current and Future Service Demand – Total estimated calls broken down by incoming 9-1-1, 3-1-1 and other non-emergency calls; and outgoing calls; as well as anticipated growth of CRESA's user agencies through 2045.
 - iii. Determining Call Processing Capability – Average call completion time (from call answer to call being disconnected) plus average radio talk time per dispatched call, taking into account potential any efficiencies gained from enhancements under 3.ai above.
 - iv. Estimating Staff Needs – Project current and future staffing levels through 2045, factoring in employee availability and call processing capability; as well as the current and projected service demand.
 - b. Determine CRESA Emergency Management workload demand and staffing needs by:
 - i. Recommending Emergency Management Service Levels based on most recent hazard and vulnerability assessment; predictive modeling from state and federal agencies on anticipated hazards, population density; and the needs and capabilities of participating jurisdictions.
 - ii. Recommending Emergency Management Staffing factoring in anticipated growth in service demand through 2045 that supports the needed service levels outlines below. This staffing analysis should include a mixture of full-time, part-time and contract options.
4. **Performance Metrics and Desired Service Levels:**
 - a. Time-life Critical Standards- Related to call triage, what processes are considered "Best Practice" to identify and dispatch time-life critical events as quickly as possible. What metrics should be used to measure these incidents?
 - b. Lower Priority Standards - Should low priority (non-emergent) calls be measured in the same manner as time-life critical calls? If not, what is a meaningful measurement?
 - c. Client Agency Services Desired –The successful proposer will meet and work with CRESA's user agencies to determine the desired services levels and performance standards.
5. **Future Technology**
 - a. Assist CRESA in evaluating the costs and benefits at implementing new technologies. For example, the costs (i.e., increased time-on-task) and benefits (increase situational awareness) for implementation of NG911 enhancements such as images and video sent to 911.
6. **Strategic Implementation Plan²:**
 - a. Recommend Performance Metrics & Standards Based on the "Workload Assessment and Staffing Analysis" plus the findings from the "Performance Metrics and Desired Service Levels" recommend standards for the following metrics that may include but are not limited to:

² Note – The Strategic Implementation Plan should identify trigger points as to when investments in staffing and resources should occur.

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CRESA Service, Staffing and Infrastructure Assessment

- i. Call Answer Times
- ii. Call Abandonment Rates
- iii. Call Processing Times by Priority and Discipline
- iv. Dispatch Processing Times by Priority and Discipline
- b. Recommend Dispatcher to Officer Ratios. With the goal of maintaining a high level of officer safety and awareness, determine the number of officers that one dispatcher is able to track and support under routine operations verses high-risk incidents. Recommend best practice to transition from routine to a more focused support when needed.
- c. Recommend Dispatcher to Fire Unit Ratios. With the goal of maintaining a high level of firefighter safety and awareness, determine the number of units that one dispatcher is able to track and support under routine operations verses incidents that involve a “working fire” or other high-risk incidents. Recommend best practices to transition from routine to a more focused support when needed.
- d. Recommended Operations Staffing: Based on the results from the tasks listed above, recommend 9-1-1 Operations staffing levels by hour of day and day of week and per month factoring in projected growth in demand through 2045.
- e. Recommend Staff Levels for Other CRESA Divisions:
 - i. Recommend Emergency Management Staffing factoring in anticipated growth in service demand through 2045 that supports the needed service levels outlines below. This staffing analysis should include a mixture of full-time, part-time and contract options.
 - ii. Recommend Technical Services Staffing factoring in anticipated growth in service demand through 2045.
 - iii. Recommend Administrative Services Staffing factoring in anticipated growth in service demand through 2045.
- f. Recommend Emergency Management Service Levels based on most recent hazard and vulnerability assessment; predictive modeling from state and federal agencies on anticipated hazards, population density; and needs and capabilities of participating jurisdictions.
- g. Recommend Emergency Management Funding Structures to support the needed service and staffing levels. Funding structures should assume that the current 40% federal grant funding will no longer be available by 2027.
- i. Recommend Infrastructure factoring anticipated growth in service demand and staffing needs through 2045. Advise: 1) what’s currently available in the existing facility and when CRESA needs to plan for a new facility; and 2) when and how the capacity of the existing radio infrastructure will need to be increased.

4. Project Funding

Allocation of funds for this RFP will be established based on the funds requested in the selected proposal.

Clark County, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

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El Condado de Clark, de acuerdo con las disposiciones del Título VI de la Ley de Derechos Civiles de 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d a 2000d-4) y el Reglamento, por la presente notifica a todos los postores que se asegurará afirmativamente de que cualquier contrato celebrado de conformidad con este anuncio, las empresas comerciales desfavorecidas tendrán la oportunidad plena y justa de presentar ofertas en respuesta a esta invitación y no serán discriminadas por motivos de raza, color u origen nacional en consideración a un laudo.

5. Timeline for Selection

The following dates are the **intended** timeline:

Proposals Due	May 18, 2022
Proposal Review/Evaluation Period	May 19 – 25, 2022
Selection Committee Recommendation	May 20 th , 2022
Board Approval of Recommendation	June 6, 2022
Contract Negotiation/Execution	June 3 – July 7, 2022
Contract Intended to Begin	July 11, 2022

6. Employment Verification

To be considered **responsive** to any formal Clark County Bid/RFP or Small Works Quote, all vendors shall submit before, include with their response or within **48 hours** after submittal, a recent copy of their E-Verify MOU or proof of pending enrollment. The awarded contractor shall be responsible to provide Clark County with the same E-Verify enrollment documentation for each sub-contractor (\$25,000 or more) within thirty days after the sub-contractor starts work. Contractors and sub-contractors shall provide a report(s) showing status of new employee's hired after the date of the MOU. The status report shall be directed to the county department project manager at the end of the contract, or annually, whichever comes first. E-Verify information and enrollment is available at the Department of Homeland Security web page: www.dhs.gov/E-Verify

How to submit the MOU in advance of the submittal date:

1. Hand deliver to 1300 Franklin St, Suite 650, Vancouver, WA 98660, or;
2. E-mail: koni.odell@clark.wa.gov or priscilla.ricci@clark.wa.gov

Note : Sole Proprietors shall submit a letter stating exempt.

Section IB

Work Requirements

1. Required Services

The Contractor shall provide the services as outlined under the Scope of Project (Section I.A.3).

2. County Performed Work

CRESA's staff shall perform the following work:

- Develop and monitor the budget and work plans to ensure the deliverables are met.
- Provide all data and reference materials to the contractor as needed.
- Coordinate meetings related to the project to ensure the inclusion of key stakeholders.
- Prepare meeting materials (agenda, minutes, handouts, etc.)
- Monitor invoices and payments to contractor
- Monitor contractor performance.

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3. Deliverables & Schedule

Deliverables	Start Date - End Date
1. Project Kick-Off Meeting	CRESA desires proposers provide a timely project schedule that ensures a sound plan is developed for the next 20+ years. CRESA recognized some of the deliverables can be worked on concurrently.
2. Governance Model	
3. Work Load Assessment & Staffing Analysis	
4. Performance Metrics and Service Levels	
5. Future Technology Assessment	
6. Strategic Implementation Plan	
7. Project Wrap Up	

4. Place of Performance

Clark Regional Emergency Services Agency, 710 West 13th Street, Vancouver, WA 98660.

5. Period of Performance

A contract awarded as a result of this RFP will be for (approximately 12 months) and is intended to begin on July 11, 2022.

Clark County reserves the right to extend the contract resulting from this RFP for a period of two (2) additional years, in one (1) year increments, with the same terms and conditions, by service of a written notice of its intention to do so prior to the contract termination date.

6. Prevailing Wage (When Applicable)

As of July 1, 2019, it is required that contractors meet the new requirements for Prevailing Wage and public works requirements, per RCW 39.04.350. Proposer shall be either exempt, by having a valid Washington business license for three years or more and completed three or more public works projects or received and completed training on prevailing wage and public works requirements.

Pursuant to State of Washington RCW 39.12, all payment for salaries and wages shall conform to State of Washington Department of Labor and Industries as prevailing wage rates. For this project select the Clark County rates that apply on the proposal closing date from either of these sites:

<http://www.wsdot.wa.gov/Design/ProjectDev/WageRates/default.htm>

<http://www.ini.wa.gov/TradesLicensing/PrevWage/WageRates>

Before payment is made by the Local Agency of any sums due under this contract, the Local Agency must receive from the Contractor and each Subcontractor a copy of "Statement of Intent to Pay Prevailing Wages" (Form L & I Number 700-29) approved by the Washington State Department of Labor and Industries.

A fee of \$45.00 per each "Statement of Intent to Pay Prevailing Wages" and "Affidavit of Wages Paid" is required to accompany each form submitted to this Department of Labor and Industries. The Contractor is responsible for payment of these fees and shall make all applications directly to the Department of Labor and Industries. These fees shall be incidental to all the proposed items of this contract.

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7. Debarred/Suspended Federally or Washington State debarred or suspended suppliers may not participate in this Request for Proposal.

All proposer's must fill out, sign and submit the "Certification Regarding Debarment, Suspension, and Other Responsibility Matter" form with their proposal to be eligible to participate.

8. Public Disclosure This procurement is subject to the Washington Public Records Act (the "Act"), chapter 42.56 RCW. Once in the County's possession, all of the RFP Submittals shall be considered public records and available for public records inspection and copying, unless exempt under the Act.

If a Respondent or Proposer considers any portion of an RFP Submittal to be protected under the law, whether in electronic or hard copy form, the Respondent or Proposer shall clearly identify each such portion with the word "PROPRIETARY". The County will notify the Respondent or Proposer in writing of the request and allow the Respondent or Proposer ten (10) days to obtain a court order enjoining release of the record(s). If the Respondent or Proposer does not take such action within the ten (10) day period, the County will release the portions of the RFP Submittal deemed subject to disclosure. All Respondents and Proposers who provide RFP Submittals for this procurement accept the procedures described above and agree that the County shall not be responsible or liable in any way for any losses that the party may incur from the disclosure of records to a third party who requests them.

9. Insurance/Bond

A. Waiver of Subrogation

All insurance coverage maintained or procured pursuant to this agreement shall be endorsed to waive subrogation against County, its elected or appointed officers, agents, officials, employees and volunteers or shall specifically allow Contractor or others providing insurance evidence in compliance with these specifications to waive their right of recovery prior to a loss. Contractor hereby waives its own right of recovery against County and shall require similar written express waivers and insurance clauses from each of its subcontractors.

