WASHOE COUNTY

Integrity Communication Service
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CM/ACM	X
Finance	X
DA	X
Risk Mgt	n/a
HR	n/a
Other	

STAFF REPORT
BOARD MEETING DATE: March 14, 2017

DATE: Tuesday, March 07, 2017

TO: Board of County Commissioners

FROM: Mark Mathers, Budget Manager
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THROUGH: Christine Vuletich, Assistant County Manager
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SUBJECT: Receive presentation on a regional dispatch consolidation study; and provide direction to staff. [No impact]. (All Commission Districts)

SUMMARY

Last year, Washoe County contracted with IXP Corporation to prepare a Regional Dispatch Consolidation study. The purpose of the study was to review existing dispatch operations performed by the City of Reno and Washoe County at the County's Emergency Operations Center and to conduct an analysis of potential efficiencies and other issues related to possible consolidation of the two agencies' operations. IXP Corporation will present their analysis and conclusions.

Washoe County Strategic Objective supported by this item: Stewardship of our Community

PREVIOUS ACTION

January 26, 2016 – The Board of County Commissioners (BCC) received a report regarding discussions with the City of Reno regarding dispatch consolidation and directed staff to pursue a consolidation study.

June 28, 2016 – the Board of County Commissioners authorized the use of $80,000 from the General Fund Contingency account to pay for the cost of a consolidation study after receiving consulting proposals submitted pursuant to a Request for Proposal (RFP).

BACKGROUND

On January 26, 2016, the BCC received a staff report outlining the merits of a study of the feasibility and costs of a combined, regional dispatch center. An RFP for consulting services to conduct this study was issued in May 2016 and proposals were received in June 2016. A selection panel comprised of representatives from the Manager's Office, Sheriff's Office and City of Reno recommended the selection of IXP Corporation. This firm has prepared many studies analyzing possible consolidation of public safety

communications functions and also operates its own dispatch center for agencies in the state of Georgia.

During the course of their study, IXP met with staff from the County Manager's Office, Sheriff's Office and City of Reno and also discussed dispatch issues with Truckee Meadows Fire Protection District. They have gathered call data, cost information and information on the building configuration and information technology used by both agencies and prepared the attached report analyzing staffing needs for a combined dispatch function. The result of IXP's work concludes that operational consolidation is indeed feasible and that there is an opportunity to reduce overall costs compared to operating separate organizations.

FISCAL IMPACT

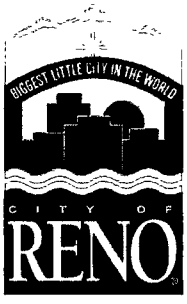
There is no fiscal impact related to this item.

RECOMMENDATION

It is recommended that the Board of County Commissioners receive the presentation on a regional dispatch consolidation study; and provide direction to staff.

POSSIBLE MOTION

Should the Board agree with staff's recommendations, a possible motion would be: "Move to receive the presentation on a regional dispatch consolidation study; and direct staff to pursue further discussions with the City of Reno on this issue."



Regional Dispatch Consolidation Study Of Washoe County and the City of Reno in Washoe County, NV

Final Report

January 23, 2017

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Introduction and Report Overview

Washoe County and the City of Reno enjoy a long history of working together in providing public safety and governmental services to the populations they serve. One notable example of this is the close collaboration that has been utilized in the provision of 9-1-1 and emergency communications services to a large number of law enforcement and fire service agencies across the County. However, even though these services are provided out of a shared facility and are supported by shared technology systems, the functional aspects of answering emergency calls and dispatching emergency services are still operated by two separate organizations.

In this report, IXP Corporation was asked to provide a review of existing operations and to provide observations and analysis on the four critical factors in any emergency communications organization: how the organization is governed; how operations and staffing are configured; the fit of the technology to the operational needs; and the competence of the facility all of this is housed in. This information is covered in in Section 2 of this report.

IXP was also asked to develop a proposed staffing model and potential staffing costs based on our experiences with multi-jurisdictional and multi-disciplinary emergency communications centers and based on the call volume and workload data for the combined operations of the City and the County. Section 2 of this report provides information related to the recommended staffing model and Section 3 of the report provides information on the potential costs.

Three cost models were developed: one based on an assumption that the consolidated organization would be hosted by the County and operate under their compensation and benefit structures; one based on the assumption that the consolidated organization would be hosted by the City and operate under their compensation and benefit structures; and a third model based on an assumption that the consolidated organization would be hosted by the County and operate under their compensation and benefit structure except that City employees moved into that structure would not experience any compensation reductions and be held at any higher compensation levels until the County compensation structure caught up to them.

The result of this work concludes that operational consolidation is indeed feasible and that past experience in shared services models provide good models for creating a successful governance structure to administer a consolidated operation. It also concludes that regardless of the hosting model selected there is an opportunity to reduce overall costs compared to operating separate organizations.

Section 1 – Background Information

Washoe County is located along the eastern slopes of the Sierra Nevada Mountains in the northwestern corner of Nevada bordering California and Oregon. The county has a land area of just over 6,300 square miles and a 2015 estimated population of 441,946. The City of Reno is the largest municipality in Washoe County with an area of approximately 103 square miles and a 2015 estimated population of 238,615. The population of unincorporated Washoe County is estimate at 109,750.

The Washoe County Sheriff's Office and the City of Reno operate their 9-1-1 and emergency communications/dispatching organizations out of a shared facility referred to as the Regional Emergency Communications Center (RECC) which is located in a facility that also houses the Regional Emergency Operations Center (REOC). This colocation took place in July 2012 and these two organizations operate on a common set of technology infrastructure and share several overlapping operational functions, but also remain as independent organizations run by each of their respective governments. The City of Sparks operates their own 9-1-1 and emergency communications center and is not a participant in this study.

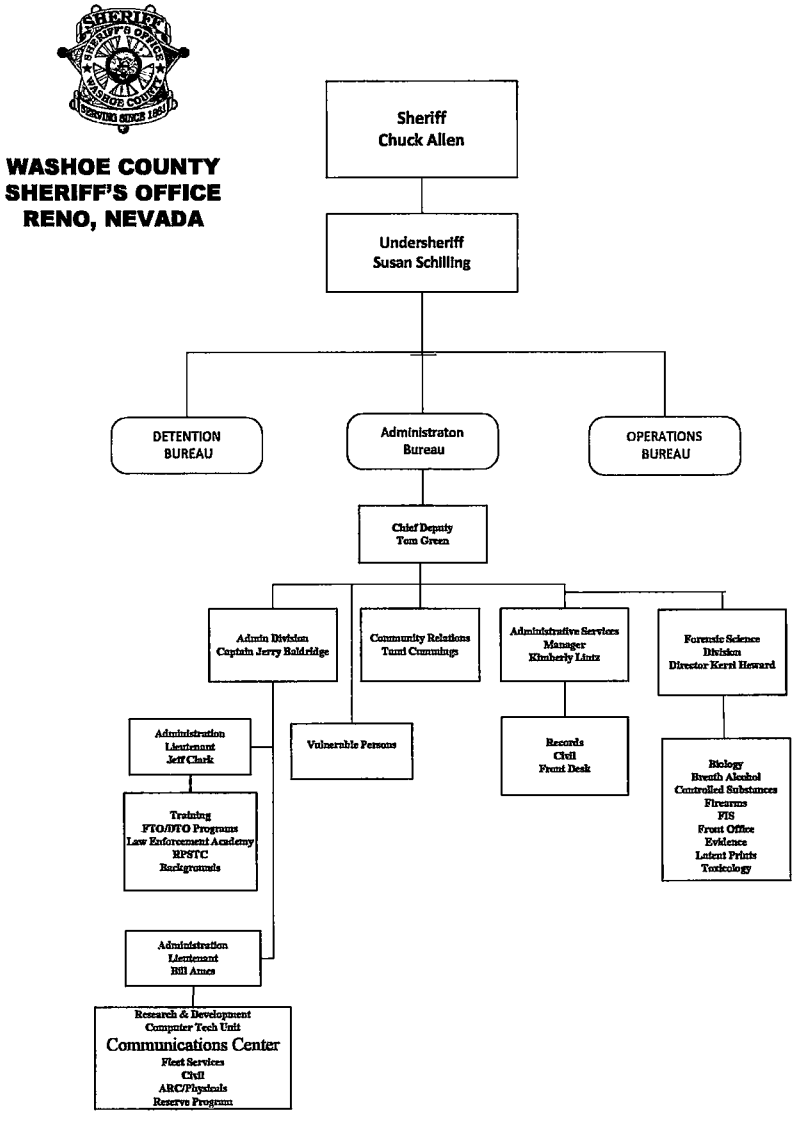
Prior examinations of regional emergency dispatching and emergency medical services have observed that consolidation of 9-1-1 and emergency call receiving along with the consolidation of emergency communications and dispatching, may provide opportunities for improved service levels or lower costs. The purpose of this study is to specifically examine the current operations of the Washoe County and Reno emergency communications organizations and identify potential governance, operations/staffing, technology and facility implications if a further consolidation of these two organizations were to take place and a single emergency communications organization were to be established.

Section 2 – Preliminary Analysis and Alternatives Development

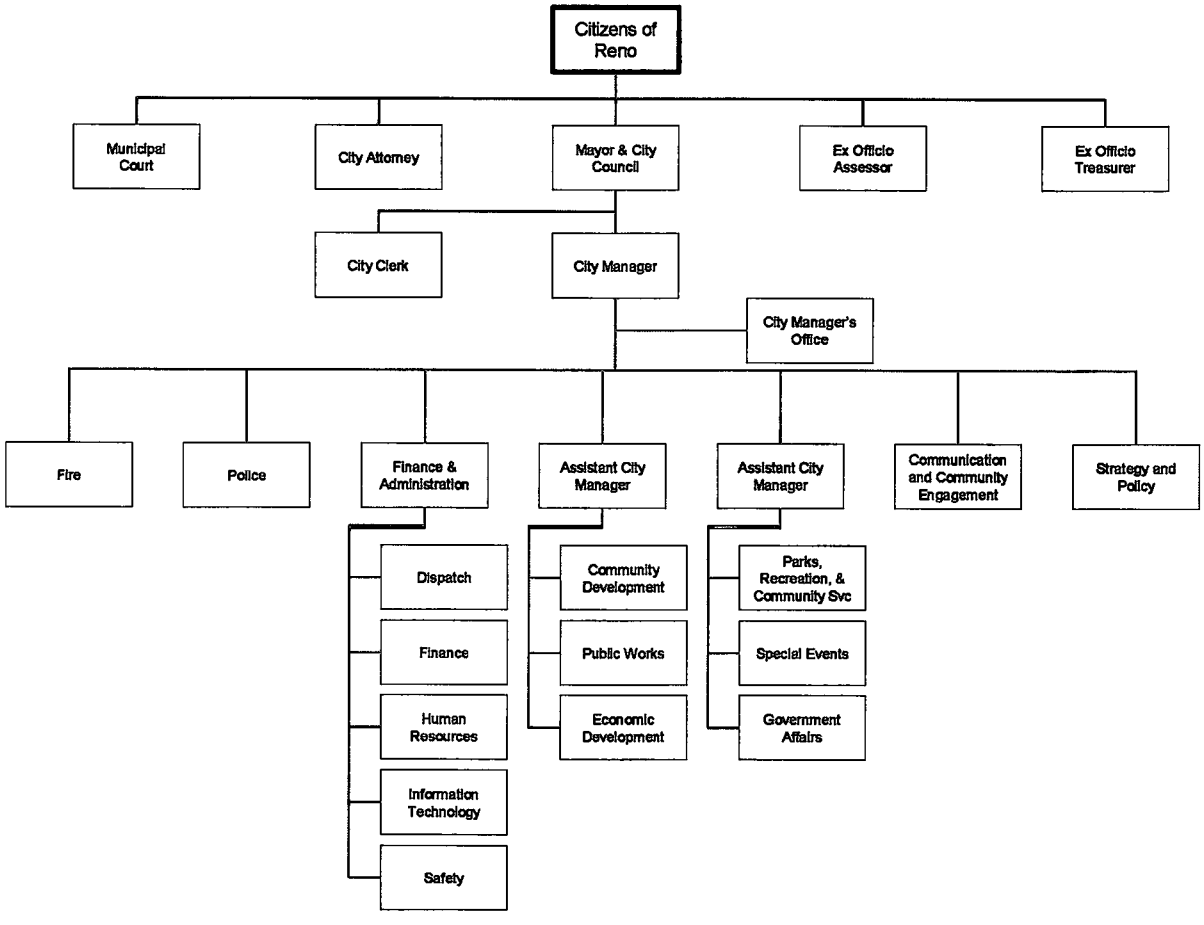
Governance Analysis

The current governance structures for the two individual communications organizations are fairly straight forward.

The Washoe County communications organization is an operational unit of the Washoe County Sheriff's office located in the Administration Division of the Administration Bureau.



The City of Reno communications organization operates as a Department under the Director of Finance and Administration.



When considering establishment of new governance relationships for consolidated dispatch organizations, it is often useful to consider any existing governance relationships that are in place with the participating jurisdictions for other shared-services operations. In this case, there are three such agreements which provide useful insights and experiences when considering potential governance structures for consolidated dispatch.

Interlocal Agreement for Animal Control Services

This agreement has been in place since 2003 and established Washoe County as the single organization for providing animal control services that were previously provided by the County, the City of Reno and the City of Sparks. There is no formal multi-jurisdictional governance

process established by this agreement, rather it consolidated all animal control functions as the sole operating responsibility of Washoe County.