B. Proof of Insurance

Proof of Insurance shall be provided prior to the starting of the contract performance. Proof will be on an ACORD Certificate(s) of Liability Insurance, which the Proposer shall provide to Clark County. Each certificate will show the coverage, deductible and policy period. Policies shall be endorsed to state that coverage will not be suspended, voided, canceled or reduced without a 30-day written notice by mail. It is the Proposer's responsibility to provide evidence of continuing coverage during the overlap periods of the policy and the contract.

C. Worker's Compensation

As required by the industrial insurance laws of the State of Washington.

D. Automobile

If the Proposer or its employees use motor vehicles in conducting activities under this Contract, liability insurance covering bodily injury and property damage shall be provided by the Proposer through a commercial automobile insurance policy. The policy shall cover all owned and non-owned vehicles. Such insurance shall have minimum limits of \$1,000,000 per occurrence, combined single limit for bodily injury liability and property damage liability with a \$1,000,000 annual aggregate limit. If the Proposer does not use motor vehicles in conducting activities under this Contract, then written confirmation to that effect on Proposer letterhead shall be submitted by the Proposer.

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E. Commercial General Liability (CGL) Insurance written under ISO Form CG0001 or its latest equivalent with minimum limits of \$1,000,000 per occurrence and in the aggregate for each one year policy period. Personal and Advertising Injury \$1,000,000 and General Aggregate \$1,000,000. This policy will renew annually. This coverage may be any combination of primary, umbrella or excess liability coverage affording total liability limits of not less than \$1,000,000 per occurrence and in the aggregate. However, if other policies are added they must be a follow-form policy in language, renewal date, and have no more exclusions than the underlying coverage. Products and Completed Operations coverage shall be provided for a period of three years following Substantial Completion of the Work. The deductible will not be more than \$50,000 unless prior arrangements are made with Clark County on a case by case basis; the criterion is the Contractor's liquidity and ability to pay from its own resources regardless of coverage status due to cancellation, reservation of rights, or other no-coverage-enforce reason. Coverage shall not contain any endorsement(s) excluding nor limiting Product/Completed Operations, Contractual Liability or Cross Liability. Clark County needs to be listed as additional insured.

F. Professional Liability (aka Errors and Omissions)

The Proposer shall obtain, at Proposer's expense, and keep in force during the term of this contract Professional Liability insurance policy to protect against legal liability arising out of contract activity. Such insurance shall provide a minimum of \$1,000,000 per occurrence. The deductible will not be more than \$25,000 unless prior arrangements are made with Clark County on a case by case basis; the criterion is the Proposer's liquidity and ability to pay from its own resources. It should be an "Occurrence Form" policy. If the policy is "Claims Made", then Extended Reporting Period Coverage (Tail coverage) shall be purchased for three (3) years after the end of the contract.

G. Pollution and Asbestos Liability

If hazardous material is encountered during any construction, the Project Manager must be notified immediately, and if any work is done to remove it, any Proposer performing work shall obtain and keep in effect during the term of the contract, Pollution Liability Insurance, including Asbestos Liability covering bodily injury, property damage, environmental damage, including any related clean-up costs. Combined single limit should be a minimum of \$1,000,000.00.

H. Umbrella Liability Coverage

Umbrella Coverage in the amount of \$1,000,000 shall be provided and will apply over all liability policies without exception, including Commercial General Liability and Automobile Liability. All policies must have a Best's Rating of A-VII or better.

10. Plan Holders List

All proposers are required to be listed on the plan holders list.

- ✓ Prior to submission of proposal, please confirm your organization is on the Plan Holders List below:

To view the Plan Holders List, please click on the link below or copy and paste into your browser. Clark County RFP site: <https://clark.wa.gov/internal-services/purchasing-overview>

- If your organization is NOT listed, submit Attachment B - Letter of Interest to ensure your inclusion.
- Proposals received by Clark County by proposers not included on the Plan Holders List may be considered non-responsive.

Request for Proposal #823

CRESA Service, Staffing and Infrastructure Assessment

Part II Proposal Preparation and Submittal

Section IIA Pre-Submittal Meeting / Clarification

1. Pre-Submittal Meeting
There are no plans to hold a pre-submittal meeting.
2. Proposal Clarification
Questions and Requests for Clarification regarding this Request for Proposal must be directed in writing, via email, to the person listed on the cover page.

The deadline for submitting such questions/clarifications is May 6, 2022 by 3:00 pm.

An addendum will be issued no later than May 12, 2022 to all recorded holders of the RFP if a substantive clarification is in order.

The Questions & Answers/Clarifications are available for review at the link below. Each proposer is strongly encouraged to review this document prior to submitting their proposal.

Clark County RFP site: <https://clark.wa.gov/internal-services/request-proposal-1>

Section IIB Proposal Submission

1. Proposals Due
Sealed proposals must be received no later than the date, time and location specified on the cover of this document.

The outside of the envelope/package shall clearly identify:
 1. RFP Number and;
 2. TITLE and;
 3. Name and Address of the Proposer.
Responses received after submittal time will not be considered and will be returned to the Proposer - unopened.

Proposals received with insufficient copies (as noted on the cover of this document) cannot be properly disseminated to the Review Committee and other reviewers for necessary action, therefore, may not be accepted.
2. Proposal
Proposals must be clear, succinct and not exceed twenty-five (25) pages, excluding resumes, E-Verify and coversheet. Proposer's who submit more than the pages indicated may not have the additional pages of the proposal read or considered.

For purposes of review and in the interest of the County, the County encourages the use of submittal materials (i.e. paper, dividers, binders, brochures, etc.) that contain post-consumer recycled content and are readily recyclable.

The County discourages the use of materials that cannot be readily recycled such as PVC (vinyl) binders, spiral bindings, and plastic or glossy covers or dividers. Alternative bindings such as reusable/recyclable binding posts, reusable binder clips or binder rings, and recyclable cardboard/paperboard binders are examples of preferable submittal materials.

Request for Proposal #823

CRESA Service, Staffing and Infrastructure Assessment

Proposers are encouraged to print/copy on both sides of a single sheet of paper wherever applicable; if sheets are printed on both sides, it is considered to be two pages. Color is acceptable, but content should not be lost by black-and-white printing or copying.

All submittals will be evaluated on the completeness and quality of the content. Only those Proposers providing complete information as required will be considered for evaluation. The ability to follow these instructions demonstrates attention to detail.

Additional support documents, such as sales brochures, may be included with each copy unless otherwise specified.

Section IIC

Proposal Content

1. Cover Sheet
This form is to be used as your proposal Cover Sheet.
See Cover Sheet - Attachment A

2. Project Team
Provide an organizational chart that clearly delineates responsibility, authority, and chain of command within the organization. Provide resume(s) of the key project individual(s).

3. Management Approach
Describe how your organization manages projects including planning, implementation, monitoring and control, completion of deliverables and project closeout.

4. Respondent's Capabilities
Please furnish such information and references that will help the District assess your organization's reputation within the management consulting industry. Specifically, furnish the following required information:
 - a) Organization. Provide description of legal organization stating whether it is an individual proprietorship, partnership, corporation, or subsidiary of any other corporation.

 - b) History Of Service. List previous experience in facility needs assessment and other relevant consulting services within the past five (5) years. Experience in working with emergency communications centers preferred. For each organization listed, provide the name, address and phone number of a key contact.

 - c) Industry Leadership. Supply evidence of leadership within the industry, including offices held in national trade organizations, awards received, publications written by your organization's personnel, contributions to published research, and other.

5. Project Approach and Understanding
Using the Deliverables and Schedule in Section I.B.3 as a basic outline to start from, describe your approach in managing this project. This approach should be sufficiently broad in scope so as to accomplish the key deliverables in order to provide a complete facility needs assessment.

6. Proposed Cost
Provide a proposed budget that details: team hourly rates, estimated hours and total personnel fees; travel expenses; and estimated equipment and supply costs.

Request for Proposal #823 CRESA Service, Staffing and Infrastructure Assessment

7. Employment Verification

Please refer to section 1A.6. – E-Verify

IMPORTANT NOTE: Include this portion of the response immediately **AFTER** the cover page, if not already on file with Clark County. Current vendors on file can be viewed at:
<https://clark.wa.gov/internal-services/purchasing-overview>

**Request for Proposal #823
CRESA Service, Staffing and Infrastructure Assessment**

Part III Proposal Evaluation & Contract Award

Section IIIA Proposal Review and Selection

1. Evaluation and Selection: Proposals received in response to this RFP will be evaluated by a Review Committee. Committee review results and recommendations may be presented to an appropriate advisory board prior to the consent process with the Clark Regional Emergency Services Agency Administrative Board.

2. Evaluation Criteria Scoring Each proposal received in response to the RFP will be objectively evaluated and rated according to a specified point system.

A one hundred (100) point system will be used, weighted against the following criteria:

Project Approach and Understanding	30
Proposers Capabilities:	
Organization	Pass/Fail
Project Team	20
History of Service	20
Industry Leadership	20
Cost	10
Total Points	100

Section IIIB Contract Award

1. Consultant Selection CRESA will award a contract to the highest scoring Proposer. Should CRESA not reach a favorable agreement with the highest scoring Proposer, CRESA shall terminate negotiations and commence negotiations with the second highest scoring Proposer and so on until a favorable agreement is reached.

2. Contract Development The proposal and all responses provided by the successful Proposer may become a part of the final contract.

3. Award Review The public may view proposal documents by public records request at www.clark.wa.gov . After contract execution, proposers may seek additional clarification on the scores, proposals and interviews.

4. Orientation/Kick-off Meeting CRESA intends to complete negotiations by June 30, 2022. Following the CRESA Administrative Board authorization of the contract at the July 7, 2022 meeting, a kick-off meeting with the CRESA management team will be scheduled.

**Request for Proposal #823
CRESA Service, Staffing and Infrastructure Assessment**

Attachment A: COVER SHEET

General Information:

Legal Name of Proposing Firm _____

Street Address _____ City _____ State _____ Zip _____

Contact Person _____ Title _____

Phone _____ Fax _____

Program Location (if different than above) _____

Email Address _____

Tax Identification Number _____

ADDENDUM:

Proposer shall acknowledge receipt of Addenda by checking the appropriate box(es).

None 1 2 3 4 5 6

NOTE: Failure to do so, shall render the proposer non-responsive and therefore be rejected.

I certify that to the best of my knowledge the information contained in this proposal is accurate and complete and that I have the legal authority to commit this agency to a contractual agreement. I realize the final funding for any service is based upon funding levels, and the approval of the Clark County Council and required approvals.