This agreement did however have to deal with an important consolidation issue, how to handle personnel that need to be transferred from one operating organization to a different operating organization. In this case, with the County taking full responsibility for operating animal control services, the following personnel policies/practices were utilized:

- City employees were transferred to become County employees, and there was no probation period.
- City employees were given immediate health benefit coverage with no waiting period.
- If the City employee's pay rate was higher than the County rate, they were frozen until the County scale caught up with their compensation, then they moved with the County scale.
- The City hire date was used for calculations on things like longevity, sick leave accrual, vacation accrual, etc.
- City employees retained their balances of Sick Leave and Vacation time and carried these balances over to the County. There was no carry over of Comp Time.
- City employees hired before 09/17/1997 became eligible to be covered by the County's retiree medical benefits program (Other Post-Employment Benefits – OPEB). An actuary created a net present value analysis of what that financial obligation was worth, and the cities paid the County a lump-sum amount to fund this down-stream cost exposure.
- City employees hired after 09/17/1997 received no OPEB consideration.
- The County and the City agreed to become 'joint employers' for purposes of immunity from liability under Nevada's workers' compensation laws.

Interlocal Agreement for the Regional Public Safety Training Center

This agreement has been in place since 2004 and involves a larger group of participants, which includes: Washoe County; City of Reno; City of Sparks; Sierra Forest Fire Protection District (Washoe County component); and Truckee Meadows Community College (TMCC). This agreement established a multi-layered governance structure with three bodies involved in the governance and operations of the facility and its services.

- The top level governing body is called the Manager's Board composed of four individuals: the City Managers from Reno and Sparks; the Washoe County Manager; and the President of TMCC. Their responsibilities include functions such as:
  - Formal approval of the annual operations and maintenance budget
  - Formal approval of a 5-year capital plan
  - Formal approval of the Operations Manual
  - Performing the duties of the final step in the grievance resolution process

- Oversee the operations and maintenance of the facility which is performed by Washoe County

This Board meets annually and a majority of members' present represents a quorum and a majority of a quorum can make decisions.

- The middle level governing body is called the Executive Board and is composed of seven individuals:
  - Sheriff of Washoe County
  - Reno Police Chief
  - Reno Fire Chief
  - Sparks Police Chief
  - Sparks Fire Chief
  - Sierra Forest Fire Protection District representative
  - TMCC V.P. of Academic Affairs

  The Sheriff serves as the permanent Chair of this Board, and collectively the Board is responsible for the following functions:
  - Approval of Policies and Procedures
  - Review and recommend the annual operations and maintenance budget
  - Review and recommend the 5-year capital plan
  - Approve any expenditures > $5,000
  - Develop and approve the training plan

  This Board meets quarterly and a majority of members' present represents a quorum and a majority of a quorum can make decisions.

- The lower level governing body is called the Operations Committee and is composed of representatives from the same seven organizations identified for the Executive Board. This Committee is Chaired by the Training Center Director (who only votes to break a tie) and is responsible for the following functions:
  - Develop and approve the Operations Manual
  - Review and recommend the annual operations and maintenance budget
  - Making recommendations on capital outlays
  - Develop the training and facility use schedule

  This Board meets quarterly and a majority of members' present represents a quorum and a majority of a quorum can make decisions.

Similar to the agreement establishing Animal Control Services, this agreement dealt with the merging of personnel into the Washoe County employment structure. In this case, these were existing employees of TMCC. In this agreement, the following personnel policies/practices were utilized:

- The TMCC hire date was used for things like seniority and vacation accrual, but were not considered for any retiree medical benefit (OPEB) mechanisms.
- For purposes of OPEB, their date of hire was established as 09/17/1997 which made them ineligible for the County's post-employee health insurance coverage.
- TMCC employees were placed into County position classifications and if their current compensation was higher than the compensation for that classification, they were frozen until the range caught up with them.
- TMCC employees were provided health benefits immediately rather than having a waiting period like a new hire.

Interlocal Agreement for the Regional Emergency Operations Center (REOC) and Regional Emergency Communications Center (RECC)

This agreement has been in place since 2012 and establishes the relationships between Washoe County, the City of Reno and the City of Sparks. While this agreement is primarily focused on the governance and operations of the REOC, it is also the document that formally identifies that the WCSO communications operation will be relocated from Incline Village and colocate with Reno's operation on the top floor of the facility.

The governance structure for the REOC is established in a two-tiered structure:

- The top level governing body is called the REOC Joint Executive Committee, which is composed of the City Managers from Reno and Sparks and the Washoe County Manager. This body makes recommendations to the Washoe County Commission on budget related matters and decisions on operational-level issues:
  - Review and recommend the annual operating and maintenance budget
  - Review and recommend major capital outlays
  - Review, revise as necessary and recommend a 5-year capital improvement plan
  - Oversee the development of long-range plans
  - Review and approve operating policies and procedures
  - Receive and act upon recommendations from the Joint Management Committee.

  This Board meets on a regular basis and a majority of members' present represents a quorum and a majority of a quorum can make decisions.

- The second level governing body is called the Joint Management Committee, which is composed of the Emergency Management managers or coordinators, and is responsible for the following functions:
  - Review and recommend operating policies and procedures
  - Review, revise as necessary and recommend an annual operating and maintenance budget
  - Review and recommend capital outlays for facility improvements

- Review and recommend updated goals and objectives for the REOC
- Review and recommend long-range plans
- Review and recommend additional agencies

Since there were no existing employees by any of the three participating jurisdictions, there was no need in this agreement to deal with how employment transfer issues handled. The agreement identifies the Washoe County Department of Community Services as the entity responsible for maintenance and repair of the facility and establishes the following cost-sharing relationship for these costs:

City of Reno	Share of RECC area	34% of overall facility costs
City of Reno	Proportion of shared support spaces, building circulation and share of REOC	13% of overall facility costs
Washoe County	Share of RECC area	23% of overall facility costs
Washoe County	Proportion of shared support spaces, building circulation and share of REOC	21% of overall facility costs
City of Sparks	Proportion of shared support spaces, building circulation and share of REOC	9% of overall facility costs

Washoe County Regional Communication System Interlocal Agreement

This agreement has been in place since 1999 and was amended and extended in 2014 and establishes the governance and operational model for the ownership and operation of the Washoe County Regional Communications System (WCRCS). The agreement is established between Washoe County, the Washoe County School District, the Nevada Department of Transportation, the City of Reno, the City of Sparks, and the Truckee Meadows Fire Protection District. These parties are identified as *Participating agencies* in the agreement.

The governance structure for the WCRCS is established in a two-tiered structure described below. The actual day-to-day operations and maintenance of the WCRCS is performed by the Washoe County Technology Services (WCTS) organization under the direction and guidance of this governance structure.

- The top level governing body is called the Joint Operating Committee (JOC), which is composed of the City Managers of Sparks and Reno, the Washoe County Manager, The Washoe County School Superintendent and the Assistant Director Operations for the Nevada Department of Transportation. While a participant to the Agreement, the Truckee Meadows Fire Protection District does not hold a seat on the JOC. JOC members may appoint an alternate to represent them at meetings but they cannot identify another JOC member as their alternate. This body is responsible for the governance and oversight for the system, including:
  - Approval of operating and maintenance budgets for the system
  - Approval of capital outlays

- Review and recommend five-year capital improvement plans and other long range plans
- Review, approve and modify operating policies and procedures
- Make recommendations to the County Manager on the operation, maintenance and repair of the system
- The JOC is also authorized to issue opinion letters to resolve questions that arise from the interpretation of the Agreement.

The JOC meets on a quarterly basis and the majority of the members' present represents a quorum and a majority of a quorum can make decisions. Minutes are kept and the meetings operate in accordance to Nevada's Open Meeting law.

- The second level governing body is the User Committee. This committee is composed of up to 3 representatives from each of the Participating agencies and is responsible for the following functions:
  - Review and recommendation of an annual operating and maintenance budget for the system, as proposed by WCTS
  - Review and recommendation of capital outlays and long range plans
  - Review and recommendations on goals and objectives for the system along with operating policies and procedures

  The User Committee meets on a quarterly basis and the majority of the members' present represents a quorum and a majority of a quorum can make decisions. While each Participating agency is allowed up to 3 representatives on the Committee, voting is conducted on a one vote per Participating agency basis. Minutes are kept and the meetings operate in accordance to Nevada's Open Meeting law.

- All personnel, contractors, supplies and activities necessary to maintain and operate the system are the responsibility of the Washoe County Technology Services organization (WCTS) which operates under the County Manager (or designee). The WCTS staff serves as an advisor to both the JOC and the User Committee but is not a voting member of either body. On or before February 15th of each fiscal year, WCTS prepares a proposed budget for the maintenance, operation, repair, and capital outlay for the system for the ensuing year. This budget is then reviewed by the User Committee and reviewed and acted upon by the Joint Operations Committee. The Agreement itself contains the mechanisms for allocating system costs to the system users (Section 12) and technical performance goals for the system (Exhibit A).

Agreement for Dispatch and Forensic Services

The emergency communications and dispatch relationship between Washoe County and the City of Reno is also governed by the Agreement for Dispatch and Forensic Services between the City of Reno Police Department and the Washoe County Sheriff's Office, originally established in 1990. The Statement of Concept from this agreement describes that the Sheriff's Office will provide Forensic

Science Investigation Services for the Reno Police Department, and the Reno Police Department will provide Communication and Dispatch Services to Washoe County, both at no charge to the other. This agreement was modified by the 2012 Interlocal Agreement for the Regional Emergency Operations Center (REOC) and Regional Emergency Communications Center (RECC), in which the division of call receiving and dispatching services were modified as described in the listings of public safety agencies and responsibilities covered by each the two communications organizations.

Considerations in Establishing a Governance Structure for Consolidated Dispatch

When it comes to establishing governance structures for multi-jurisdictional and multi-disciplinary consolidated dispatch organizations, there is no single model that could universally be considered 'the best'. A wide variety of factors influence finding a governance structure that provides a 'best fit' for each set of local circumstances. Each of the current dispatch organizations are already providing emergency communications services in a multi-jurisdictional and multi-disciplinary setting, and both are accomplishing it successfully. Therefore, in considering a governance structure to guide a further consolidation into a single operating organization, it will be important to capture the best elements of each of the current structures and expand on these to establish the new combined organization that builds on the successes of the current organizations.

While IXP has encountered a variety of multi-jurisdictional and multi-disciplinary governance structures for communications organizations, the most successful of these typically include the following characteristics:

- Autonomy for the Communications Organization – From IXP's experience, communications organizations that are established with a high degree of autonomy are viewed more favorably by the agencies being served than communications organizations that are run by a single governmental body. This is typically achieved through creation of a multi-layered governance structure similar to those already in use locally for the Regional Public Safety Training Center and the Regional Emergency Operations Center.

- Highly Inclusive Governance Body Representation – Since the decisions made by the governance structure of a communications organization typically have direct impacts on the level and quality of services performed, and the costs of those services to the agencies being served, the most successful organizations have governance processes that include as many of the agencies being served as possible. Sometimes local circumstances or organizational size will prevent every agency being served having a seat on the top-level governing board, but they are typically fully included on the operational-level board. This allows all the agencies being served to have a voice in the policy, operational and financial decisions of the organization, whether at a recommendation level, final decision level or both.

- Shared Decision Making and Collaboration – It is also often observed that the most successful organizations do all that they can to fully vest their decision-making processes

within their multi-layered governance model rather than having governance structures that are mostly advisory to a higher-level governmental authority. This allows the various layers of the governance structure to carefully consider their decisions with respect to the potential impacts they will have on all the agencies being served by the communications organization.

- Openness and Transparency – One consistent theme in successful consolidated operations is that the governance and operational models are established so that everything is done in an open and transparent manner. Even when decisions need to be made that are not universally agreed to, every participant is fully aware of the facts or circumstances that drove the decision and know that they had an opportunity to have their input into the final outcomes.

- Cost Allocation Models Based on Mutually Agreeable Statistics – Consolidated communications centers typically operate under a cost allocation mechanism that recovers the full cost of operations (and often capital) from the full mix of agencies being served. This requires that the cost allocation model be based on a set of metrics that everyone can understand and mutually agree represents a fair mechanism for sharing costs. Since salary and benefit costs are often the largest cost component in any communications center, and since the level of staffing needed is largely determined by workload, it is not uncommon to see cost allocation mechanisms include one or more metrics related to the numbers of 9-1-1 or telephone calls handled from each jurisdiction, the numbers of incidents dispatched to each jurisdiction, or other metrics that relate to the overall cost basis of the organization.

All of the above characteristics appear to be present in some form or another in the two existing governance models for the Training Center and Regional EOC. While three-tiered models similar to the one used for the Training Center have certainly been seen in the consolidated communications arena, it is more common to see a two-tiered structure such as used for the Regional EOC. This model allows the top-level governance body, composed of the senior leadership from the primary jurisdictions being served, to be positioned to make well informed decisions for the organization as a whole, such as approvals of overall organizational policies, budgets and capital plans.

This also positions them to fully understand the impacts of these decisions on their own organization and prepares them for carrying these through to their own budgeting and capital planning processes. For communications organizations, this top-level board is often referred to as the Governing Board, Policy Board or even the Board of Directors. It is not uncommon, particularly in mature organizations, to see this top-level board only meet on a quarterly or less-frequent basis.

The top-level governance body is then supported by an operational-level governing body that is typically composed of the senior leadership from the various law enforcement and Fire/EMS agencies being served. This body is typically given the ability to make mid-level and operational decisions at their level, and recommend policies, budgets and capital plans to the senior leadership for their ultimate adoption. These bodies are often referred to as Operation's Boards or Joint Operations Boards, and typically meet on a monthly basis.

Deciding Where to Anchor a Consolidated Communications Organization

Deciding how to structure the governance model for a consolidated communications organization is often much more straight-forward than deciding where this new organization will be anchored for handling its administrative and business functions. In some states, we have seen consolidated communications organizations established as fully autonomous quasi-governmental agencies and operate free-standing from any of their participating agencies. At the time of this writing, it is not clear if this is even a possibility in Nevada, and further research is underway by the City of Reno to determine if current Nevada law would allow consideration of a structure such as this.

Even if it is determined that a fully free-standing organization is possible, it may be found that this is not the best model for consideration in the current setting. From IXP's experience, it is often difficult to fully cover all of the administrative and overhead functions of a free-standing communications organization (Finance, Human Resources, Benefit Management, legal support, etc.) unless the organization is of a sufficient size that it can effectively cover these costs within a cost allocation model that is acceptable to the agencies they serve. This is often not seen in agencies of under approximately 75-100 personnel serving a dozen or more customer agencies and a population base of a half million or less.

While a consolidation of the Washoe County and Reno dispatch operations will approach these kinds of metrics, it still may be found that anchoring the communications organization either within the Washoe County structure or the City of Reno structure makes the best sense. Both jurisdictions have expressed that they are willing to consider being the 'home' of a consolidated organization, and both have also expressed that they would find the other to be an acceptable anchor organization. With a well-structured governance model that achieves the characteristics previously described, it is IXP's perception that it probably doesn't matter which of the two governmental organizations becomes the host. The success of the organization will rest instead with the open, transparent and collaborative decision-making processes established at all levels of the organizational structure.

Operations and Staffing Analysis

Current Organizational Structures, Staffing Levels and Responsibilities

Washoe County – The Washoe County communications organization is currently staffed with a total of 34 funded positions for Fiscal Year 2017. These positions break down as follows:

- 29 Communications Specialists
- 3 Communications Specialists Trainee
- 5 Supervising Communications Specialists

The communications center is the direct responsibility of the Administrative Lieutenant from the Sheriff's Office Administration Division who reports to a Captain in charge of all Administrative Services (see earlier org chart). The Supervising Communications Specialists are focused on

supervising the ongoing 24-hour operations of the center and the 3 Communications Specialists Trainee positions allow hiring and training of Communications Specialists to begin before vacancies due to routine turnover actually occur. This helps to avoid staffing shortages of Communications Specialists which can drive overtime costs.

Personnel in Communications Specialist and Communications Specialist Trainee classifications are covered by a Collective Bargaining Agreement (CBA) with The Washoe County Employees Association (WCEA) for Non-Supervisory employees. The Supervising Communications Specialists are covered under a separate WCEA CBA for Supervisory and Administrative Employees.

Washoe County's dispatch organization supports the emergency communications needs of a variety of public safety organizations.

- Washoe County Sheriff's Office (WCSO) – Services include:
  - Primary 9-1-1 call receiving and processing for landline and wireless 9-1-1 calls originating in the Incline Village/Crystal Bay area and the North Lake Tahoe Fire Protection District; Wadsworth areas north of Township 22.
  - Call receiving and processing for wireless 9-1-1 calls originating in unincorporated Washoe County but not initially routed to the Reno Call Receivers.
  - Call receiving and processing for designated emergency and non-emergency 10-digit lines associated with the Sheriff's Office, utilizing Emergency Medical Dispatch (EMD), Emergency Police Dispatch (EPD) and/or Emergency Fire Dispatch (EFD) protocols as needed.
  - Dispatching for the Sheriff's Office and all of their specialized units/teams.

- North Lake Tahoe Fire Protection District (NLTFPD) – Services include:
  - Primary 9-1-1 call receiving and processing (including EMD and EFD) for 9-1-1 calls from within the NLTFPD service area.
  - Call receiving and processing of calls on lines designated for alarm companies and non-emergency 10-digit lines.
  - Dispatching for NLTFPD incidents, including EMS incidents.
  - Coordination with REMSA for the dispatching of Care Flight when needed.

- Truckee Meadows Fire Protection District (TMFPD) – Services include:
  - Call receiving and processing of calls on lines designated for alarm companies and non-emergency 10-digit lines.
  - Dispatching for TMFPD incidents utilizing EFD and EMD protocols.
  - Coordination with REMSA for the dispatching of EMS resources as needed.

- Pyramid Lake Paiute Tribe – Services include:
  - 9-1-1 landline and non-emergency 10-digit call receiving and processing for calls originating within the tribal area.

- Dispatching of the Pyramid Lake Paiute Tribal Police Department utilizing EPD protocols.

- Reno-Spark Indian Colony – Services include:
  - 9-1-1 landline and non-emergency 10-digit call receiving and processing for calls originating within the tribal area.
  - Dispatching of the Reno-Sparks Indian Colony Tribal Police Department utilizing EPD protocols.

- Gerlach Volunteer Fire Department – Services include:
  - Primary 9-1-1 call receiving and processing (including EMD and EFD) for 9-1-1 calls from within the GVFD service area.
  - Call receiving and processing of calls on lines designated for alarm companies and non-emergency 10-digit lines.
  - Dispatching for GVFD incidents, including EMS incidents.
  - Coordination with REMSA for the dispatching of Care Flight when needed.

- Washoe County Department of Alternative Sentencing – Monitoring of units while on the air and providing assistance when needed.

- Washoe County Coroner's Office – Monitoring units while on the air and providing assistance when needed.

- Lake Tahoe Regional Fire Chiefs Agreement – The communications center is responsible for coordinating/dispatching resource requests for this mutual aid agreement between 10 fire agencies in the region.

- Washoe County School District Police – After hours dispatching services

City of Reno – The City of Reno communications organization is currently staffed with a total of 54 funded positions for Fiscal Year 2017. These positions break down as follows:

- 3 Public Safety Call Takers
- 40 Public Safety Dispatchers
- 9 Public Safety Dispatch Supervisors
- 1 Assistant Emergency Communications Manager
- 1 Assistant Director of Emergency Communications

The communications center operates as part of the City's Communications and Technology Department and is headed by an Assistant Director of Emergency Communications who reports to the City's Director of Finance and Administration. This position is supported by an Assistant Emergency Communications Manager and several of the Dispatch Supervisor positions that are assigned administrative duties responsible for Administration, Training and Operations. The

remaining 6 Dispatch Supervisors oversee the 7X24 operations of the communications center staff.

Personnel in the Public Safety Call Taker and Public Safety Dispatcher classifications are covered by a CBA with the International Union of Operating Engineers Stationary Local #39, Non-Supervisory Unit. Personnel in the Public Safety Dispatch Supervisor classification are covered by a CBA with the Local #38 Supervisory Unit. The Assistant Emergency Communications Manager is covered by a CBA with the Reno Administrative/Professional Group, Professional Unit and the Assistant Director of Emergency Communications is unrepresented.

The City of Reno's dispatch organization supports the emergency communications needs of a variety of public safety organizations.

- City of Reno – Services include:
  - Primary 9-1-1 call receiving and processing for landline and wireless 9-1-1 calls from within the City of Reno.
  - Call receiving and processing of designated emergency, central station alarm, and non-emergency 10-digit lines for the City of Reno.
  - Dispatching for the Reno Police Department and the Reno Fire Department.
  - Coordination with Regional Emergency Medical Services Authority (REMSA) for EMD call processing and dispatching of EMS resources as needed.
  - Reno Municipal Court Marshall's Office – Monitoring of units when they are on the air.
  - Reno Public Works Parking Violation Attendants – Monitoring of units when they are on the air.
- Truckee Meadows Fire Protection District (TMFPD) – Services include:
  - Primary 9-1-1 call receiving and processing for landline and wireless 9-1-1 calls from within the TMFPD service area.
  - Coordination with REMSA for dispatching of EMS resources for TMFPD.
- University of Nevada, Reno Police Department (which now also includes Truckee Meadows Community College) – Services include:
  - Primary 9-1-1 call receiving and processing for 9-1-1 calls from campus facilities.
  - Call receiving and processing of designated emergency 10-digit lines.
  - Dispatching for the University of Nevada/TMCC Police Department.
- Washoe County Sheriff's Office (and unincorporated Washoe County) – Services include:
  - Primary 9-1-1 call receiving and processing for landline and wireless 9-1-1 calls from the within unincorporated Washoe County except calls originating from the Incline Village/Crystal Bay area, the Pyramid Lake Paiute Tribe Reservation, the Reno-Sparks Indian Colony, the Gerlach area and areas North of Township 22.

Overview of Current Workload Statistics and Staffing Models

Establishing staffing models for emergency communications centers requires taking into consideration a wide variety of performance standards, performance expectations and methods of work. Typically, staffing models are determined against desired performance metrics so that the performance of individual personnel and the communications center as a whole can be measured on a routine basis to assure that desired service levels are being met.

The most widely recognized performance standards for the processing of inbound emergency calls and initiating dispatch activities are the standards developed by the National Emergency Number Association (NENA) and the National Fire Prevention Association (NFPA). These two standards are summarized below.

National Emergency Number Association (NENA) Call Answering Standard/Model Recommendation – NENA Document 56-005 issued June 10, 2006

Section 3, Call Taking Standards

3.1 Standard for answering 9-1-1 Calls. 90% of all 9-1-1 calls arriving at the Public Safety Answering Point (PSAP) shall be answered within 10 seconds during the busy hour (the hour each day with the greatest call volume), as defined in the NENA Master Glossary 00-01). 95% of all 9-1-1 calls should be answered within 20 seconds.

3.2 Order of Answering Priority. It is the responsibility of the duty Telecommunicators to answer all in-coming calls. All phone calls will be answered in order of priority. 1st priority will be the 9-1-1 and emergency 7/10-digit phone lines; 2nd priority will be non-emergency lines; and 3rd priority will be the administrative and/or internal phone lines.

3.7 Transferring emergency calls. When emergency calls need to be transferred to another PSAP, the Telecommunicator will transfer the call without delay. The Telecommunicator will advise the caller: "Please do not hang up; I am connecting you with (name of the agency)". The Telecommunicator should stay on the line until the connection is complete and all pertinent information has been relayed to the answering PSAP.

National Fire Protection Association (NFPA) Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems – NFPA Standard 1221, 2016 Edition

Chapter 7 – Operations, Section 7.4 Operating Procedures

7.4.1* 95% of alarms received on emergency lines shall be answered within 15 seconds, and 99% of alarms shall be answered within 40 seconds. (*Sec. 12.5.2 – Statistical

analysis for call and dispatch performance measurement shall be done monthly and compiled over a 1-year period.)

7.4.2* With the exception of the calls identified in 7.4.2.2 below, 90% of emergency alarm processing shall be completed within 64 seconds, and 95% of alarm processing shall be completed within 106 seconds. (*Sec. 12.5.2 – Statistical analysis for call and dispatch performance measurement shall be done monthly and compiled over a 1-year period.)

7.4.2.2 Emergency alarm processing for the following call types shall be completed within 90 seconds 90% of the time and within 120 seconds 99% of the time:

1. Calls requiring emergency medical dispatch questioning and pre-arrival medical instructions.
2. Calls requiring language translation
3. Calls requiring the use of a TTY/TDD device or audio/video relay services
4. Calls of criminal activity that require information vital to emergency responder safety prior to dispatching units
5. Hazardous material incidents
6. Technical rescue
7. Calls that require determining the location of the alarm due to insufficient information
8. Calls received by text message

7.4.4* Where alarms are transferred from the primary PSAP to a secondary answering point, the transfer procedure shall not exceed 30 seconds for 95 percent of all alarms processed. (*Sec. 12.5.2 – Statistical analysis for call and dispatch performance measurement shall be done monthly and compiled over a 1-year period.)

7.4.4.1 The PSAP shall transfer alarms as follows:

1. The alarm shall be transferred directly to the Telecommunicator.
2. The answering transferring agency shall remain on the line until it is certain that the transfer is effected.
3. The transfer procedure shall be used on emergency 9-1-1 calls.

Both of these standards place a heavy emphasis on the ability of the communications center to quickly answer inbound 9-1-1 and emergency 10-digit calls, so we will examine Call Receiver staffing models first.

To start with, we need to develop an understanding of the routine volume of telephone traffic that moves through the center on an annual, monthly, daily and hourly basis. Telephone system statistics were used to determine that the total inbound telephone call volume flowing through the combined operations of Washoe County and the City of Reno was 361,407 calls in 2015 and is estimated to be 354,517 for 2016 (based on data through September 7, 2016). In 2015 approximately 53% of these calls were received

over 9-1-1 lines and in 2016 it is estimated that 9-1-1 calls will compose just over 54% of the total inbound calls. The table below summarizes the inbound and outbound call statistics for 2015 and 2016.