Authorized Signature of Proposing Firm

Date

Printed Name

Title

**Request for Proposal #823
CRESA Service, Staffing and Infrastructure Assessment**

Attachment B: LETTER OF INTEREST

Legal Name of Applicant Agency _____

Street Address _____

City _____ State _____ Zip _____

Contact Person _____ Title _____

Phone _____ Fax _____

Program Location (if different than above) _____

Email Address _____

- All proposers are required to be included on the plan holders list.
- If your organization is NOT listed, submit the ‘Letter of Interest’ to ensure your inclusion.

Email Letter of Interest to: Koni.Odell@clark.wa.gov and Priscilla.Ricci@clark.wa.gov

Clark County web link: <https://clark.wa.gov/internal-services/request-proposal-1>

This document will only be used to add a proposer to the plan holders list. Submitting this document does not commit proposer to provide services to Clark County, nor is it required to be submitted with proposal.

Proposals may be considered non-responsive if the Proposer is not listed on the plan holders list.

**Request for Proposal #823
CRESA Service, Staffing and Infrastructure Assessment**

Attachment C



Clark County, Washington

**Certification Regarding
Debarment, Suspension and Other Responsibility Matters**

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

Typed Name & Title of Authorized Representative

Signature of Authorized Representative

Date

I am unable to certify to the above statements. My explanation is attached.

**CRESA's Vital Statistics
2016 - 2020**

Vital Stats.	2016	2017	2018	2019	2020	% Δ '16 - '20	% Δ /yr.
Est. Population (src. US Census)	467,018	474,643			499,200	6.9%	1.7%
Service Area (sq. mi.)	706	706	706	706	706		
Total Calls	536,728	525,371	0	0	528,759	-1.5%	-0.4%
Total Outgoing Calls	128,289	125,736			117,897	-8.1%	-2.0%
Total Incoming Calls (src. Annual Reports)	408,439	399,635	0	0	410,862	0.6%	0.1%
911 Emergency Calls	274,467	254,211			251,652	-8.3%	-2.1%
Non-Emergency Calls	133,972	145,424	0	0	159,210	18.8%	4.7%
311 Non-Emergency Calls	42,252	66,844			93,155	120.5%	30.1%
Other	91,720	78,580			66,055	-28.0%	-7.0%
Total Events (src. Annual Reports)	361,986	364,206	0	0	382,496	5.7%	1.4%
Law ²	317,028	315,352			334,110	5.4%	1.3%
Fire/EMS	44,958	48,854			48,386	7.6%	1.9%
Total Approved Staff	86	86	86	86	86	0.0%	0.0%
9-1-1 Staff ³	64	64	64	64	64	0.0%	0.0%
Other Divisions/Programs	22	22	22	22	22	0.0%	0.0%

Vital Statistics	2020	2025	2030	2035	2040	2045
Est. Population ^A	499,200	508,124	536,717	562,207	585,137	
Total Calls	528,759	557,650	581,321	605,996	631,720	658,535
Total Incoming Calls ^B	410,862	428,302	446,483	465,435	485,192	505,787
911 Emergency Calls ^D	251,652	266,257	277,559	289,341	301,623	314,426
Non-Emergency ^E	159,210	162,045	168,924	176,094	183,569	191,361
Outgoing Calls ^C	117,897	129,347	134,838	140,561	146,528	152,748

WA OFM Est.

	2010	2010 -2020	per yr.
Total Calls	528,759	8.49%	0.85%
Total Incoming Calls ^B	410,862	B	4.24%

	2017	2018	2019	2020
911	254,211	245,941	243,308	251,652
311/Adm	145,424	149,374	151,749	159,210
Subtotal	399,635	395,315	395,057	410,862
Outgoing	125,736	113,936	125,338	117,897
Total	525,371	509,251	520,395	528,759

^A "County Growth Management Population Projects by Age and Sex: 2010 - 2040," State of Washington Office of Financial Management

^B Based on CRESA Annual Reports w/historic .85% annual growth of incoming calls (2010 - 2020)

^C Based on CRESA Annual Reports when outgoing calls started being tracked (2017 - 2020). There was no growth trend noted, so it's based on the average percent when divided by the incoming calls.

^D Based on average 62.17% of incoming calls (2017 - 2020)



2017 Environmental Scan



Clark Regional Emergency Services Agency

Always here, always ready

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Exhibit A – Data Tables

Exhibit B – 911 Operations Division Staffing Analysis

Executive Summary

Purpose

As part of Clark Regional Emergency Services Agency's (CRESA's) ongoing strategic planning process, the agency conducted an environmental scan to gather information about relevant data within CRESA's internal and external environment to help determine future levels of service and direction for the agency.

Scope

The categories examined include:

1. Socio-Economic (Population Growth, Age Distribution, Employment, Median Household Income and Median Household Expenses)
2. 9-1-1 Service Level Demands (Total Calls for Service, Events Generated and Service Level Projections)
3. Public Safety Technology (Technology Funding, Change Management and Next Generation 9-1-1)
4. Emergency Management (Evolving Technology, Growing Vulnerable Population and Increasing Vulnerability to Disasters)

Possible Impacts

The following is a list of possible impacts from the categories examined in this scan. They are listed here without context as a quick overview. Broader context is provided in the full report.

Socio-Economic:

- Clark County's population is projected to increase by 31% over the next 25 years. This represents a 1.2% annual growth rate.¹
- Based on the percent of population, those 65 years or older will have the greatest relative increase (106%) over the next 25 years, due to the baby-boomers reaching retirement. At the same time those in the workforce (age groups 25 – 64) will actually decrease by 5%.²
- Unemployment rates have reached pre-recession levels since 2014, with the September 2017 rate dropping to 4.5%.³ These low unemployment rates could reduce CRESA's service level demands based on recent studies showing that crime rates drop as household income increases.^{4, 5, 6}
- As a larger percentage of the population reaches retirement on a fixed income, and if the key workforce (age groups 25 – 64) percentage decreases, the median household income growth will slow if not decline as some reports estimate.⁷ It will be important to monitor the actual impact of household income since studies cited above show a correlation with crime rates.
- The forecasted 2% annual increase to the cost of living will provide some stability to the overall livability and quality of life in the community.⁸

- The cost of living in Vancouver is approximately 14% lower (including rent at 21% lower) than Portland.⁹ This is an attractive quality for qualified job applicants when competing with other 9-1-1 centers in the metro area.

Service Level Demands:

- Over the next 25 years, an estimated 23% increase will occur in the Call for Service and Events Generated will occur. This represents an annual growth rate of .93%.^A
- The estimated increase to calls for service and events may actually be higher for emergency medical calls due to the relative increase for the 65 and older population.^B
- Law event call types such as Suspicious; Unwanted; and Mental Subject will continue to grow unless mitigation measures are taken for growing homeless population and lack of local case management/mental health services.^C
- Fire/EMS call types such as Falls and Breathing Problems will continue to grow due to the aging population. In addition, the Unknown Problems will also continue to grow due to increases in homeless population and cell phones.^D
- An estimated 31% increase from current staffing levels should be made over the next 25 years to keep pace with the increased demand. This represents an estimated annual growth in staffing levels at 1.25%.^E

Public Safety Technology:

- There is a need to develop and maintain a funding model that accounts for unplanned and uninsured failures; as well as planned capital replacement schedules.
- It's projected that NG911, when fully realized, will increase the units of work by 10 to 100 percent.¹⁰
- As a result of the costs and complexities of NG911, It is likely that the federal government, through the FCC, will mandate regional governance models in the future.¹¹ CRESA's governance structure is positioned well to take on regional governance responsibilities.

Emergency Management:

- Future vulnerability assessments and mitigation planning will need to take into account a growing technology dependent infrastructure.¹²

^A See Section 2.c "Service Level Projects" for details.

^B See Section 1.b "Age Distribution" for details.

^C See Section 2.b "Events Generated – Law Event Types" for details.

^D See Section 2.b "Events Generated – Fire/EMS Event Types" for details.

^E See Exhibit C, "9-1-1 Operations Division Staffing Analysis: A report based on APCO Project RETAINS."

- Emergency management will need to continue employing appropriate technologies so that information remains relevant to the public in complex information and media environments.¹³
- There is a growing need for public and healthcare services and a reduced capacity to deliver such services.¹⁴
- There is a growing need for multi-lingual services.¹⁵
- Risk modeling will need to take into account vulnerable infrastructure and work to mitigate potential points of catastrophic failure.¹⁶
- Based on the increased frequency and magnitude of disasters, local emergency managers will need to:
 - Develop regional and sub-regional sharing of assets, infrastructure and logistics capabilities.¹⁷
 - Consider new staffing models that include greater volunteer, private sector, non-governmental organizations and armed forces support also could help meet this need.¹⁸
- Emergency Managers will need to assess and plan for supply chain vulnerabilities of all supplies, not just commodities; and developing contingencies in anticipation of both global and local supply challenges.¹⁹

Introduction

Purpose

This Environmental Scan gathers information about relevant data within Clark Regional Emergency Services' (CRESA's) internal and external environment to help determine future levels of service and direction for the agency.

Scope

Categories

The categories examined include:

5. Socio-Economic (Population Growth, Age Distribution, Employment, Median Household Income and Median Household Expenses)
6. 9-1-1 Service Level Demands (Total Calls for Service, Events Generated and Service Level Projections)
7. Public Safety Technology (Technology Funding, Change Management and Next Generation 9-1-1)
8. Emergency Management (Evolving Technology, Growing Vulnerable Population and Increasing Vulnerability to Disasters)

Sources

Key sources of data include:

- State of Washington Office of Financial Management
- Bureau of Labor and Statistics
- US Census Bureau
- Economic Policy Institute
- Uniform Crime Reporting Statistics
- Oregon Metro
- Columbia River Economic Development Council
- CRESA 2014 Organizational and Operations Assessment
- CRESA Annual Reports
- CRESA FirstWatch Reports
- APCO Project RETAINS

1. Socio-Economic

1.a Population Growth

The 2015 population of Clark County was estimated at 447,201. The Washington State Office of Financial Management estimates the County's population will increase to 585,137 by 2040. This represents a 31% growth over the next 25 years, or 1.2% annual growth. This projected rate of growth is a decline as compared to a 2.5% annual growth rate from 2000 to 2010. (Figure 1)