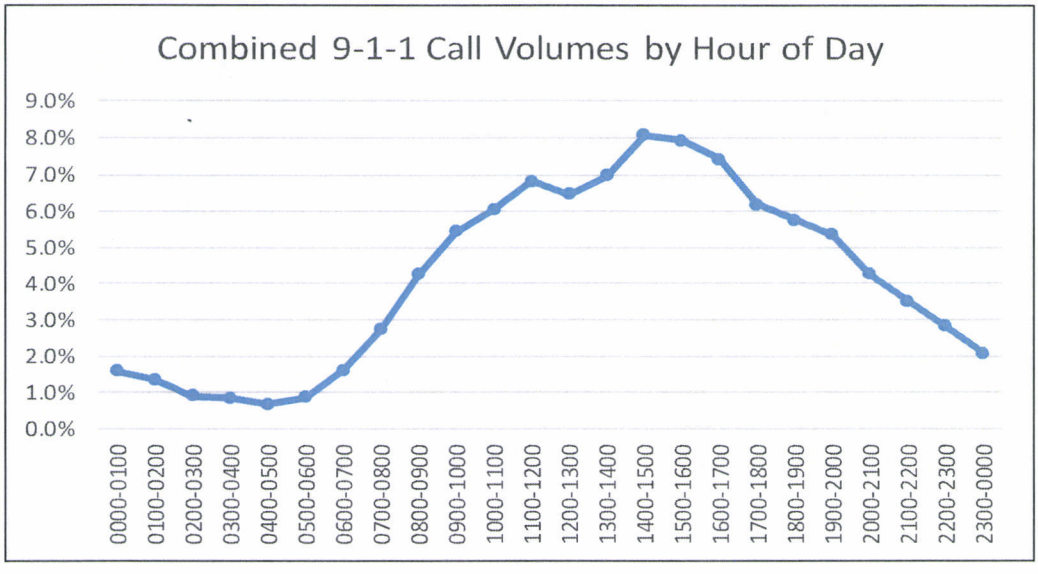
Total Telephone Call Volumes								
	2015	% of Inbound Calls	% of Total Calls		2016 YTD (68.8% of the Year)	Predicted for Full Year	% of Inbound Calls	% of Total Calls
Incoming 911 Calls	189,573	52.5%	38.9%		132,347	192,365	54.3%	41.0%
Incoming 911 Abandoned	2,530	0.7%	0.5%		1,274	1,852	0.5%	0.4%
Incoming REMSA Calls	12,557	3.5%	2.6%		10,714	15,573	4.4%	3.3%
Incoming 10-Digit	156,747	43.4%	32.2%		99,573	144,728	40.8%	30.9%
Total Incoming Calls	361,407	100%			243,908	354,517	100%	
Total Calls with No Value	29,011		6.0%		19,640	28,547		6%
Total Outgoing Calls	96,477		19.8%		58,935	85,661		18%
Total Calls Handled	486,895		100.0%		322,483	468,725		100%

It should be noted that the predicted number of calls for 2016 is based on a straight extrapolation based on the number of days in the data provided and may not take into consideration seasonal variations that may bring the 2016 number closer to the 2015 totals.

A combination of 9-1-1 call data for both Washoe County and the City of Reno, along with dispatched calls-for-service data from Washoe County, allows estimating of the average percentages of calls transacted on any given day of the week. Each operation experiences their busiest days of the week on different days, with Saturday's being the busiest day for Washoe County and Friday being the busiest day for the City of Reno. For purposes of modeling call receiver staffing for a consolidated operation, the values in the right-hand column of the table below will be used as they represent the averaged call volumes across both organizations.

9-1-1 Call Volumes by Day of Week			
Day of Week	Washoe County Averages	City of Reno Averages	Assumed Call Volumes for Consolidation Model
Monday	14.2%	14.2%	14.2%
Tuesday	13.7%	14.2%	13.9%
Wednesday	12.7%	15.0%	13.8%
Thursday	13.5%	16.2%	14.8%
Friday	14.9%	16.7%	15.8%
Saturday	16.9%	13.1%	15.0%
Sunday	14.1%	10.6%	12.3%
	100.0%	100.0%	100.0%

Call volumes to emergency communications centers also vary considerably with the hour of the day, and therefore Call Receiver staffing needs to vary through the day to match the rising and falling overall telephone call volumes being processed. Data provided by both organizations allowed compilation of the following call volume by hour-of-day information.

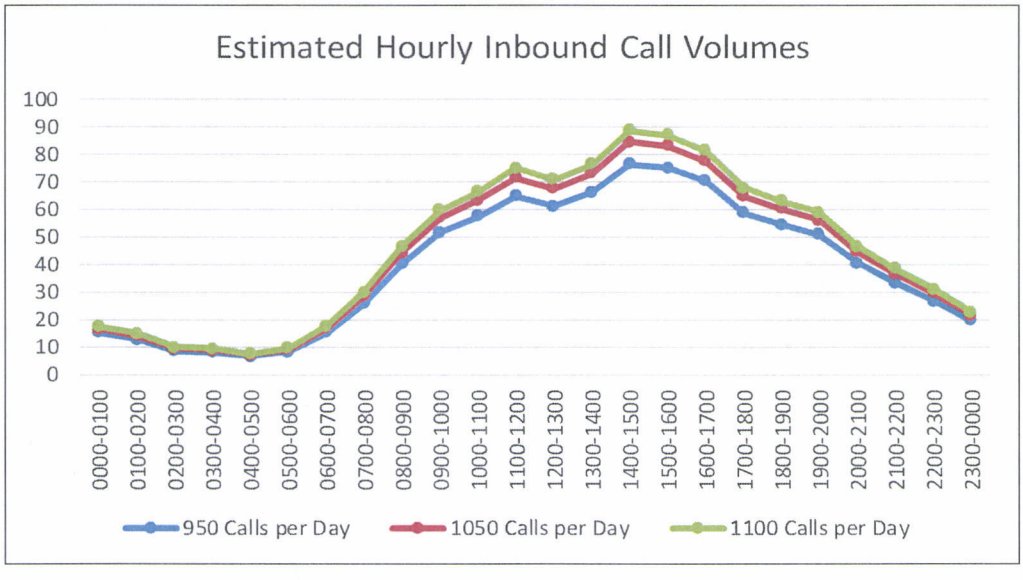


9-1-1 Call Volumes by Hour of Day			
Hour of Day	Washoe County Averages	City of Reno Averages	Assumed Call Volumes for Consolidation Model
0000-0100	1.4%	1.8%	1.6%
0100-0200	1.2%	1.5%	1.4%
0200-0300	0.7%	1.1%	0.9%
0300-0400	0.8%	0.9%	0.9%
0400-0500	0.5%	0.8%	0.7%
0500-0600	0.9%	0.8%	0.9%
0600-0700	1.9%	1.3%	1.6%
0700-0800	3.2%	2.3%	2.7%
0800-0900	4.1%	4.4%	4.2%
0900-1000	5.7%	5.2%	5.4%
1000-1100	6.0%	6.1%	6.1%
1100-1200	7.5%	6.1%	6.8%
1200-1300	6.6%	6.3%	6.5%
1300-1400	6.5%	7.4%	7.0%
1400-1500	8.5%	7.6%	8.1%
1500-1600	7.9%	8.0%	7.9%
1600-1700	6.5%	8.4%	7.4%
1700-1800	6.6%	5.8%	6.2%
1800-1900	5.9%	5.6%	5.8%
1900-2000	5.0%	5.7%	5.4%
2000-2100	4.3%	4.2%	4.3%
2100-2200	3.6%	3.4%	3.5%
2200-2300	2.8%	2.8%	2.8%
2300-0000	1.9%	2.3%	2.1%
	100.0%	100.0%	100.0%

Knowing the total number of calls processed in a given year, and knowing their average distribution across the normal week, allows us to develop daily call volume estimates that can then be modeled on an hour-of-day basis for use in determining appropriate Call Receiver staffing levels. Three scenarios were examined, with overall inbound call volumes ranging from slightly below current call volume experience to slightly above this experience. The resulting expected daily total inbound call volumes are for each scenario are shown in the table below.

Estimated Inbound Call Volumes (3 Scenarios)				
Annual Inbound Volumes		355,000	360,000	365,000
Estimated Weekly Volumes		6,809	6,904	7,000
Monday	14.2%	970	984	997
Tuesday	13.9%	948	961	974
Wednesday	13.8%	943	956	969
Thursday	14.8%	1,011	1,025	1,039
Friday	15.8%	1,077	1,092	1,107
Saturday	15.0%	1,022	1,037	1,051
Sunday	12.3%	839	851	863

At the assumed scenario levels, normal weekday call volumes will typically average between 950 and 1,100 calls per day, so these values were then used to estimate hourly call volumes as shown in the graph and table below.

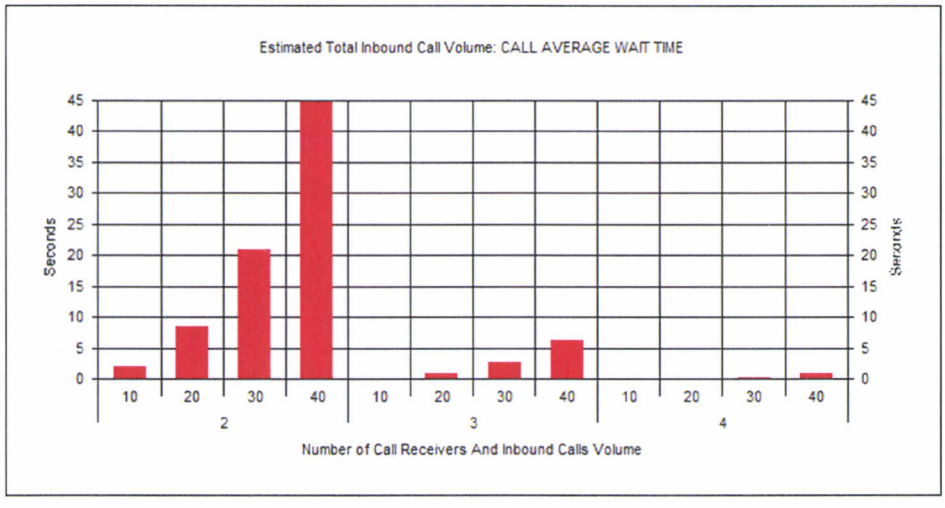


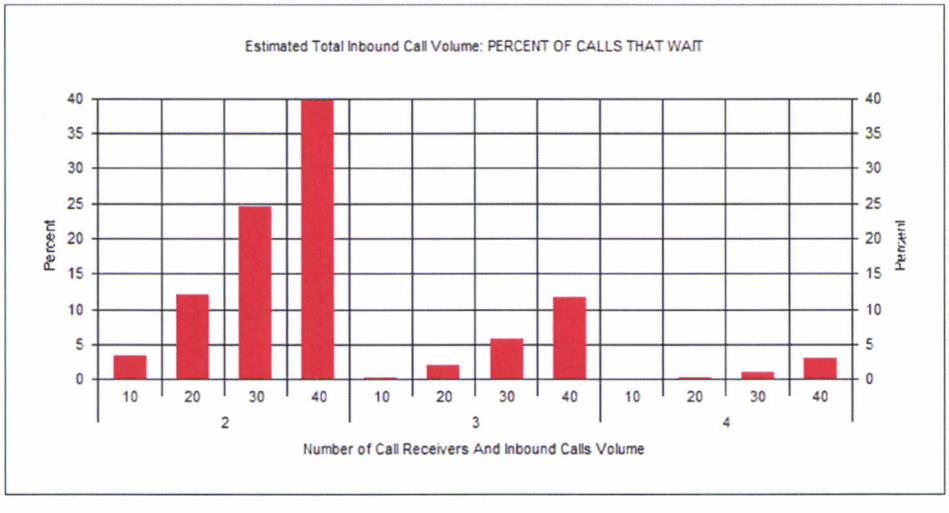
Estimated Hourly Inbound Call Volumes (3 Scenarios)				
		Inbound Call Volumes		
Hour of Day		950	1050	1100
0000-0100	1.6%	15	17	18
0100-0200	1.4%	13	14	15
0200-0300	0.9%	9	10	10
0300-0400	0.9%	8	9	9
0400-0500	0.7%	7	7	8
0500-0600	0.9%	8	9	10
0600-0700	1.6%	15	17	18
0700-0800	2.7%	26	29	30
0800-0900	4.2%	40	45	47
0900-1000	5.4%	52	57	60
1000-1100	6.1%	58	64	67
1100-1200	6.8%	65	72	75
1200-1300	6.5%	61	68	71
1300-1400	7.0%	66	73	77
1400-1500	8.1%	77	85	89
1500-1600	7.9%	75	83	87
1600-1700	7.4%	70	78	82
1700-1800	6.2%	59	65	68
1800-1900	5.8%	55	60	63
1900-2000	5.4%	51	56	59
2000-2100	4.3%	41	45	47
2100-2200	3.5%	33	37	39
2200-2300	2.8%	27	30	31
2300-0000	2.1%	20	22	23
	100.0%	950	1050	1100

With these hourly estimates established we can now use industry standard Erlang calculations to determine the number of Call Receivers needed to achieve various performance levels. IXP has built a customized tool that allows us to model several different call volume levels against several different staffing levels to allow the user to see how incremental increases in Call Receiver staffing can allow handling of increasing call volumes with varying performance levels. Erlang calculations take into consideration the average duration of calls as well as the random distribution of calls across a given hour. Data from Washoe County for 2015 and 2016 indicate that the average call duration was between 88 and 91 seconds. Therefore, we have developed the following staffing models using 100 second average call durations to build a slight cushion into the resulting calculations.

For the combination of total inbound telephone traffic for a consolidated Washoe County and City of Reno call receiving function, we have first modeled at call volumes between 10 and 40 calls per hour, essentially the expected levels between the hours of 2100 (9:00 p.m.) and 0800 (8:00 a.m.) and the

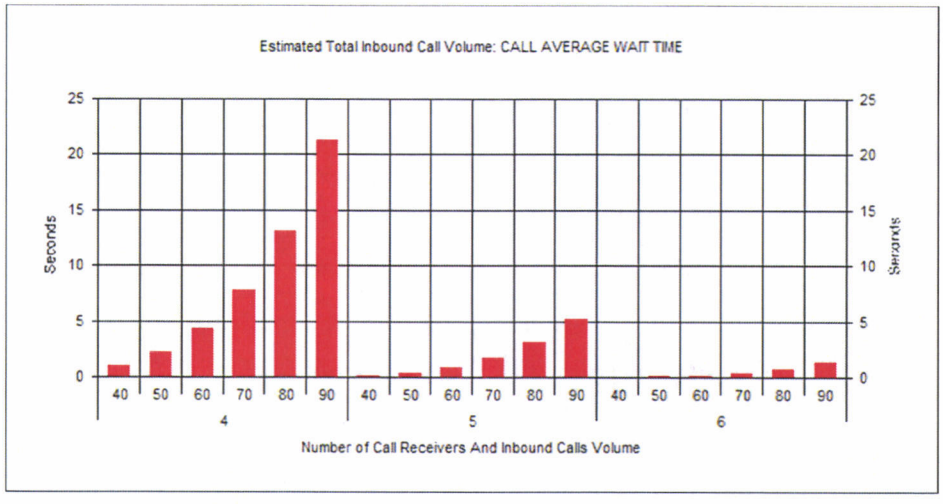
performance achieved with 2, 3 or 4 personnel available to answer incoming calls. In the charts below we can examine the expected average wait time for callers and percentage of calls that will experience a wait. During the quietest hours of the night, with call volumes in the 10-20 calls per hour range, 2 to 3 personnel are needed to allow calls to be answered in less than 10 seconds. A common approach to accomplishing this would be to have minimum staffing set at 2 Call Receivers on duty and have surges in call volumes handled by other Dispatch personnel (often Fire Dispatch personnel as is already being done).

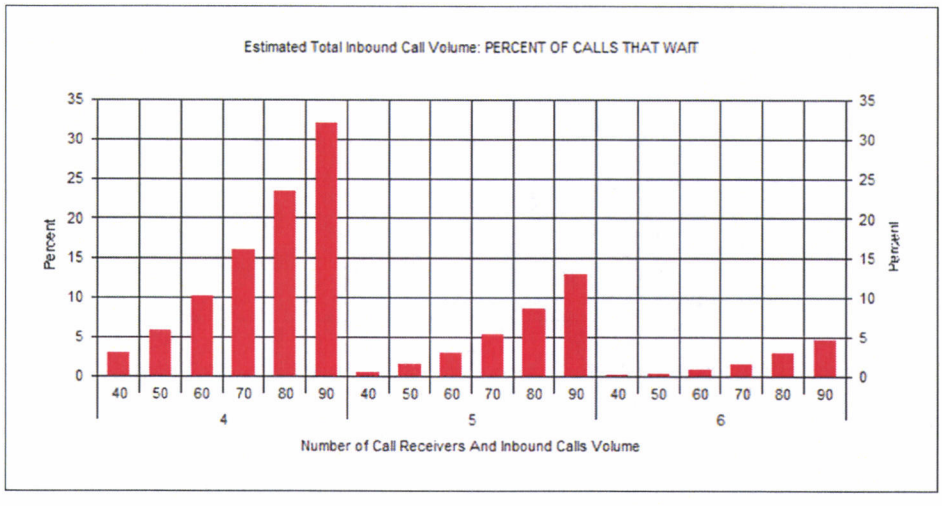




As the day gets busier and call volumes increase, the number of Call Receivers will also need to increase to maintain call answering performance levels. The charts below model the performance expectations for call volumes between 40 and 90 calls per hour, essentially the expected call volumes between the

hours of 0800 (8:00 a.m.) and 2100 (9:00 p.m.). Performance with 4, 5 and 6 personnel available to answer calls is examined. As call volumes increase from 50 to 70 calls per hour range, staffing available to answer calls needs to increase to at least 4 and then 5 personnel in order to maintain low average wait times. This would probably need to be accomplished with dedicated Call Receiver personnel since the availability of Dispatch personnel to assist with call receiving will be more challenging during these busier hours of the day.





Overall, it appears that a consolidated Call Receiver function for the total inbound telephone call volumes being experienced by Washoe County and the City of Reno would need to be set a minimum staffing of 2 Call Receivers for 11 hours of the day, increase to 4 Call Receivers for approximately 5 hours of the day and then rise to 5 Call Receivers for the remaining 8 hours of the day.

Determining the actual FTE count needed to fill these positions is determined by the Net Available Working Hours (NAWH) for the personnel filling these positions. IXP uses an approach similar to

APCO's Project Retains methodology to examine both the net available working hours and the resulting 'coverage factor' needed to cover a position on a full 24 hours per day basis. In building staffing models, we utilize both the NAWH and coverage factor approach, depending on whether a position is routinely staffed on a full 7X24 basis, regardless of workload (such as routinely staffed Dispatch positions) or if the position may be staffed for less than a full 24 hours. Average leave utilization rates and related data was provided by both Washoe County and the City of Reno, and is summarized in the tables below.

Estimating Reno's Telecommunicator Net Available Working Hours and Coveage Ratio			
Total Hours to cover per 7X24 Shift		8760	
			Coverage Factor
Total Hours to Cover per Employee		2080	4.2
Average Non-Working Hours per Position			
Vacation	113.78		
Sick Leave	81.06		
Comp Time Used	33.82		
Bonus Sick Leave	0.33		
Holiday Comp Time Used	23.15		
Total FMLA (see below)	-		
Subtotal non-working (excluding FMLA)		(252)	
Net Available Hours before Training Time and Meals/Breaks		1,828	4.8
Assumed Annual Non-Working Training Time		(70)	
Breaks (assumes 2-15 min breaks per shift worked)		(114)	
Meal Break (assume 1/2 hour per shift worked)		(114)	
Net Available Hours Per EE (before any FMLA assumptions)		1,529	5.73
Assumed FMLA Average Utilization per EE		(62)	
Assumed Net Available Working Hours (including FMLA)		1,467	5.97

Full Yearly Hours per EE	2080
Average Leave Time per EE (excluding FMLA)	(252)
Average Working Hours per EE	1,828
Average Shift Length	8
Average Number of Shifts Worked per EE per Year	228

Estimating the County's Telecommunicator Net Available Working Hours and Coverage Ratio			
Total Hours to cover per 7X24 Shift		8760	
			Coverage Factor
Total Hours to Cover per Employee		2080	4.2
Average Non-Working Hours per Position			
Vacation and Holiday	160.3		
Sick Leave	79.5		
Personal Leave	2.5		
FMLA (see below)	-		
Meetings and special assignments	6.0		
Subtotal non-working (excluding FMLA)		(248)	
Net Available Hours before Training Time and Meals/Breaks		1,832	4.8
Assumed Annual Non-Working Training Time		(70)	
Breaks (assumes 2-15 min breaks per shift worked)		(92)	
Meal Break (assume 1/2 hour per shift worked)		(92)	
Net Available Hours Per EE (before any FMLA assumptions)		1,579	5.55
Assumed FMLA Average Utilization per EE		(53)	
Assumed Net Available Working Hours (including FMLA)		1,526	5.74

Full Yearly Hours per EE	2080
Average Leave Time per EE (excluding FMLA)	(248)
Average Working Hours per EE	1,832
Average Shift Length	10
Average Number of Shifts Worked per EE per Year	183

Washoe County utilizes a combination of 10 and 12 hour shifts which can result in personnel working fewer shifts per year and therefore having different levels of non-working time during those shifts. Collectively this can result in slightly lower coverage ratios than for 8 hour shifts. In the table above, a 10-hour shift was used as an example of this impact, bringing the calculated coverage factor to 5.74 rather than the 5.92 it would be with 8 hour shifts.

Since the specific details for how shift scheduling would be configured for a newly established consolidated operation are beyond the scope of this analysis (and premature at this stage of considering consolidation as an alternative), IXP recommends using a NAWH value of 1,470 hours per year for purposes of calculating staffing levels in this report. This results in a coverage factor of 6 personnel to cover a single position on a full 7X24 basis (24 hours per day X 365 days per year = 8,760 hours to cover, divided by 1,470 hours per employee yields a required 6.0 personnel). It is important to note that the NAWH calculation takes into account the non-working break and lunch periods that are part of a normal shift, so the resulting personnel count provides for personnel in the overall model to be assigned to work full or partial shifts as 'breakers' to allow personnel to take their breaks and the position remain covered in their absence.

Based on the call volume and staffing levels discussed above, a total of 22 personnel would be needed to perform Call Receiver functions for a consolidated operation:

Position Description	# of Positions Needing Coverage	Daily Hours to Cover	Total Hours Needed per Day	Total Annual Hours to Cover	Assumed Net Available Working Hours	# of Employees Needed to Cover
Estimated Call Receiver Position Staffing Levels						
Call Receivers - Minimum Coverage	2	24	48	17520	1470	12
Call Receivers - 16 busy hours of Day	2	16	32	11680	1470	8
Call Receivers - 8 busiest hours Day	1	8	8	2920	1470	2

Establishing staffing levels for other Dispatch positions would follow a similar approach. Positions that need to be staffed on a routine basis would require 6 employees per position. Expanded coverage for positions that are staffed for only certain hours of the day would be calculated on the basis of the aggregate number of hours needing to be covered divided by the 1,470 NAWH for each employee.

During prior examinations of consolidation alternatives, the staff of Washoe County and the City of Reno identified several potential staffing models and provided these to IXP for consideration.

In one of these models, a total of 6 positions were staffed on a 24-hour per day basis (4 working Law Enforcement functions and 2 working Fire/EMS) and a 7th Law Enforcement position would be staffed for the busier hours each day, as shown below:

- LE North Position – Staffed 24 X 7
- LE Central Position – Staffed 24 X 7
- LE South Position – Staffed 24 X 7
- Combined Secondary Position – Staffed 24 X 7
- Combined Auxiliary/Admin Channel – Staffed 0700 to 1800
- Fire North Position – Staffed 24 X 7
- Fire South Position – Staffed 24 X 7

In another of the models, the same total number of positions were identified but with a slightly different arrangement of working assignments:

- Reno Green Position – Staffed 24 X 7
- Reno Yellow Position – Staffed 1100 to 0100
- Combined Secondary Position – Staffed 24 X 7
- WCSO Green Position – Staffed 24 X 7
- Combined Auxiliary/Admin Channel – Staffed 24 X 7
- Reno Fire/Truckee Meadows Fire – Staffed 24 X 7
- North Lake Tahoe Fire – Staffed 24 X 7

In the third model, a significantly deeper staffing level was outlined, with a total of 11 dispatch positions staffed on a 24-hour per day basis (6 working Law Enforcement functions, 3 working Fire/EMS and 2 positions for breaks), as shown below:

- WCSO Green Position – Staffed 24 X 7
- WCSO Yellow (Tribal, Motors, Jail Transport, DAS, etc.) – Staffed 24 X 7
- Reno Green – Staffed 24 X 7
- Reno Yellow – Staffed 24 X 7
- WCSO Secondary – Staffed 24 X 7
- Reno Secondary – Staffed 24 X 7
- Reno Fire – Staffed 24 X 7
- Truckee Meadows Fire – Staffed 24 X 7
- North Lake Tahoe Fire – Staffed 24 X 7
- Breaker – 2 Positions staffed 24 X 7

In looking at this third model, since the 6:1 coverage ratio modeling described for use in this report is based on Net Available Working Hours which already take into account non-working hours including breaks, it also accounts for the bodies needed to cover a position on a 24-hour basis including scheduling coverage for those breaks. Therefore, for comparison purposes, this third model would actually be a total of 9 positions staffed on a 24-hour basis, with 6 working Law Enforcement functions and 3 working Fire/EMS.

IXP has reviewed each of these models in comparison to our observations on overall workload and our experience advising and operating multi-jurisdictional and multi-disciplinary communications centers. However, since our operational observation time was limited and statistics alone can't be used to support dispatcher staffing considerations, we also need to carefully consider the experience and recommendations of personnel in the current operating environments in formulating any recommendations for dispatch staffing levels.

Particularly for Law Enforcement dispatching, local operational practices and the nature of incidents responded to can have significant impact on the number of units that a single dispatch position can handle, and these characteristics have much greater impact on dispatcher workload than just looking at calls for service statistics. For example, the Sheriff's Office observes that during the busier hours of the day there will be 30-35 units on the air for the Green and Yellow channels and this can drop to a low of 25 units on the air with only the Green channel in use. Similar daily variations occur for Reno Police as well.

Calls for service statistics can however provide insights when considering whether positions need to be staffed on a continuous 24 X 7 basis. In the tables below, the 2015 law enforcement calls for service statistics for both dispatch organizations are compared on an hourly basis. As with the total telephone call volume data, there is a natural rise and fall of calls for service across a typical 24-hour period, though with slightly different hourly proportionality.