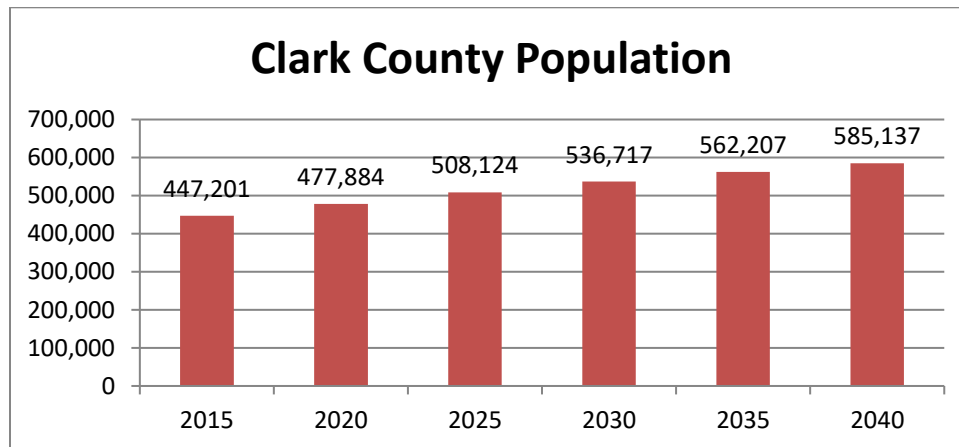


Figure 1

Source: "County Growth Management Population Projections by Age and Sex: 2010 - 2040" State of Washington Office of Financial Management

Possible Effects of Population Growth to CRESA Services:

- There are a variety of factors that contribute to demand for 9-1-1 services including population growth. Based on historic trends both in population growth and service demand, the average percent of population growth to calls for service and events generated is approximately a 1.0 to 0.8 ratio (See in this report, Section 2 "Service Level Demand" for details)
- It will be important to assess what type of growth occurs as the population becomes denser when it comes to crime rates. Past research has shown that crime increases at higher rates as the population density increases.^{20, 21} Yet more recent studies point out that household income, racial diversity, age, and education are all variables which have greater impact crime rates.^{22, 23, 24}

1.b Age Distribution

In Clark County, the older age group (65+) is estimated to have the greatest relative increase (106%) from 2015 to 2040. The main cause for this increase is due to the baby-boomers reaching retirement. This fact is evident when comparing the percentage of this age group to the total population. For example, in 2015 the 65+ age group represented 14% of the total population as compared to 22% of the total population in 2040. Whereas, the key workforce

(age groups 25 – 64) percentage will actually decrease by 5% during this same timeframe. (Figure 2)

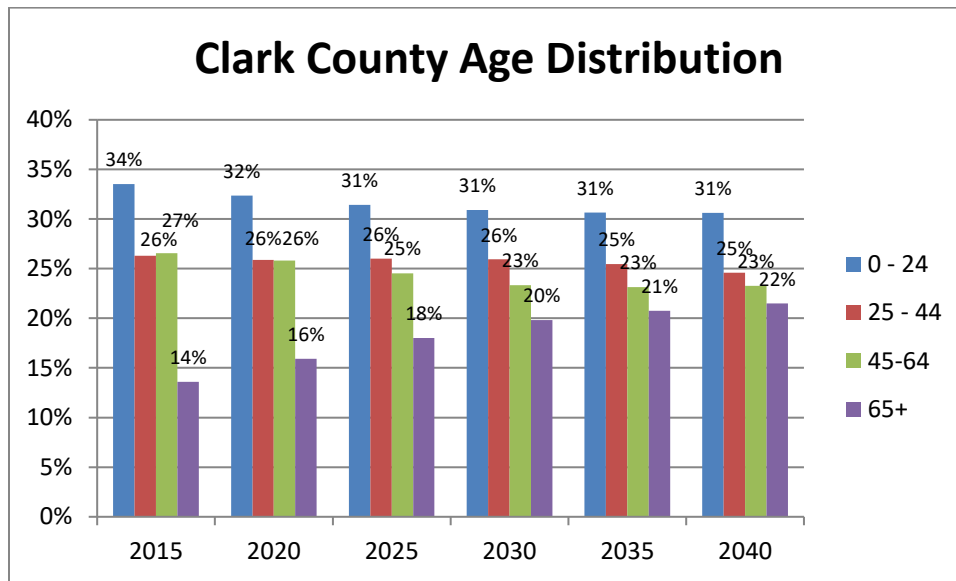


Figure 2

Source: "County Growth Management Population Projections by Age and Sex: 2010 - 2040" State of Washington Office of Financial Management

Possible Effects of an Aging Population to CRESA Services:

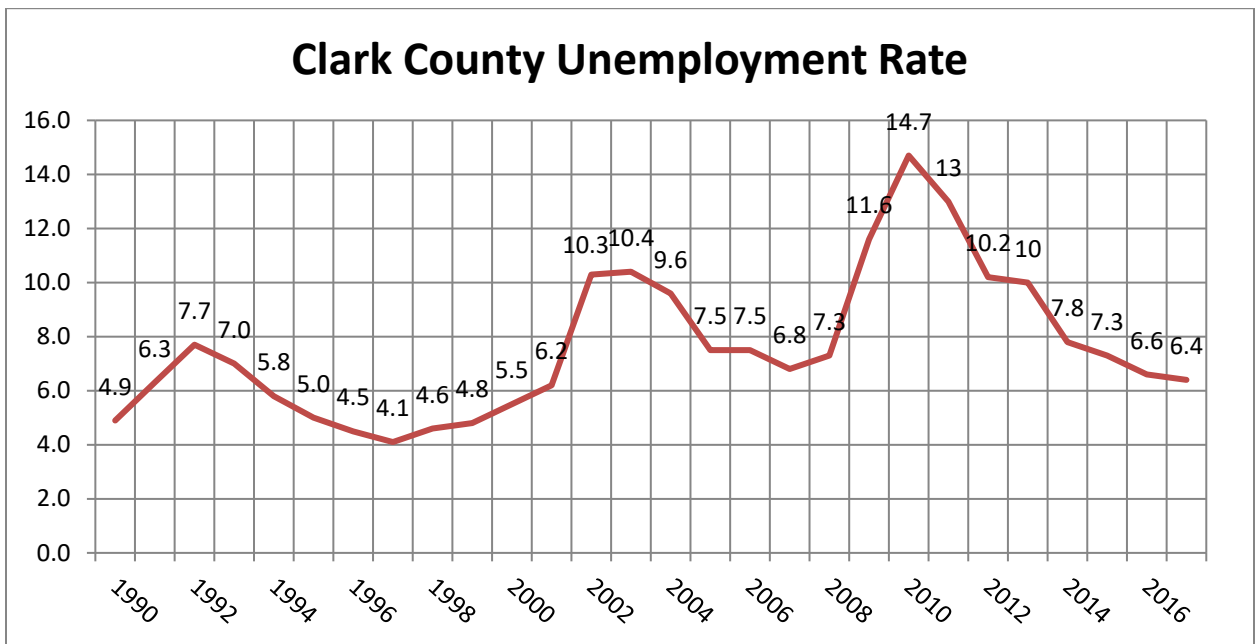
- An increase to emergency medical calls for service will occur, as the relative increase for the 65+ population age population grows. For example in 2014, the 65+ age group comprised 13% of the population and 43% of total the EMS responses based the Medicare percentage of EMS District #2’s ambulance contractor payor mix.²⁵
- As the population ages, there will be higher rates in particular types of emergency medical calls including: fall related injuries, myocardial infarctions and cardiac arrests and cerebral vascular accidents.
- As a larger percentage of the population reaches retirement on a fixed income, and if the key workforce (age groups 25 – 64) percentage will actually decreases as estimated, the median household income growth will slow if not decline as some reports estimate. (See in this report, Section 1.d “Income” for details)

1.c Employment

Unemployment Rate

Clark County’s unemployment rate was below the state and national averages throughout the 1990s, but above both since 2000. The financial recession widened the gap, reaching an all-time high of 14.7. Starting in 2014, the unemployment rate began to reach pre-recession levels. The most recent report put out by the Bureau of Labor and Statistics shows the unemployment rate at 4.5% for September 2017. (Figure 3)

In looking at the unemployment rate, it's important to consider the impacts of demographic trends (i.e., aging population), and that a significant number of residents of prime working age (22 to 54) have yet to return to the labor market.²⁶



Source: Bureau of Labor and Statistics - Annual rates showing January

Figure 3

Sectors of Employment - Clark County employment is part of the larger Portland metropolitan area. Its economy can be understood only in that context. For example, one-third of the county's labor force, about 60,000 workers, commutes to Portland on a daily basis, while only 11,000 commute in the opposite direction.²⁷ Major industry sectors in Clark County reported in 2014 included: healthcare and social assistance at 23,400, retail trade at 15,668, manufacturing at 13,406 and leisure and hospitality at 12,809. In addition, government employed 24,454. Since 2005, over 18,000 jobs have been added, with over half being realized in the healthcare and social assistance sector (Figure 4). These larger employment sectors will continue to see growth as baby boomers continue to expand the +65 age category (healthcare and social assistance); and the development of the waterfront along the Columbia River west of Interstate 5 and the Cowlitz Tribe casino near La Center is completed (Retail Trade and Accommodation/Food Services)

Finally, Oregon Metro's 2013 Employment Forecast estimates employment growth in Clark County at 2.9% and the four-county area at 2.2%.²⁸

Industry	2005		2010		2014		% 05 - 14	
	Count	Share	Count	Share	Count	Share	Percent	Count
Agriculture, Forestry, Fishing and Hunting	611	0.47%	472	0.33%	530	0.36%	-13%	-81
Utilities	506	0.39%	1,789	1.27%	1,789	1.21%	254%	1,283
Construction	10,099	7.78%	8,417	5.97%	8,976	6.06%	-11%	-1,123
Manufacturing	13,159	10.14%	13,149	9.33%	13,406	9.05%	2%	247
Wholesale Trade	5,137	3.96%	6,466	4.59%	6,643	4.48%	29%	1,506
Retail Trade	14,125	10.88%	14,884	10.56%	15,688	10.59%	11%	1,563
Transportation and Warehousing	3,143	2.42%	3,092	2.19%	3,183	2.15%	1%	40
Information	2,949	2.27%	2,792	1.98%	2,909	1.96%	-1%	-40
Finance and Insurance	3,771	2.91%	4,080	2.90%	4,172	2.82%	11%	401
Real Estate and Rental and Leasing	2,749	2.12%	2,118	1.50%	2,277	1.54%	-17%	-472
Professional, Scientific, and Technical Services	6,186	4.77%	7,097	5.04%	7,420	5.01%	20%	1,234
Management of Companies and Enterprises	1,065	0.82%	2,047	1.45%	2,126	1.43%	100%	1,061
Administration & Support, Waste Management and Remediation	6,310	4.86%	7,706	5.47%	8,474	5.72%	34%	2,164
Educational Services	1,100	0.85%	1,300	0.92%	1,006	0.68%	-9%	-94
Health Care and Social Assistance	14,446	11.13%	21,478	15.24%	23,753	16.03%	64%	9,307
Arts, Entertainment, and Recreation	2,163	1.67%	1,816	1.29%	2,213	1.49%	2%	50
Accommodation and Food Services	9,736	7.50%	9,289	6.59%	10,596	7.15%	9%	860
Other Services (excluding Public Administration)	4,632	3.57%	3,841	2.73%	4,241	2.86%	-8%	-391
Public Administration	5,150	3.97%	5,021	3.56%	5,182	3.50%	1%	32
Government	22,500	17.34%	23,900	16.96%	23,454	15.83%	4%	954
Total	129,775	100%	140,901	100%	148,186	100%		18,411