Washoe County 2015 LE CFS			Reno 2015 Law Enforcement CFS			Combined Average Hourly CFS Levels	Hourly % of Daily CFS Volume	Hourly % of Total Daily Telephone Call Volume
Hour	Annual Total	Daily Average	Hour	Annual Total	Daily Average			
0000-0100	4849	13.3	0000-0100	7255	19.9	33.2	3.4%	1.6%
0100-0200	3916	10.7	0100-0200	6496	17.8	28.5	2.9%	1.4%
0200-0300	2808	7.7	0200-0300	5451	14.9	22.6	2.3%	0.9%
0300-0400	2048	5.6	0300-0400	4777	13.1	18.7	1.9%	0.9%
0400-0500	1889	5.2	0400-0500	4184	11.5	16.6	1.7%	0.7%
0500-0600	2161	5.9	0500-0600	4443	12.2	18.1	1.8%	0.9%
0600-0700	2842	7.8	0600-0700	5315	14.6	22.3	2.3%	1.6%
0700-0800	5877	16.1	0700-0800	6540	17.9	34.0	3.5%	2.7%
0800-0900	6941	19.0	0800-0900	9467	25.9	45.0	4.6%	4.2%
0900-1000	8141	22.3	0900-1000	10472	28.7	51.0	5.2%	5.4%
1000-1100	9105	24.9	1000-1100	11503	31.5	56.5	5.7%	6.1%
1100-1200	8042	22.0	1100-1200	10978	30.1	52.1	5.3%	6.8%
1200-1300	7590	20.8	1200-1300	10911	29.9	50.7	5.1%	6.5%
1300-1400	8765	24.0	1300-1400	12268	33.6	57.6	5.9%	7.0%
1400-1500	7950	21.8	1400-1500	13259	36.3	58.1	5.9%	8.1%
1500-1600	7644	20.9	1500-1600	14294	39.2	60.1	6.1%	7.9%
1600-1700	6840	18.7	1600-1700	12076	33.1	51.8	5.3%	7.4%
1700-1800	6559	18.0	1700-1800	10873	29.8	47.8	4.9%	6.2%
1800-1900	5610	15.4	1800-1900	9836	26.9	42.3	4.3%	5.8%
1900-2000	5423	14.9	1900-2000	10211	28.0	42.8	4.4%	5.4%
2000-2100	5234	14.3	2000-2100	10086	27.6	42.0	4.3%	4.3%
2100-2200	5535	15.2	2100-2200	10748	29.4	44.6	4.5%	3.5%
2200-2300	6134	16.8	2200-2300	11248	30.8	47.6	4.8%	2.8%
2300-0000	5750	15.8	2300-0000	9049	24.8	40.5	4.1%	2.1%

The staffing models for law enforcement dispatching discussed above range from a low of 4.5 staffed positions (4 staffed 7 X 24 and 1 staffed for the busier hours of the day), to a high of 6 staffed positions (all staffed on a 7 X 24 basis). In IXP's opinion, the models with only 4.5 positions assigned to law enforcement dispatching may work satisfactorily for routine workloads but would have little capacity to handle surges in activity if a large scale or multiple intense incidents occurred simultaneously. Conversely, having a total of 6 positions staffed on a 24-hour basis is likely too deep during the deep night hours. Therefore, IXP would recommend that the staffing pattern for law enforcement dispatching be modeled on the basis of 5 positions staffed on a 24-hour basis with a 6th position added for the busiest 12-hour period of each day.

Establishing the appropriate staffing levels for Fire/EMS dispatching is similarly influenced by expected call volumes but is also influenced by the nature of the work performed. In the suggested models above, two of the models identified 2 full time Fire/EMS positions and the third model identified 3 full time Fire/EMS positions. The tables below provide an overview of the Fire/EMS calls for service levels for the two currently separate operations.

Washoe County 2015 Fire CFS			Reno 2015 Fire CFS			Combined Average Hourly CFS Levels	Hourly % of Daily CFS Volume	Hourly % of Total Daily Telephone Call Volume
Hour	Annual Total	Daily Average	Hour	Annual Total	Daily Average			
0000-0100	298	0.8	0000-0100	1051	2.9	3.7	2.7%	1.6%
0100-0200	257	0.7	0100-0200	1063	2.9	3.6	2.6%	1.4%
0200-0300	212	0.6	0200-0300	959	2.6	3.2	2.3%	0.9%
0300-0400	229	0.6	0300-0400	778	2.1	2.8	2.0%	0.9%
0400-0500	187	0.5	0400-0500	686	1.9	2.4	1.7%	0.7%
0500-0600	249	0.7	0500-0600	767	2.1	2.8	2.0%	0.9%
0600-0700	308	0.8	0600-0700	1001	2.7	3.6	2.6%	1.6%
0700-0800	528	1.4	0700-0800	1371	3.8	5.2	3.7%	2.7%
0800-0900	859	2.4	0800-0900	1752	4.8	7.2	5.2%	4.2%
0900-1000	783	2.1	0900-1000	1884	5.2	7.3	5.3%	5.4%
1000-1100	809	2.2	1000-1100	1821	5.0	7.2	5.2%	6.1%
1100-1200	753	2.1	1100-1200	1923	5.3	7.3	5.3%	6.8%
1200-1300	786	2.2	1200-1300	1974	5.4	7.6	5.4%	6.5%
1300-1400	825	2.3	1300-1400	2057	5.6	7.9	5.7%	7.0%
1400-1500	741	2.0	1400-1500	2102	5.8	7.8	5.6%	8.1%
1500-1600	702	1.9	1500-1600	2095	5.7	7.7	5.5%	7.9%
1600-1700	734	2.0	1600-1700	1940	5.3	7.3	5.3%	7.4%
1700-1800	790	2.2	1700-1800	2123	5.8	8.0	5.7%	6.2%
1800-1900	765	2.1	1800-1900	1887	5.2	7.3	5.2%	5.8%
1900-2000	652	1.8	1900-2000	1954	5.4	7.1	5.1%	5.4%
2000-2100	617	1.7	2000-2100	1783	4.9	6.6	4.7%	4.3%
2100-2200	518	1.4	2100-2200	1683	4.6	6.0	4.3%	3.5%
2200-2300	381	1.0	2200-2300	1487	4.1	5.1	3.7%	2.8%
2300-0000	332	0.9	2300-0000	1214	3.3	4.2	3.1%	2.1%

Collectively, the Fire agencies dispatched by the separate Reno and Washoe County dispatch operations handled a total of 50,670 calls for service in 2015. From IXP's experience, 2-position Fire/EMS dispatching operations are fully capable of handling these types of call volumes. For example, one organization we've worked with handles a total of 11 Fire agencies and a regional ALS agency with a total incident volume of approximately 109,000 annually. Staffing for this operation is handled with a constant staffing of 2 Dispatchers with a 3rd position added for the 12 busiest hours of the day. In another example, a center that IXP operates handles Fire and ALS-level EMS dispatching for 2 agencies with approximately 32,200 annual calls for service with a 2-posiiton operation and only adds a 3rd position on the fly when needed during surges or major events.

One of the most important considerations in consolidated Fire and/or EMS dispatching is the efficient sharing of radio channels by all of the fire agencies involved in the operation. If each agency operates on their own discrete set of channels, staffing efficiencies at the comm center can't be as readily achieved. For example, in the larger example discussed above, dispatching of all incidents for all 12 agencies is handled on a single radio channel, and then working incidents are moved to an operational channel. Only large scale events or working fires get assigned to a private channel staffed with its own

Dispatcher. This allows this "3rd Dispatcher" to be a part of the overall mix of staffing in the room to assist with call receiving workload, breaks and other related workload.

Based on information obtained during our work with Washoe County and Reno, it appears that there will need to be some work done to build the level of consolidated regional fire dispatching efficiency we know to be possible from other jurisdictions. This will require coordinated and collaborative work on the part of both the fire agencies themselves and the group planning the consolidated operational model. Without this, there will be increased pressure to operate the consolidated communications center with staffing levels that are not as efficient as is known to be possible.

From IXP's experience and recognizing the limited number of agencies and incident volumes involved, we recommend that Fire/EMS dispatching be staffed with 2 personnel on duty on a 24X7 basis and that a 3rd position be staffed during the busier hours of the day. This 3rd position should flex between multiple operational responsibilities, particularly supporting call receiving activities, and only be 'dedicated' to Fire/EMS operations that require the use of a dedicated channel for a significant event.

Finally, coverage for shift supervision also needs to take into consideration the flows of workload and staffing levels present throughout a normal daily cycle, along with the additional duties that Shift Supervisors have to fulfill to manage current workloads and future scheduling of personnel. During our interviews and information collection activities, we observed a number of differences in the nature of the work performed by Shift Supervisors between the two organizations. Particularly with the Sheriff's Office, the Supervisors take on a number of administrative duties such as FOIA requests and data compilation for outside agencies such as the District Attorney. From IXP's experience with consolidated communications centers, these types of activities are typically supported by administrative staff positions or other communications center personnel other than Supervisors.

With the combined staffing levels for Call Receivers and Dispatchers recommended above, it is likely there will be periods of the day with 13 or more staffed positions operating in the center. This likely exceeds the capacity for a single Supervisor to support so2 Supervisors would be needed during these busier hours. However, as the daily cycle of call and incident volumes declines, staffed positions would fall to only 9 positions, and from IXP's experience, this is well within the capacity for a single Shift Supervisor,

Therefore, the overall recommended staffing levels for Supervisors, Dispatchers and Call Receiver positions would be a total of 78.5 personnel as follows:

Communications Shift Supervisors						
Routine Coverage	1	24	24	8760	1470	6.0
Busiest Hours Extra Coverage	1	12	12	4380	1470	3.0
Estimated Dispatch Position Staffing Levels						
Law Enforcement Dispatch - Continuous Coverage	5	24	120	43800	1470	29.8
Law Enforcement Dispatch - Busiest Hours	1	12	12	4380	1470	3.0
Fire Dispatch - Continuous Coverage	2	24	48	17520	1470	11.9
Fire Dispatch - Busiest Hours	1	12	12	4380	1470	3.0
Estimated Call Receiver Position Staffing Levels						
Call Receivers - Minimum Coverage	2	24	48	17520	1470	11.9
Call Receivers - 16 busiest hours of the Day	2	16	32	11680	1470	7.9
Call Receivers - 8 busiest hours of the Day	1	8	8	2920	1470	2.0

In addition to the shift operations, there are a number of other managerial and supporting functions that need to be included in the organizational structure. Given the size of the organization and the need for the organization to provide a high degree of consistency in the service levels provided to the agencies being served, IXP would recommend the following management and support staff structure:

- Agency Director – This position would be directly responsible to the governance bodies established for the organization and have full management responsibility for the organization.

- Deputy Director/Operations Manager – This position would serve as the immediate subordinate to the Director and act in that capacity in the absence of the Director. The primary role of this position would be the management of oversight of the day-to-day operations of the communications center.

- Clerical Support – This position (likely comparable to the Office Assistant II classifications used in both jurisdictions) would support all of the clerical and accounting functions for the organization. This would include interacting with Finance and Human Resource/Payroll staff of the host organization to process organizational transactions within the host agency's financial systems.

- Training and Quality Assurance Supervisor – This position would be a Supervisory level employee selected from within the cadre of Communications Shift Supervisors to provide leadership and operation of the organizations' training and quality assurance programs. This position would supervise the Trainer and Quality Assurance Support Team, and work closely with the Communications Shift Supervisors to monitor the quality of the organizations performance and compliance with any adopted performance standards. This position, and their team, would also be responsible for producing incident document and recordings in response to FOIA requests and data needs of other agencies such as the District Attorney.

- Trainers and Quality Assurance Support Team – This team would be selected from the fully qualified and experienced Telecommunicator staff to serve as dedicated staff to support the training and QA functions. This body of work would include assisting in the hiring process, conducting new hire training, conducting training as personnel advance from call receiver to dispatcher functionality levels, conducting routine in-service training, and performing QA reviews as prescribed by adopted standards. Since these personnel would also be fully qualified dispatch staff, they could also be used to fill in for unexpected shift vacancies or to augment staffing during adverse or special events.

Collectively then, IXP feels that an overall staffing mix of 85.5 personnel would be needed to manage and operate a consolidated communications organization. The combined staffing model is shown in the table below.

Position Description	# of Positions Needing Coverage	Daily Hours to Cover	Total Hours Needed per Day	Total Annual Hours to Cover	Assumed Net Available Working Hours	# of Employees Needed to Cover
Director	1	Weekdays				1
Deputy Director/Operations Manager	1	Weekdays				1
Office Assistant II	1	Weekdays				1
Training & QA Supervisor	1	Weekdays				1
Trainers and QA Support Team (Telecommunicators)	3	Weekdays				3
Communications Shift Supervisors						
Routine Coverage	1	24	24	8760	1470	6.0
Busiest Hours Extra Coverage	1	12	12	4380	1470	3.0
Estimated Dispatch Position Staffing Levels						
Law Enforcement Dispatch - Continuous Coverage	5	24	120	43800	1470	29.8
Law Enforcement Dispatch - Busiest Hours	1	12	12	4380	1470	3.0
Fire Dispatch - Continuous Coverage	2	24	48	17520	1470	11.9
Fire Dispatch - Busiest Hours	1	12	12	4380	1470	3.0
Estimated Call Receiver Position Staffing Levels						
Call Receivers - Minimum Coverage	2	24	48	17520	1470	11.9
Call Receivers - 16 busiest hours of the Day	2	16	32	11680	1470	7.9
Call Receivers - 8 busiest hours of the Day	1	8	8	2920	1470	2.0
				Total Estimated Staffing		**85.5**

It is extremely common for there to be routine turnover in public safety communications organizations, and the mechanisms used to deal with this vary considerably across the industry. Some organizations choose to add a specific turnover factor into their staffing model so that they have some degree of 'over-hiring' already in place to deal with vacancies as they occur. Others choose to use overtime to fill unexpected vacancies and only 'over-hire' if they know in advance that specific vacancies will occur in the near future. Others just utilize overtime to fill vacancies when needed and cover these costs through some combination of budgeted overtime funds and salary and benefit cost savings generated by the vacant position(s). Each of these techniques have their own advantages and disadvantages, and the ultimate approach taken is often driven by a variety of local characteristics and past practices.