Source: US Census Bureau's OnTheMap "Work Area Profile Analysis and Washington Office of Financial Management, Clark County Profile **Figure 4**

Possible Effects of Employment to CRESA Services:

- Unemployment rates have reached pre-recession levels since 2014, with the May 2017 rate dropping to 5.0%. These low unemployment rates should be favorable in reducing CRESA's service level demands based on recent studies showing that crime rates drop as household income increases.²⁹

1.d Income

The median household income for 2013 was at \$58,225 in Clark County. Projections for median household incomes were made for 2020 and 2025 using the average annual rate of change from 2000 – 2015 taken from the US Census Bureau’s Median Household Income by State. This average annual rate of change was at 3.87%. (Figure 3, years noted with “ii”)

Yet using only the annual average rate of change results in an overly high median household income estimate. This is due to the estimates not taking into account the “baby boom” generation, that reached their peak earning years during this period, will be retiring over the next two decades with their household incomes falling. This is further complicated from the key workforce (age groups 25 – 64) percentage of total population also decreasing (See in this report, Section 1.b “Age Distribution” for details). One report estimates these workforce changes will result in a 0.5% annual decline to the median household income. (Figure 3, years noted with “iii”)

Income	2013 ⁱ	2020 ⁱⁱ	2025 ⁱⁱ	2020 ⁱⁱⁱ	2025 ⁱⁱⁱ
Median Household Income	\$57,558	\$75,107	\$90,832	\$55,737	\$54,198
< \$35,000	30%	Figure 3			
\$35,001 - \$50,000	14%				
\$50,001 - \$75,000	20%				
>\$75,000	36%				
Total Households	170,752				

- i. Columbia River Economic and Development Council's Website - Demographic and Community Data
- ii. Median Household incomes for 2020 and 2025 based on Table H-8 Median Household Income by State, US Census Bureau with WA average annual rate of change @ 3.87% from 2000 – 2015.
- iii. Median Household incomes for 2020 and 2025 @ .5% annual decline based on report from Burkhauser, R. & Larrimore, J., "Median Income and Income Inequality: From 2000 and Beyond" July 2013.

Possible Effects of Median Household Income to CRESA Services:

- It’s safe to assume the median household income will not increase as it has over the past 15 years at a 3.87% average annual increase. Yet it’s also important not to quickly assume the concerns over negative impacts caused from the retiring baby boomers will all become true since policy changes may occur to mitigate the impacts (i.e., age for Social Security or Medicare eligibility). It will be important to closely monitor actual changes in the median household income; as well monitor changes in policies that encourage older workers to delay retirement, or positive shifts in the employment sectors that could result in higher earnings.

1.e Cost of Living

An annual cost of living was calculated using a 2008 briefing paper from the Economic Policy Institute. One of the tables in the paper showed the average cost for a four person family living in Portland Oregon at \$48,946. Inflation was added based on Consumer Price Index actuals from 2009 - 2016 for Portland-Salem. A two percent estimated annual inflation rate was the applied for future years based on forecasts done by the Organization for Economic Cooperation and Development. (Figure 4)

Expenses	2013 ⁱ	2020 ⁱⁱ	2025 ⁱⁱ
Median Household Cost of Living	\$53,498	\$61,270	\$67,647

Figure 4

- i. Lin, J. & Bernstein, J., "What We Need to Get By" [Figure B for selected area Portland, OR], Economic Policy Institute Briefing Paper. Oct. 29, 2008. Inflation added based on 2009 - 2016 CPI-U 1982-84=100 actuals for Portland-Salem
- ii. 2.1% annual inflation forecast per Organization for Economic Cooperation and Development, OECD (2018), Inflation forecast (indicator). doi: 10.1787/598f4aa4-en (Accessed on 21 February 2018)

Possible Effects of Median Cost of Living to CRESA Services:

- The forecasted 2% annual increase to the cost of living will provide some stability to the overall livability and quality of life in the community.
- The cost of living in Vancouver is approximately 14% lower (including rent 21% lower) than Portland.³⁰ This is an attractive quality for qualified job applicants when competing with other 9-1-1 centers in the metro area.

2. 9-1-1 Service Level Demand

In examining the trends in service level demand, two areas of historic workload were reviewed: Calls for Service coming into the 9-1-1 center; and Events Generated in response to these calls as well as those generated by units in the field. In addition to looking at these historic trends in calls and events, a review of the Uniform Crime Reporting (UCR) rates and increases to specific event types was done.

Projections on future service demands were then made based on the correlation that population has on Calls for Service, as well as the historic percentage of Events Generated to these calls.

2.a Calls for Service

Calls for service include 9-1-1 emergency calls and 3-1-1 non-emergency calls. The 3-1-1 option was implemented in 2015 for the purpose of reporting non-emergency law enforcement issues. There has been a 48% increase on all calls for service from 1995 through 2016. This represents a 2.3% annual increase. (Figure 5)

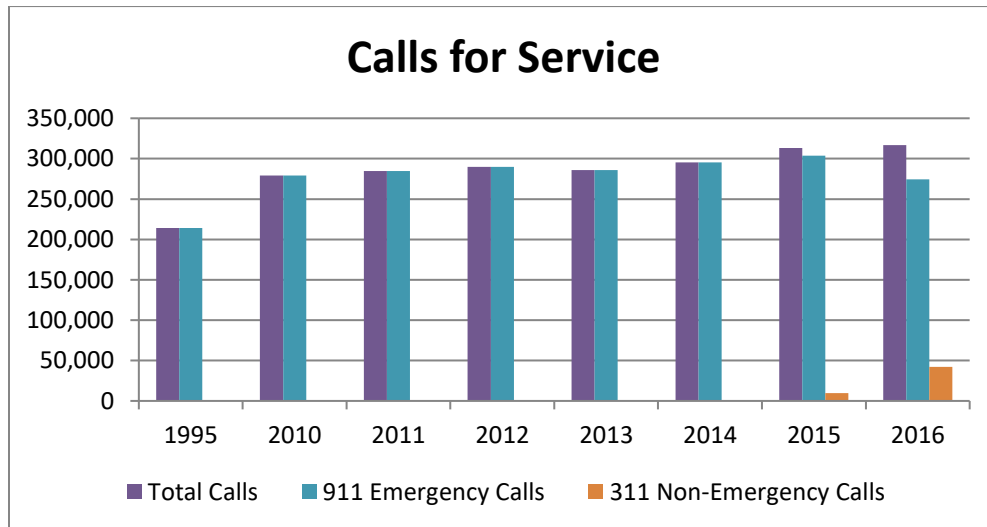


Figure 5

Source: CRESA Annual Reports

2.b Events Generated

Number of Law Events

Law events include dispatched events, field initiated, field created, cancelled and referred to another agency or online reporting system. There has been a 42% increase on all calls for service from 1995 through 2016. This represents a 2% annual increase. Of note is the fluctuations in the law events reported between 2010 - 2016 with annual changes as great as 21.5%^F between 2011^F and 2012 and as low as -8.1% between 2015 and 2016. (Figure 6)

^F The increase was due to a change in the inclusion of cancelled events starting in 2012.

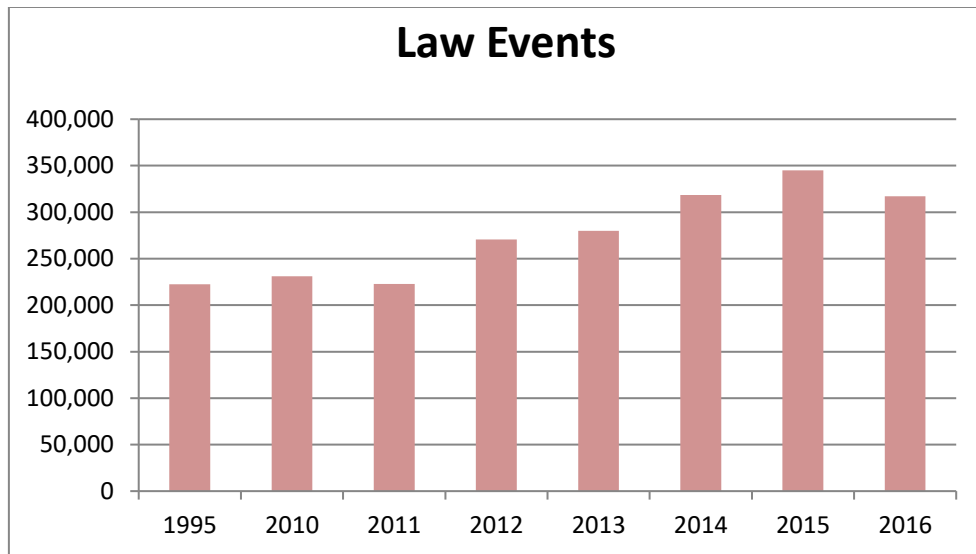


Figure 6

Source: CRESA Annual Reports

Uniform Crime Report (UCR) Rates

Reported UCR rates from the Clark Sheriff's Office and Vancouver Police Department were also examined. Similar to the rest of the nation, there have been dropping rates of *reported* crimes in recent years in Clark County. For example, the UCR rate (per 100,000) for Total Crime in 1995 was .137 to .092 in 2014. The same is true for the reporting subcategories of Property Crime at .125 in 1995 compared to .083 in 2014; and Violent Crime at .012 in 1995 compared to .009 in 2014 (Figure 7).

What's important to note is reported UCR rates is less of a measure of law enforcement activity for 9-1-1 operations since not all events result in a reportable crimes. For this reason, a review of the number of CRESA law call types was done.

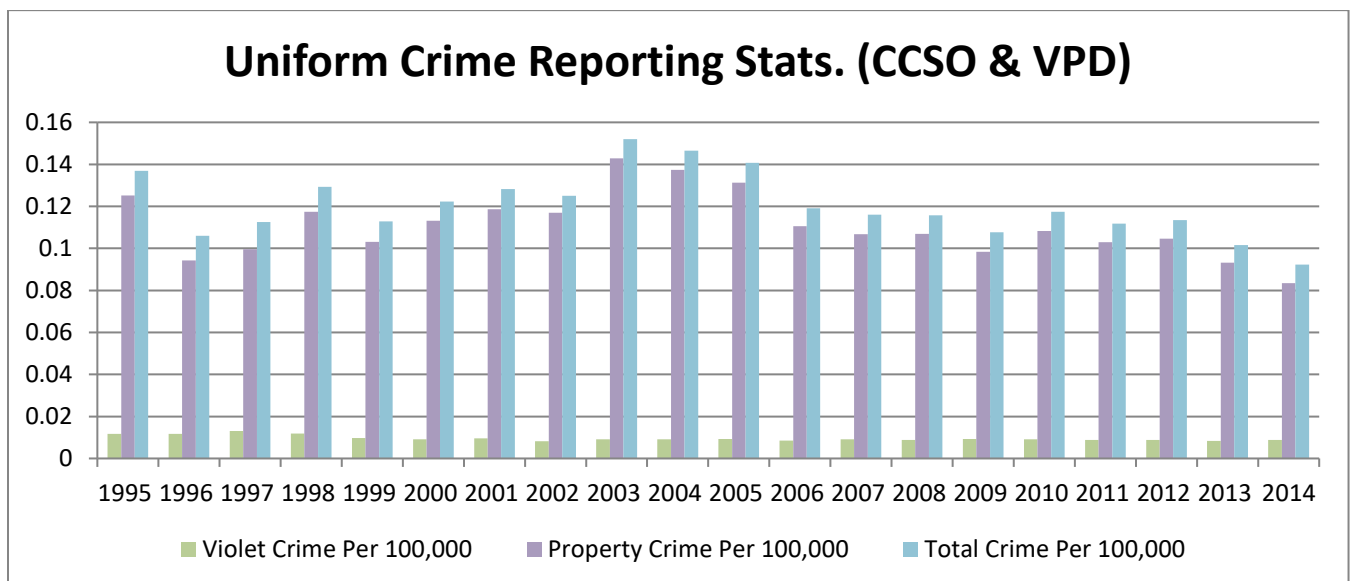


Figure 7

Source: Uniform Crime Reporting Statistics, US Dept. of Justice

Law Event Types

An examination of the larger law event types was also done for 2010 compared to 2016. In 2016, the largest event types included: Suspicious (18,773); Traffic (15,217); Disturbance (8,380), Alarm (6,965) and Unwanted (4,082). Largest event type increases from 2010 to 2016 were most notably Suspicious (>5,116 by 37.5%) and Unwanted (>2,023 by 98.3%). Based on just percentage increases, the largest jumps occurred for Premise Check at 155.5% and Mental Subject by 91.1%. (See Figure 8 and [Exhibit A](#), “Dispatch Law Event Types”). The increases in Suspicious and Unwanted may be due to a growing homeless population.³¹ The increase to Premise Check may be due to the number of home monitoring systems; and the increase to Mental Subject may again be due to the growing homeless population and lack of local case management/mental health services.^{32, 33}

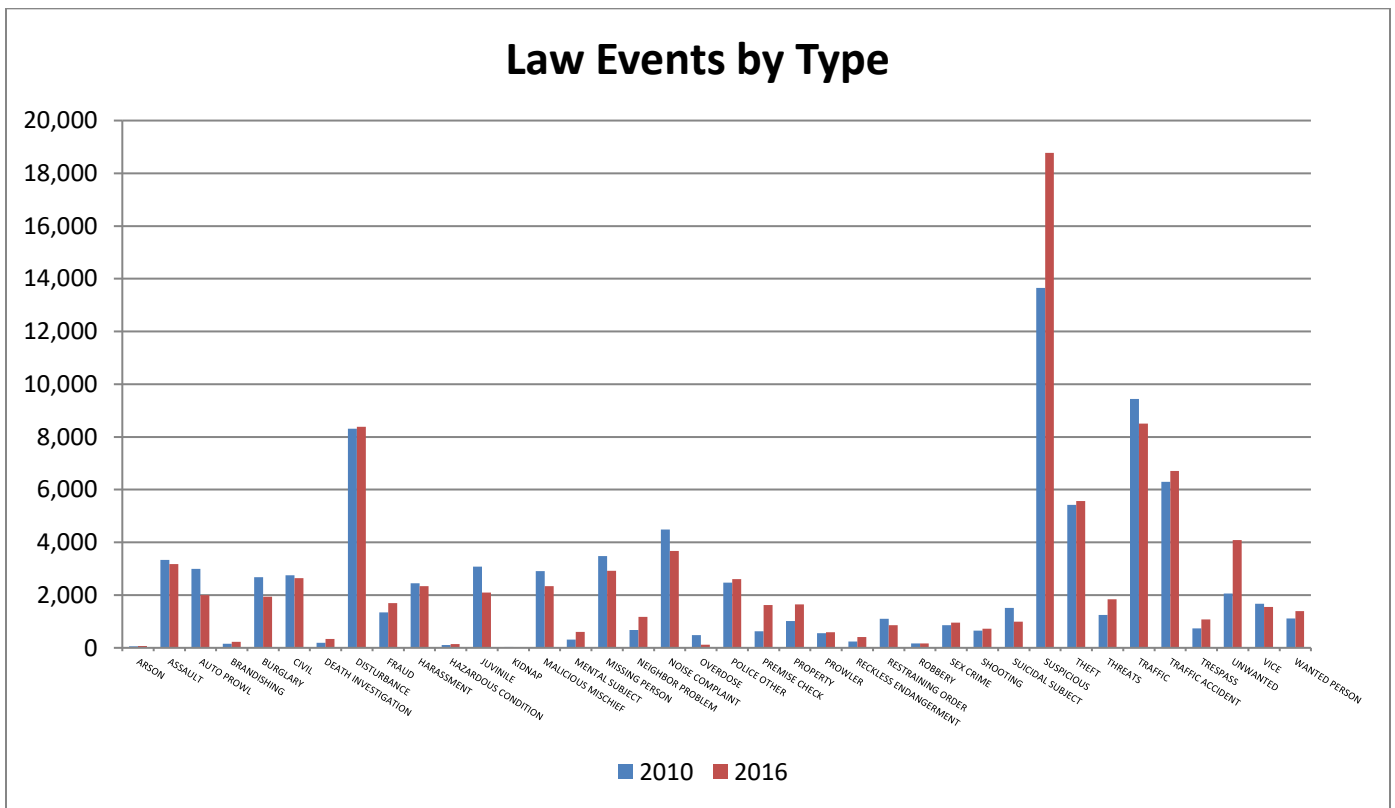
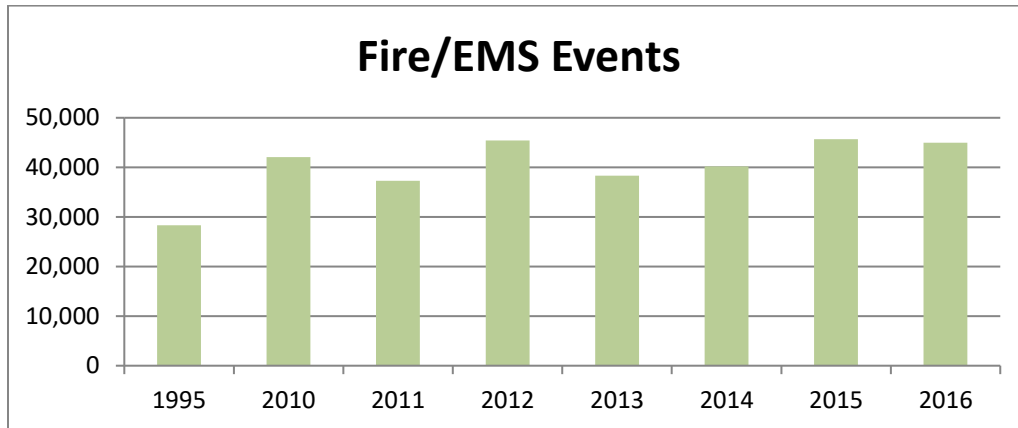


Figure 8

Source: *FirstWatch - Created Events by Event Type (019admin):*
 1) 2016; 2) Law; and 3) Dispatched Events

Number of Fire/EMS Events

Fire/EMS events include calls that are dispatched for Fire/EMS response. There has been a 59% increase on all calls for service from 1995 through 2016. This represents a 2.8% annual increase. Of note is the fluctuations in the fire/EMS events reported between 2010 - 2016 with annual changes as great as 21.8% between 2011 and 2012 and as low as -15.6% between 2012 and 2013. (Figure 9)