In conversations with the leadership for this project, a decision was made to not identify a specific turnover factor in the staffing model and thus increase the staffing level above the recommended level of 85.5. By having a combination of one Supervisor and 3 Telecommunicators normally assigned to training and QA functions, the organization will have some degree of flexibility to fill unexpected vacancies with these personnel on a short-term basis. There will also be an ability to utilize overtime to fill minimum staffing needs when needed. After a couple of years of operation in the consolidated configuration, the issue of turnover rates and how to manage them should be revisited, and adjustments in strategy made at that time if needed.

Technology Analysis

Inventory of Hardware and Software

IXP obtained lists of technology equipment and software used in the Washoe County and Reno Communications operations from the information technology personnel who support the organizations. The lists are below and include:

- City of Reno, NV, Dispatch Center Hardware Currently in Use
- City of Reno, NV, Dispatch Center Software Currently in Use
- Washoe County, NV, Dispatch Center Hardware Currently in Use
- Washoe County, NV, Dispatch Center Software Currently in Use

Each list includes a description of the technology item, the quantity of units or licenses owned, the vendor, the age or date of purchase, whether the item is under maintenance, and whether replacement of the item is planned or needed.

Hardware and software is constantly being upgraded and replaced. Prior to the time of consolidation, the hardware and software lists must be reviewed and updated to provide the most accurate inventory.

Consolidation of Technology

The scope of this report does not include an analysis of the technology requirements for consolidation. However, IXP did observe that consolidation of the City and County dispatch operations requires few changes to implement. The two organizations made a very advantageous decision to use common codes and procedures in their shared CAD system. From an operational standpoint, they could combine immediately without making any changes to configuration or data, and without needing any additional training. The entities also cooperated in the choice of all technology equipment to ensure that technology common to both is standard and compatible.

The organizations will most likely isolate the dispatch network within the purview of whichever entity takes over the responsibility for the combined center, but even those changes could be done in a phased process. The City and County have positioned the technology well for the task of consolidation.

Dispatch Center Hardware Currently in Use
Updated 9/16/2016

Item	Hardware	Qty	Vendor	Age/Date Purchased	Under Warranty/ Maint.	Replacement Needed/ Planned	Owner Agency
1	CAD Server - PowerEdge R720	1	HP	5/24/2013	Yes	No	City of Reno
2	MSS Application Live Server - PowerEdge R720	1	HP	5/24/2013	Yes	No	City of Reno
3	Remote Server - PowerEdge R320	1	HP	5/24/2013	Yes	No	City of Reno
4	Map Setup Machine - PowerEdge R720	1	HP	5/24/2013	Yes	No	City of Reno
5	CAD Print Server - VM server	1	HP			No	City of Reno
6	CAD/RMS Workstations Dell Precisions Workstations T5810	15	HP	5/19/2016	Yes	No	City of Reno
7	Radio Consoles - HP Compaq 2300	9	HP	2008	No	Replacement in process. Testing of new consoles to begin 10/2016.	City of Reno
8	San Storage - Dell SC8000, CT-SC8000-64GB	2	Dell	May 2013	Yes	No	City of Reno
9	CAD Workstations - Precision T58-10	7	Dell	11/1/2015	Yes	No	County
10	Administrative Workstations	8	Dell	May-16	Yes	Yes - Upgrade planned for 8/16	County
11	Admin Server - PowerEdge R710 (virtual)	1	Dell	6/7/2010	Yes	Yes - Replacement date not set	County
12	Zetron Optiplex 79 Towers	4	Dell	12/21/2011	No	Yes - End of Life	County
13	Mistro Radio Consoles	6	Harris	2001	No	Yes - End of Life	County
14	Radio Consoles - Symphony	6	Harris	2015	Yes	No	County
15	Handheld Radios - P7100 IP	3	Harris	2001	No	Yes - End of Life	County
16	Laptops					Being phased out. Update list before consolidation takes place to show remaining units, if any.	County
17	DVS DCS Stations	6	Harris	2001	No	Yes - End of Life	County

Dispatch Center Software Currently in Use
Updated 9/16/2016

Item	Software Item	Web or Local Server	# of Licenses for CAD Use	Under Warranty/Maint	Vendor	Software Release	Owner Agency
1	Microsoft Office (Excel and Word only)	local	15	no	Microsoft		City of Reno
2	CommandCAD - Includes	Local	22	Yes	Tiburon/TriTech	2.9.1	City of Reno
3	Maverick Mapping	Local	12	Yes	Tiburon/TriTech	Latest	City of Reno
4	Internet Explorer (Windows 7, icon hidden)	Web	0, free		Microsoft	Windows 7 v 11	City of Reno
5	ManageEngine - Desktop Central Agent	Local	15	Yes	ManageEngine	9.2.049.w	City of Reno
6	Active Directory installed and configured	Local					
7	CommandCAD	Local	12	Yes	Tiburon/TriTech	2.9 version 23.26i	County
8	RMS	Local	12	Yes	Tiburon/TriTech	7.9	County
9	MobileCommand	Local	1	Yes	Tiburon/TriTech	5.3.41124.58	County
10	Maverick Maps		12	Vendor	911 Mapping Systems, Inc	5.3.2.126	County
11	ProQA	local/ server	6	Yes	Priority Dispatch	Police 4.2.94 Fire 6.0.158 EMS 12.2.206	County
12	Web Query/Reporting	Local	12	Yes	Tiburon/TriTech	7.9	County
13	Verint Logging and Recording	Web Hosted	5	Yes	Verint	5.2.2.10	County
14	Jail Client	Web Hosted	17 - split between CAD and Workstation	Yes	Tiburon/TriTech	3.5	County
15	CodeRED	Web Hosted	1	Yes	CodeRED	Web Version	County
16	AlertSense	Web Hosted	1	Yes	AlertSense	Web Version	County
17	Flight Following	Web Hosted	1	Yes		Web Version	County
18	Camera Software (Incline)	Server	1	Yes	OnGuard	7.1	County
19	Viper	Web Hosted	1	Yes	Viper/West	Intrado Supported	County

20	SAP (HR/Personnel, Finance)	Server	5	Yes	SAP	7300.2.5.1084	County
21	Telestaff	Server	5		Kronos	2.92	County
22	Microsoft Office	Local	16	Yes	Microsoft	2010 or 2013	County
23	FireFox	Web Hosted	16	Yes	Mozilla	Web Version	County
24	VLC Player	Local	16	Yes	VideoLAN	2.2.4	County
25	InfoRad	Local	Shares portion of countywide 100 user license; as well as Email Connect add on module	Yes	InfoRad	10.4.2	County
26	Zetron FSA IP	Local	3 Dispatch stations, 1 Server, 17 station units	Yes	Zetron	2.6.6	County

Facilities Analysis

While the primary focus of this consolidation study is related to operations and staffing, there is a need to analyze the existing facility from a consolidated operations perspective in order to determine the potential needs/benefits of additional space and/or reconfiguration of the current layout.

Washoe County Dispatch and the Reno Emergency Communications Dispatch (Reno E-Comm) are co-located in the same room at the 24,782 square foot Washoe County Regional Dispatch and Emergency Operations Center. The County Dispatch and the Reno E-Comm dispatch center occupy 12,017 square feet within the building.

The Communications room is essentially divided in the middle with Reno operations on one side and Washoe operations on the other. The Reno space consists of 5 Call Receiver specific consoles and 7 Dispatch consoles. The Washoe space consists of 6 Dispatch consoles, all of which can operate in either Dispatching or Call Receiving functions. Therefore, in total, there are 14 positions currently capable of Dispatch operations and 5 equipped for Call Receiving only. In addition, there are 2 Supervisor positions situated on a raised platform in the center of the room, one for each agency.

Over-all Space:
Based on the staffing analysis and operational needs presented earlier in the report it is determined that the current space is sufficient in size. There is also some additional space on the Washoe side of the floor where one or two additional positions could be squeezed in to accommodate future growth if this were ever needed.

Space Configuration:
The staffing analysis for a consolidated operation has determined the need for a routine need for a total of 5 Call Receiving positions and between 9 and 12 Dispatch positions depending on the day of week, the time of day and the intensity of incidents being managed. This is fully achievable with the existing position count within the center. The current layout of the center makes good use of the available space and there does not appear to be any reason to change the layout. However, from a consolidated dispatch operational perspective it would make sense to redefine the function of several of the consoles to better align like functions.

We recommend consolidating all Call Receiving functions to within the 5 current Call Receiver positions. The existing Dispatch consoles would essentially retain their current assignments with Reno PD on the left, Fire Dispatch and supplemental Call Receiving consoles in the center and Washoe Sheriff on the right. All of the current Washoe Sheriff Dispatch consoles would maintain Call Receiving capabilities and would act as overflow in times of dramatic call surges.

Section 3 – Financial Analysis

Staffing Financial Analysis

The primary focus of this engagement was to identify a staffing model to support a consolidated communications organization and to identify the potential compensation and benefit costs for that model under three different scenarios:

- Establishing the organization assuming it was hosted by Washoe County and operated under their compensation and benefit structure.
- Establish the organization assuming it was hosted by the City of Reno and operated under their compensation and benefit structure.
- Identify any alternative compensation strategies based on best practices and/or past experiences.

At the beginning of the engagement, IXP was provided a series of detailed spreadsheets that provided very specific staffing, compensation and benefit costs for each of the two organizations. These spreadsheets were developed by the County and City staffs during their prior examinations of consolidation alternatives. IXP utilized these spreadsheets, along with 3 years of budget and actual expenditure history from the County and the City, to develop a prospective model for compensation and benefit costs for the staffing model identified in this report. These spreadsheets also provided valuable insights on the current levels of seniority within each organization so that this distribution of seniority could be reflected in the prospective model for the 85.5-person organizational structure.
Actual current-year compensation costs were used from the current collective bargaining agreements, all factored against the seniority spreads identified in the source data, and historical data was used to establish expected ratios for various benefit and supplementary costs where those costs aren't driven by specific rates (such as for Medicare). While these spreadsheets are too complex to be included as attachments to this report, they have been provided in Excel format to the leadership of the project for their further use during further deliberations on potential consolidation of the communications organizations.

While there was a high degree of consistency in many aspects of the budget and expenditure data from each jurisdiction, there were also some differences that IXP attempted to normalize in developing the consolidated models. For example, slightly different approaches were taken for budgeting travel, training, seminars and meetings, and these were combined into a generic Travel/Schooling/Seminars category.

As noted above, three models were developed. As discussed above, these models were driven by the current compensation costs from the current collective bargaining agreements in place at either agency, and the benefit and employment cost ratios derived from their historical data.

For the third model, referred to as the 'Hybrid' model, the assumption was made that the organization would be hosted by Washoe County and operate under their compensation and benefit structures, **but** that the City of Reno employees that got rolled into this model were held at their higher compensation levels rather than reverting to the current County compensation levels. The assumption would be that

these personnel would remain at these levels until the County compensation scales caught up with them and they would then continue through the wage progression as normal. This is the same approach taken when the City and County animal control functions were merged. This is also an approach IXP has seen used many times with multiple communications organizations are being merged where compensation levels are different. Avoiding pay cuts as a part of consolidation is a critical factor in retaining personnel.

The table below provides a summarization of the detailed spreadsheets provided separately to the project leadership team. The current combined compensation and benefit costs for the two organizations totals $9,245,485. If the organization were to be hosted and operate under the City of Reno's compensation and benefit structures, the consolidated organization would operate with an estimated increased cost of $334,786. If the Hybrid approach were used, and the organization hosted and operated under the County structures, the organization would operate with an estimated savings of $633,514. Operating under the County structures, but moving all personnel into those salary levels rather than holding higher-compensated employees at their current levels until the scales caught up, could result in an estimate savings of $991,348.

	FY17 Budget			Models		
Category	Reno	Washoe	Total	Reno	Hybrid	Washoe
Base Salaries	$ 3,472,881	2,003,774	5,476,655	$ 5,415,575	5,230,619	5,013,683
Education Pay	$ 12,942	-	12,942	$ 19,496	-	-
Shift Diff / FTO	$ 91,675	18,168	109,843	$ 138,097	151,505	145,221
Longevity Pay	$ 91,675	20,250	111,925	$ -	63,287	60,662
Travel / Schooling / Seminars	$ 27,616	18,380	45,996	$ 38,542	40,523	38,842
Holiday	$ 118,650	20,676	139,326	$ 266,288	130,153	124,755
Call Back	$ -	-	-	$ -	312	299
Overtime	$ 238,750	121,089	359,839	$ 539,007	344,898	330,014
Cell Phone	$ -	-	-	$ 563	-	-
Car Allowance	$ -	-	-	$ 600	-	-
Retirement (PERS)	$ 1,023,364	566,727	1,590,091	$ 1,614,502	1,557,275	1,492,688
Group Ins / Life / STD & LTD	$ 661,913	375,128	1,037,041	$ 1,032,180	979,227	938,615
Workers Comp	$ 89,244	13,886	103,130	$ 139,166	38,328	36,660
Deferred Comp	$ 174,965	-	174,965	$ 297,729	-	-
Unemply Comp	$ -	2,380	2,380	$ -	-	-
Medicare 1.45%	$ 52,996	28,356	81,352	$ 78,526	75,844	72,698
Total	**$ 6,056,672**	**3,188,813**	**9,245,485**	**$ 9,580,272**	**8,611,971**	**8,254,137**
Estimated (Savings) or Additional Cost Compared to Current Costs				**$ 334,786**	**$ (633,514)**	**$ (991,348)**

Operational Budget Considerations

Excluding salary and benefit costs, both organizations are carrying operational budgets to support the other aspects of operating their communications center operations. For Reno the 2017 budget for these costs total $238,105 and for Washoe County the total is $184,857. These amounts and their component elements are shown in the table below.

Reno Budget

30 - Services & Supplies		2017 Budget
7300-0000	Supplies	26,382.00
7301-0000	Supplies-to be tracked	10,000.00
7400-0000	Outside services-legal	0.00
7400-2000	Outside services-other	35,405.00
7410-0000	Communication	11,118.00
7420-0000	Rentals	145,200.00
7484-0000	Employee training/travel	10,000.00
count Classification Total: 30 - Services & Supplies		$238,105.00

Washoe County Budget

		2017 Budget
710100	Professional Services	-
710200	Service Contract	-
710205	Repairs and Maintenance	1,300.00
710300	Operating Supplies	1,975.00
710334	Copy Machine Expense	-
710350	Office Supplies	500.00
710361	Express and Courier	50.00
710503	Licenses & Permits	-
710507	Network and Data Lines	-
710508	Telephone Land Lines	-
710509	Seminars and Meetings	4,075.00
710512	Auto Expense	-
710519	Cellular Phone	-
710529	Dues	2,652.00
710862	Interpreters	-
711040	Natural Gas	-
711210	Travel	14,305.00
711504	Equipment nonCapital	160,000.00
	Total Services and Supplies	184,857.00

Both organizations also have costs in their IT and/or GIS organizations that are in some ways related to their communications center operations but not reflected in the specific budgets for these operations. In total, there is no reason to expect that overall operational costs would increase if a consolidated organizational structure were to be put in place.

There should also be very few one-time costs related to migration to a consolidated operational model. Facility and technology system changes should be relatively minor and absorbable within current staffing and budgets. The most significant one-time expenditure will be in the human efforts needed to develop and document consolidated operational policies and procedures, and then to train all personnel to those procedures. It is also recommended that all personnel undergo Emergency Medical Dispatch (EMD) protocol training so that maximum flexibility can be achieved as to what functional positions they are assigned to on any given day. Having less than the full staff trained can create scheduling challenges if only certain personnel can be assigned to handle calls where the center is responsible for EMD call processing. This training typically costs about $350 per person when done in a bulk agency training initiative.

Section 4 – Conclusion

Washoe County and the City of Reno have already established a very successful relationship in providing emergency communications services for shared systems and facilities. These are often two of the most expensive and complex challenges to face when communications center consolidations are being considered, and by having these already well in hand it is much easier to explore the prospects of operational consolidation. Further, by operating on shared technology systems, there are far fewer operational differences between the two existing organizations that is often found when two or more communications centers are considering consolidation.

The County and City also have successful experience in establishing shared governance models for combined local and regional services. Shared governance can also be a challenging issue when multiple jurisdictions are considering consolidation strategies, and the number of currently successful relationships between the County and the City bodes well for a potential consolidation of the emergency communications operations as well.

Finally, the economics of consolidation are often one of the most important considerations. While staffing and employment cost efficiencies are often one of the main motivators in consolidation initiatives, many find that the required investments in shared facilities and shared systems are too heavy a lift even if operational cost savings are present. However, since the County and the City have already met these challenges through use of a shared facility and shared technology systems, it allows any potential savings on the operational side to be rapidly realized.

From IXP's experience, we have seldom encountered two emergency communications organizations better positioned to create a consolidated operational model.

Appendices

Appendix 1 – [Placeholder if needed]

Regional Dispatch Consolidation Study Overview

March 14, 2017

Tackling the toughest challenges in public safety!

Discussion Topics

Tackling the toughest challenges in public safety!

- Review of Existing Communications Center Organizations & Operations
- Observations on Successful Governance Strategies for Consolidated Dispatching
- Anticipated Staffing Model for Consolidated Operations
- Alternative Organizational Financial Models
- Wrap-up and Questions

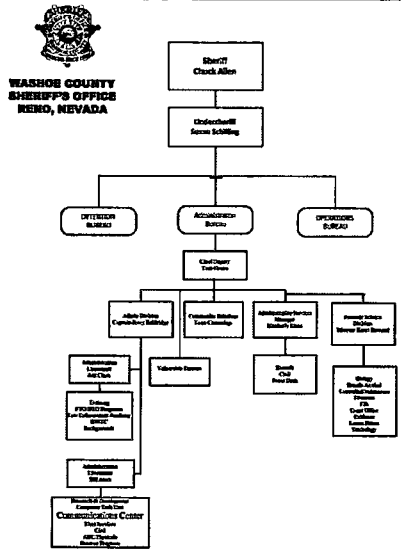
Existing Communications Center Organizations – Washoe County

Tackling the toughest challenges in public safety!

- 34 Funded FTE Positions
  - 29 Communications Specialists
  - 3 Communications Specialists Trainee (un-funded)
  - 5 Supervising Communications Specialists
- FY2017 Budget - $3,188,813
- Provides Services to:
  - Sheriff's Office
  - North Lake Tahoe Fire Protection District
  - Truckee Meadows Fire Protection District
  - Pyramid Lake Paiute Tribe
  - Reno-Sparks Indian Colony
  - Gerlach Volunteer Fire Department
  - Washoe County Department of Alternative Sentencing
  - Washoe County Coroner's Office
  - Lake Tahoe Regional Fire Chiefs
  - Washoe County School District Police

Existing Communications Center Organizations – Washoe County

Tackling the toughest challenges in public safety!



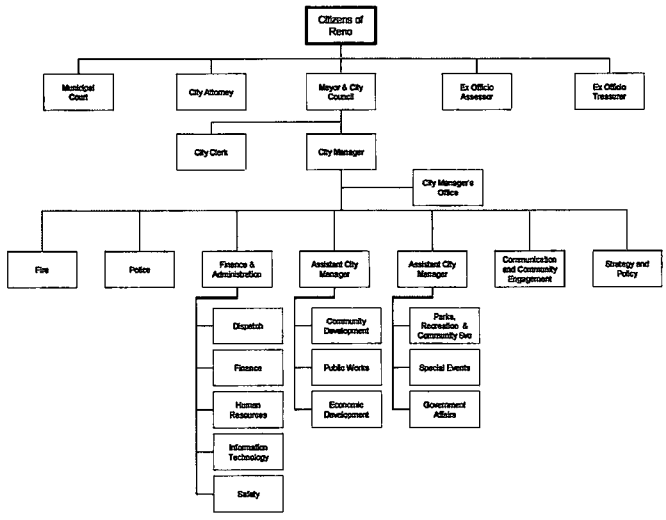
Existing Communications Center Organizations – City of Reno

Tackling the toughest challenges in public safety!

- 54 Funded FTE Positions
  - 3 Public Safety Call Takers
  - 40 Public Safety Dispatchers
  - 9 Public Safety Dispatch Supervisors
  - 1 Assistant Emergency Communications Manager
  - 1 Assistant Director of Emergency Communications
- FY2017 Budget - $6,056,672
- Provides Services to:
  - City of Reno Police Department
  - City of Reno Fire Department
  - Truckee Meadows Fire Protection District
  - University of Nevada – Reno Police Department
  - Washoe County Sheriff's Office (and unincorporated Washoe County)

Existing Communications Center Organizations – City of Reno

Tackling the toughest challenges in public safety!



Existing Communications Center Organizations – Shared Resources

Tackling the toughest challenges in public safety!

- Both operations work out of the Washoe County Regional Dispatch and Emergency Operations Center.
- They operate on:
  - Single 9-1-1 telephone system
  - Single Computer Aided Dispatch (CAD) system
  - Single Regional Radio Communications system
  - Single Logging & Recording system
- So, the two organizations are already **physically colocated** and **technologically consolidated**, but operationally separate.

Successful Communications Center Governance Strategies

Tackling the toughest challenges in public safety!

- Autonomy for the Communications Organization
- Highly Inclusive Governance Body Representation
- Shared Decision Making and Collaboration
- Openness and Transparency
- Cost Allocation Models Based on Mutually Agreeable Statistics

Local Examples of Shared Governance

Tackling the toughest challenges in public safety!

There are many local examples of shared governance and operations already in place between the County and the City

- Interlocal Agreement for Animal Control Services
  - Provides insights on transfers of employment between the jurisdictions
- Interlocal Agreement for the Regional Public Safety Training Center
  - Provides insights on governance, budgeting and employment transfers
- Interlocal Agreement for the Regional Emergency Operations Center (REOC) and Regional Emergency Communications Center (RECC)
  - Provides insights on governance and budgeting
- Interlocal Agreement for Washoe County Regional Communications System
  - Provides insights on governance and budgeting

No Major Barriers to Consolidation

Tackling the toughest challenges in public safety!

- IXP works with jurisdictions and agencies of all sizes and compositions as they explore collaborative or consolidated operations.
- Typically they have to deal with a multiplicity of governance, operations, technology and facility challenges, often with little or no history of working on these issues together.
- The Washoe County and City of Reno already enjoy a close working relationship on several public safety initiatives and an even closer working relationship in the RECC.
- From IXP's perspective, we see no significant barriers to creating a successful communications center consolidation.

Consolidated Staffing Model

Tackling the toughest challenges in public safety!

- IXP examined existing labor agreements, shift patterns and leave usage data from both organizations to determine net available working hour patterns for each organization.
  - Reno's data indicates an average NAWH of 1,467 hours per employee
  - The County's data indicates an average of 1,526 hours per employee
- Each 24-hour per day dispatch or call receiving position requires a total of 8,760 hours of coverage. Therefore:
  - At Reno's current NAWH average, a total of 5.97 personnel are needed to cover a position 24 hours per day
  - At the County's current NAWH average, a total of 5.74 personnel are needed
- Since a yet-to-be-established combination of newly negotiated labor agreements and newly established working assignments/shift scheduling will be needed for a consolidated operation, IXP used an assumed 1,470 NAWH in our modeling (essentially 6 personnel needed for each 24-hour position).

Consolidated Staffing Model

Tackling the toughest challenges in public safety!

- IXP examined telephone call volume and other workload information to develop a recommended staffing model for a consolidated operation.
- A total workforce of 85.5 FTEs is recommended:
  - 1 – Director
  - 1 – Deputy Director/Operations Manager
  - 1 – Office Assistant II
  - 1 – Training and Quality Assurance Supervisor
  - 3 – Trainers/QA Support Telecommunicators
  - 9 – Shift Supervisors
  - 58 – Fully Cross-Trained Telecommunicators
  - 11.5 – Call Receiver Telecommunicators

Consolidated Staffing Model

Tackling the toughest challenges in public safety!

- Full consolidation of the organizations can also bring other operational benefits, such as :
  - Standardized operations and elimination of 2-stage processing for some calls now being handled by Reno then transferred to the County.
  - Increased flexibility within shift deployments to meet changing circumstances such as major events or surges in call volume.
  - Dedicated Training and Quality Assurance staffing creates opportunities for both maintaining high operational performance levels and for augmenting staffing when needed for major events.
  - Internal career-path opportunities for personnel.

Financial Model Scenarios

Tackling the toughest challenges in public safety!

- Three scenarios for how this workforce would be structured were examined from a financial perspective:
  - The consolidated organization would be hosted by Washoe County and operated under their existing compensation and benefit structure.
  - The consolidated organization would be hosted by the City of Reno and operated under their existing compensation and benefit structure.
  - A 'hybrid' model where the organization would be hosted by Washoe County and operate under their compensation and benefit structure, but the City of Reno employees would be held at their higher compensation levels until the County structure caught up. (This is the approach used in the merging of Animal Control services)

Financial Model Scenarios

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1. If the consolidated organization were to be operated under the City of Reno compensation and benefit structure, the estimated annual costs would be $334,786 higher than the current combined costs for the two organizations.

2. If the consolidated organization were to be operated under the County's structure, the estimated annual costs would be $991,348 lower than the current combined costs for the two organizations.

3. If the hybrid approach were used, the estimated annual costs would be $633,514 lower than the current combined costs.

Models	Annual Compensation and Benefit Impacts
1. City of Reno structure	Increase of $334,786
2. Washoe County structure	Decrease of $991,348
3. Hybrid approach	Decrease of $633,514

Wrap-up

Tackling the toughest challenges in public safety!

- The degree of technological and facility sharing already in place provide a solid basis for further organizational consolidation.
- Successful experience in existing collaborative governance structures also bodes well for establishing a consolidation for communications as well.
- Finally, there appears to be opportunities for creating an operational model that could achieve savings in compensation and benefit costs.
- Collectively, Washoe County and the City of Reno appear to be well positioned to proceed towards a successful consolidation of their communications operations if the decision is made to move in this direction.

Questions and Discussion

Tackling the toughest challenges in public safety!

Questions and/or Discussion

Thank you for the opportunity
to assist you in this effort