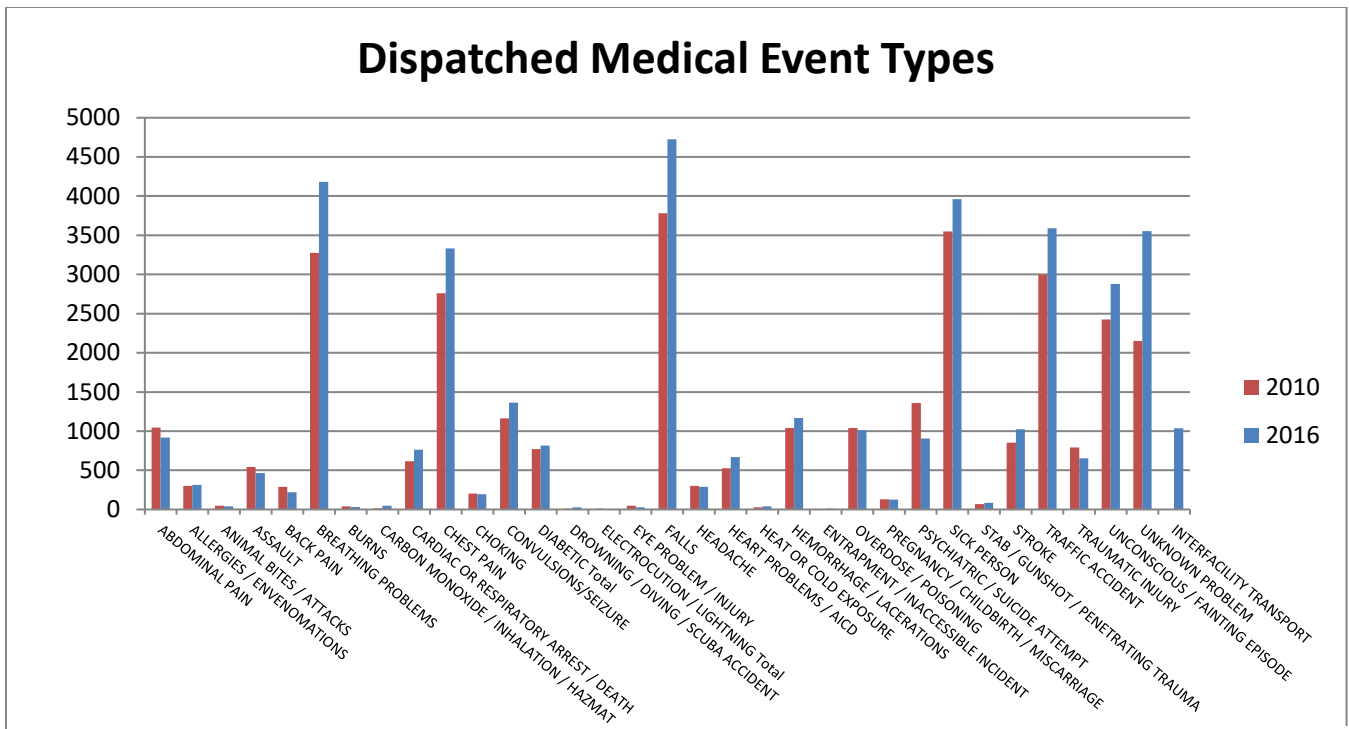


Source: CRESA Annual Reports

Figure 9

Fire/EMS Event Types

EMS responses represent 72% of all fire/EMS events.³⁴ An examination of the larger fire/EMS event types was also done for 2010 compared to 2016. In 2016, the largest event types included: Falls (4,726); Breathing Problems (4,181), Sick Person (3,961); Traffic Accident (3,590) and Unknown Problem (3,551). Largest event type increases from 2010 to 2016: Unknown Problem (1,398 by 64.9%); Falls (946 by 25%); and Breathing Problems (906 by 27.7%). Based on just percentage increases, the largest jumps occurred for Carbon Monoxide/Inhalation/Hazmat by 206.3% and Drowning/Diving/SCUBA Accident at 160%. The increases in falls and breathing problems is likely aging population; whereas the increase to unknown problems is possibly due increases in homeless population and cell phones. While relatively small numbers, the percentage jumps in Carbon Monoxide/Inhalation/Hazmat and Drowning/Diving/SCUBA Accidents, should warrant consideration of specific public education and prevention efforts. (See Figure 10 and See Exhibit A “Dispatch EMD Event Types”)



Source: FirstWatch - Created Events by Event Type (019admin):
 1) 2016: 2) EMS: and 3) Dispatched Events

Figure 10

2.c Service Level Projections

Service demand includes: Calls for Service (9-1-1 and 3-1-1); and 2) Events Generated (total law events including dispatched, cancelled/referred and field generated; and dispatch fire/EMD events). The estimates on future service demand, is based on the correlation that population has on Calls for Service, as well as the historic percentage of Events Generated to these calls. The reason for linking population to service demand was done due to the estimates for future population growth being slower than historic growth. In other words, using the annual increases to calls and events without taking into account future population growth would result in over-inflated estimates in service demand.

By using the previous five year average total calls percentage to population at 66%, an estimated 23% increase to Calls for Service and Events Generated from 2015 through 2040 is projected. This represents an average annual increase to Calls for Service and Events Generated at .93%. (Figure 11)

What these projections don't factor in are impacts from an aging population, any impacts to health care policy and practice; and changes in variables that contribute to criminal activity (i.e., population density, income and employment, mental health services, drug and alcohol addition, family cohesiveness³⁵).

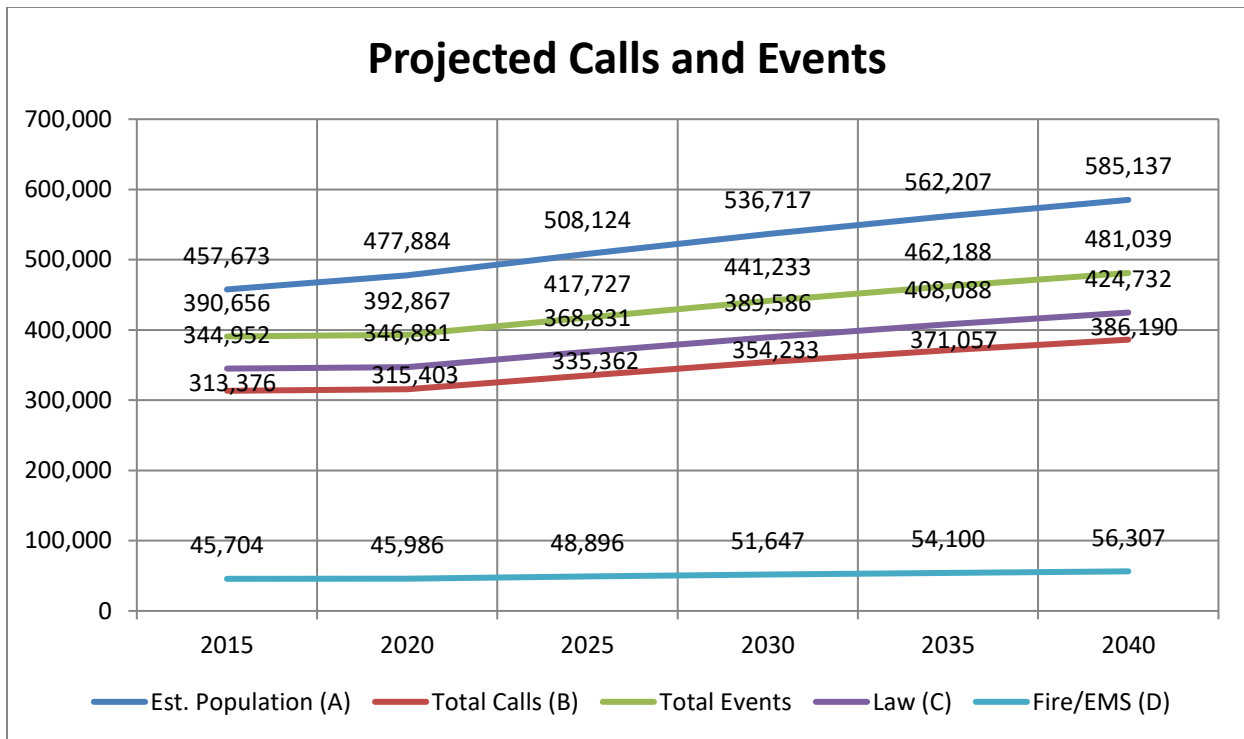


Figure 11

- A. Source - "County Growth Management Population Projections by Age and Sex: 2010 - 2040" State of Washington Office of Financial Management
- B. Percent of 9-1-1 & 3-1-1 calls to population based on 5 year previous average @ 66%
- C. Percent of events to total calls based on recent 2 year average when events exceeded calls @ 110% compared to previous 3 years @ 85%. This is due to change in procedures for call takers to create an event for every incomplete call. (Law events includes calls generated by dispatch, field units and those calls referred to another agency or online reporting system)
- D. Percent of dispatched Fire/EMS events to total calls based on 5 year average @ 14%

Possible Effects of Future Service Level Demand:

- Over the next 25 years, an estimated 23% increase will occur in the Call for Service and Events Generated will occur. This represents an annual growth rate of .93%.
- Based on [Exhibit B](#), "9-1-1 Operations Division Staffing Analysis", an estimated 31% increase from current staffing levels should be made over the next 25 years to keep pace with the increased demand. This represents an estimated annual growth in staffing levels at 1.25%.

3. Public Safety Technology

This environmental scan includes a section on technology due to the significant role it has in 9-1-1 centers. The reliance on technology within public safety communications centers has rapidly grown in both type and complexity over the past 20 years. Today, 9-1-1 centers are equipped with digital phones, trunked radios, Computer Aided Dispatch (CAD) systems that dispatch real-time unit tracking; and a whole host of sophisticated software programs. In the foreseeable future, the rate of change to this technology will likely occur even more frequently as technology continues to develop.

The following information on technology is based on the 2014 CRESA Organizational and Operational Assessment (OOA) conducted by the Stuart Consulting Group, Inc. The purpose of the OOA was to examine the agency's organizational structure, operational practices and efficiencies; and to provide a comparison with industry standards and best practices.

3.a Technology Funding

CRESA, along with every other communications center in the nation, has become increasingly reliant on mission-critical technology. CRESA's greatest challenge in the future lies in its ability to fund and manage such technology. In the past, technology has consumed larger percentages of the overall budget and it is reasonable to expect such a trend will continue. In the future, major technology expenditures will likely occur more frequently due to shorter life spans and more frequent upgrades as complexity and convergence of other technologies evolve.

Across the region and beyond, public safety communications hubs are experiencing "tax weariness" as communities reject increased taxes, or approve measures by narrowing margins. In the foreseeable future CRESA's funding needs, especially for significant system upgrades, will outpace revenue.

Possible Effects of Increased Demand for Technology Funding:

- The need to develop and maintain a funding model that accounts for unplanned and uninsured failures; as well as planned capital replacement schedules.

3.b Change Management

Change management, when it involves technology, is a challenge for all communications centers. One challenge has been an unclear change management process in the past; as well as the technology changes that impact operational habits are often not felt until the final 10% of a project (the testing and implementation phases). This requires significant resources to manage the projects successful implementation.

Possible Effects to Evolving Changes in Technology:

- The need to develop and implement an agency-wide standard change management approach and to train all employees in that approach.

- Employee turnover may increase as a result of more tenured employees choosing not to learn new technologies

3.c Next Generation 911 (NG911)

The Next Generation 911 (NG911) system is built on the assumption that public Safety Answering Points (PSAPs) are connected regionally and nationally across secure IP networks. The migration to NG911 technologies, which forces systemic interconnectedness, also forces cost-sharing across a broader platform. Such cost-sharing will eventually require governing structures to cooperate and act on a regional basis.

NG911 will require call takers and dispatchers to interact in more robust ways including text, pictures and even video. In addition, the workforce that thrives in an NG911 environment is not well suited for jobs that last ten or fifteen years. The implications for the total cost of the workforce, including recruitment, hiring, training will likely increase as NG911 technologies become the norm.

Possible Effects of NG911:

- It is likely that the state or federal government, through the FCC, will mandate regional governance models in the future.³⁶ CRESA's governance structure is positioned well to take on regional governance responsibilities.
- Floor staff will need increased hours in training on NG911.
- The units of work will increase in size by 10 to 100 percent.³⁷
- The type of individual who does well in the NG911 platforms (as fully envisioned) is different than the workforce of the past.³⁸
- Hiring process will need to take into account the competencies necessary to function in a NG911 job.

4. Emergency Management

This section of the environmental scan focuses on Emergency Management as it's a Division within CRESA. The following information is based on a 2012 report put out by FEMA titled, "Crisis Response and Disaster Resilience 2030: Forging Strategic Action in an Age of Uncertainty," as well as the information presented earlier in this environmental scan.

The Crisis Response and Disaster Resilience 2030 report was an outcome of FEMA's Strategic Foresight Initiative (SFI) that is intended to prepare the community both for emerging challenges and opportunities in the areas of population demographics, technology and environment over the next 20 years.

Some of the key challenges listed in the report include:

4.a Evolving Technology

As mentioned in Section 3, Public Safety Technology, the pace of technological change is accelerating and transforming how people do business, communicate and carry out essential services, such as ordering goods and services, paying bills and banking. This increased pervasiveness of technology is also exposing new risks such as dependence on computer systems to manage key infrastructure operations (water, telecommunications, transportation, etc.); as well as increased threats of cyber-attacks.

Furthermore, technological innovations are fundamentally altering how individuals interact with society. Today the public plays a greater role in identifying "what matters" and producing content themselves. In addition, evolving patterns of information flow have changed the role of the media and modes of information exchange.

Possible Effects of Growing Technology:

- Future vulnerability assessments and mitigation planning will need to take into account technology dependent infrastructure.³⁹
- The explosion of social media and personal communications technology will continue to increase real-time access and delivery of information making it more and more challenging to analyze and condense appropriate information for emergency services.
- Emergency management will need to continue employing appropriate technologies so that information remains relevant to the public in complex information and media environments.

4.b Growing Vulnerable Population

The Crisis Response and Disaster Resilience 2030 report states that nationwide, there will be increasing numbers of elderly. As stated earlier in Section 1.b., "Age Distribution," this will be true for Clark County as it projects a 106% relative increase over the next 25 years.

This same report also projects continued growth in foreign immigration resulting in more limited or non-English speaking residents. The U.S. Census Bureau projects that net international migration to the United States will become the primary driver of the nation's population growth between 2027 and 2038.⁴⁰

From 1990 to 2010, the percent of immigrants increased from 8 to 13 percent in the overall population; and during this same period states including Washington experienced large growth in their foreign-born populations.⁴¹ Clark County continues to be not a very ethnically diverse population with approximately 70% of the population being white. Yet this number is estimated to have a relative drop by 10% to the rest of the population, with the largest relative increases to the Hispanic and Asian populations.⁴²

The Crisis Response and Disaster Resilience 2030 report also states there will be growing numbers of homeless or destitute people over the next 15 years. Based on the “Point in Time” report from the Council for Homelessness, Clark County experienced a 22% increase in number of unsheltered persons from 2011 to 2016.

Possible Effects of Growing Vulnerable Population:

- Growing need for public and healthcare services and a reduced capacity to deliver such services;⁴³
- Growing need for multi-lingual services;⁴⁴
- Growing need to include vulnerable populations and traditionally underrepresented populations in planning and service delivery.⁴⁵

4.c Increasing Vulnerability to Disasters

FEMA’s report advised there is a growing vulnerability to natural disasters due to climate change, noting the increased frequency and scale of extreme weather events such as droughts, floods, sea-level rise and precipitation patterns.

The report also states there is growing vulnerability in man-made disasters due to aging infrastructure (i.e., hazmat), increased global mobility (spread on infectious diseases) and terrorist activity both global and homegrown.

Possible Effects of Increasing Disaster Vulnerability:

- Emergency managers will need advanced modeling and tools to prospectively assess and manage risks related to climate, power, transport, telecommunications, and water, among other domains.⁴⁶
- Risk modeling will need to take into account vulnerable infrastructure and work to mitigate potential points of catastrophic failure.⁴⁷
- Based on the increased frequency and magnitude of disasters, local emergency managers will need to:
 - ✓ Develop regional and sub-regional sharing of assets, infrastructure and logistics capabilities⁴⁸; and
 - ✓ Considering new staffing models that includes greater volunteer, private sector, non-governmental organizations and armed forces support also could help meet this need.⁴⁹
- Emergency Managers will need to assess and plan for supply chain vulnerabilities of all supplies, not just commodities; and developing contingencies in anticipation of both global and local supply challenges.⁵⁰

- Strengthening dialogue between the military (i.e., local National Guard) and community to coordinate resources and to foster trust and understanding will also be important.⁵¹

Conclusion

Over the next 25 years, CRESA will see an estimated increase in the demand for services to just less than 25%. This estimate is most likely on the conservative side, since it does not take into account an aging population that has a higher need for emergency medical response. In addition, this estimate also does not factor in the potential for increased law enforcement response due to a potential for a slower rate of growth in the median household income, a growing homeless population and the lack of local case management and mental health services.

Increased technology, both within the agency and community, will require CRESA to develop a funding model that accounts for unplanned failures and scheduled replacements. CRESA will also need to plan for the vulnerabilities from a growing technology dependent infrastructure.

Expanding technology will also increase a dispatcher's need for training and time on task due to text and video to 9-1-1. There's also the potential for increased staff turnover as the type of person who does well in a technologically sophisticated work environment is different that the workforce of the past.⁵²

With this increase in demand for services and technology comes the need for additional staff that is estimated at 1.25% annually which is based on the 9-1-1 Operations Division Staffing Analysis ([Exhibit B](#)). This need for additional staff verses improving agency efficiency is further supported by the audit done by the Stuart Consulting Group which states, "of the 250 communications centers studied and the nearly three dozen direct comparisons, CRESA is overall one of the most effective and efficient communications centers in the region."⁵³

Endnotes:

- ¹ "County Growth Management Population Projections by Age and Sex: 2010 - 2040" State of Washington Office of Financial Management
- ² Ibid 1
- ³ Bureau of Labor and Statistics, Clark County Profile, September 2017
- ⁴ Steinmetz, David. "The Pressure Cooker: Population density and crime." NYC Data Science Academy. July 20, 2016.
- ⁵ Hovel, Andrew. "Crime, Income Inequity, and Density at the Neighborhood Level". College of Saint Benedict and St. Johns University, DigitalCommons@CSB/SJU. 2014.
- ⁶ Nolan, James III. "Establishing the Statistical Relationship between Population Size and UCR Crime Rate: Its impact and implications". Journal of Criminal Justice. 2004.08.002.
- ⁷ Median Household incomes for 2020 and 2025 @ .5% annual decline based on report from Burkhauser, R. & Larrimore, J., "Median Income and Income Inequality: From 2000 and Beyond."
- ⁸ 2.1% annual inflation forecast per Organization for Economic Cooperation and Development, OECD (2018), Inflation forecast (indicator). doi: 10.1787/598f4aa4-en (Accessed on 21 February 2018).
- ⁹ <https://www.numbeo.com> (Accessed on 22, February 2018).
- ¹⁰ Hicks, D. Quitugua, D., "Clark Regional Emergency Services Agency Organizational and Operational Audit," Stuart Consulting Group Inc. p. 24.
Note – In an email dated 02/21/18, D. Hicks advised this estimate is based on studies over a two year period to estimate the length of units of work created by NG911, specifically text to 911 and video to 911, and used behavioral and economic modeling to arrive at an array of predicted activity and subsequent communication center impacts.
- ¹¹ FCC 5 Step Action Plan to Improve Deployment of NG911 apps.fcc.gov / edocs_public / attachmatch / DOC-309005A1.pdf
- ¹² "Crisis Response and Disaster Resilience 2030: Forging Strategic Action in an Age of Uncertainty", FEMA, pp.7 & 15, January 2012.
- ¹³ Ibid 12, p. 7.
- ¹⁴ As expected the elderly have a disproportionate share of medical needs (see Section 1.b, "Age Distribution"). In 2007, the GAO reported that as Medicare population increases the ability to recover cost for healthcare services decreases. In addition, a Commonwealth Fund 2009 report titled, "The Path to a High Performance US Health System: A 2020 Vision and the Policies to Pave the Way" projects a growing under and uninsured population.
- ¹⁵ Ibid 12, p. 13.
- ¹⁶ Ibid 12, pp. 7 & 15.
- ¹⁷ Ibid 12, p. 16
- ¹⁸ Ibid 12, pp 15, 20.
- ¹⁹ Ibid 12, p. 17.
- ²⁰ Jacobs, Jane. "The Death and Life of Great American Cities". New York: Vintage Books. 1961.
- ²¹ Taylor, Ralph B. "Human Territorial Functioning". Cambridge , UK: Cambridge University Press. 1988
- ²² Steinmetz, David. "The Pressure Cooker: Population density and crime." NYC Data Science Academy. July 20, 2016.
- ²³ Ibid 5
- ²⁴ Ibid 6
- ²⁵ 2014 EMS District #2 Annual Report Data

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- 26 Employment Security Department, Clark County Profile, January, 2016
- 27 Ibid 26
- 28 Employment Forecasts for 2035 by city and County, Oregon Metro, Feb. 07, 2013.
- 29 Ibid. 5 & 6
- 30 Ibid 9
- 31 From 2011 to 2016 there is a 22% increase in the number of Clark County unsheltered based on the "Point in Time Report" from The Council for the Homeless.
- 32 26% of homeless adults staying in shelters live with serious mental illness and an estimated 46% live with severe mental illness and/or substance use disorders - "The 2010 Annual Homeless Assessment Report to Congress." US Dept. of Housing and Urban Development, Office of Community Planning and Development.
- 33 Washington is in the top five states with the highest prevalence of mental illness and the lowest rates of access to care for both adults and youth. Fontaine. A, Brinkley, K. "How many lives must be lost for lack of mental-health services?" The Seattle Times, March 31, 2017.
- 34 2011 Clark County EMS Cost Survey that reported National Fire Incident Reporting System data for the previous 12 month reporting period.
- 35 "Variables Affecting Crime" Uniform Crime Reporting, Program National Incident-Based Reporting System, 2012.
- 36 FCC 5 Step Action Plan to Improve Deployment of NG911 apps.fcc.gov/edocs_public/attachmatch/DOC-309005A1.pdf
- 37 Ibid 10, p. 24
- 38 Ibid 10, p. 24
- 39 Ibid 12
- 40 U.S. Census Bureau, "International Migration is Projected to Become Primary Driver of U.S. Population Growth for First Time in Nearly Two Centuries," press release (2013), accessed July 30, 2014,
- 41 The Pew Charitable Trusts, "U.S. Immigration: National and State Trends and Actions" (November 2013)
- 42 Ibid 1
- 43 Ibid 14
- 44 Ibid 12, p. 13
- 45 Ibid 12, p. 13
- 46 Ibid 12, p. 15
- 47 Ibid 12, pp. 7 & 15
- 48 Ibid 12, p. 16
- 49 Ibid 12, pp. 15, 20
- 50 Ibid 12, p. 17
- 51 Ibid 12, p. 20
- 52 Ibid 10, p. 24
- 53 Ibid 10, p. 3Clark