

## COMMUNICATIONS NORTHWEST

624 McLoughlin Blvd  
Oregon City, OR 97045

### SOW 301 for Agreement to provide a County Wide Radio Communications System Review for Pacific County

09/30/2022

#### Services Performed By:

Communications Northwest  
624 McLoughlin Blvd  
Oregon City, OR 97045

#### Services Performed For:

Pacific County Dept. of  
Emergency Mgmt.  
300 Memorial Drive  
South Bend, WA 98586

This Statement of Work (SOW) is issued pursuant to the Agreement between Pacific County Sheriff ("Client") and Communications Northwest ("Contractor"), effective upon execution of the contract (the "Agreement"). This SOW is subject to the terms and conditions contained in the Agreement between the parties and is made a part thereof. Any term not otherwise defined herein shall have the meaning specified in the Agreement. In the event of any conflict or inconsistency between the terms of this SOW and the terms of this Agreement, the terms of this SOW shall govern and prevail.

## PERIOD OF PERFORMANCE

The Services shall commence upon the execution of the contract by both parties and shall continue no longer than through the 180<sup>th</sup> day.

## ENGAGEMENT RESOURCES

#### Scott Reilly

President/CEO of Comm NW

#### Chad Lund

Communications Northwest Project Manager

#### Victor Leatzow

Communications Northwest Project Manager

#### Scott McDougall

Pacific County Dept of Emergency Mgmt., Director

# SCOPE OF WORK

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Contractor shall provide the Services and Deliverable(s) as follows:

## SYSTEM REVIEW

It has been requested by Pacific County Department of Emergency Management to conduct a County wide radio communications system review. This includes the current radio system and addressing potential future radio communication enhancements in Pacific County. This document provides a detailed scope to conduct a system wide review, address future system updates, and associated costs and documentation.

## IMPROVE EXISTING RADIO SYSTEM PERFORMANCE OVER TIME AND HOW TO GO ABOUT DOING IT

To improve the radio system performance, a few critical steps are required. Auditing the current system will provide Communications Northwest with intimate details and help us familiarize ourselves with Pacific County Public Safety radio system. This is a key component to obtaining the best outcome for the entirety of this report.

## CURRENT SYSTEM AUDIT

First step in any system review is to obtain information to understand the current Pacific County Public Safety radio system. Communications Northwest will provide a thorough and detailed review of the current Pacific County Public Safety radio system. The Pacific County Public Safety radio system is composed of all the sites and infrastructure operated or used by public and emergency services. Audit will provide a spreadsheet to identify ownership of radio/microwave and associated equipment (to include dispatch consoles), associated leases, structures (buildings and towers) and who manages them and replacement schedule for existing equipment.

- These items include, but are not limited to:
- Site Visits
  - Shelter Inventory
  - Power/Requirements
  - Repeater Hardware
  - Combining System(s)
  - Grounding
- Towers
  - Antenna Mounting Locations
  - Microwave Dishes
  - FCC Documentation
  - Engineering Structural Analysis not included, visible concerns will be noted
- Shelter
  - HVAC Systems
  - Generators
  - Exterior Structures
- Dispatch
  - General overview and recommendations provided if directed
- Network evaluation (microwave, fiber, T1, etc.)

- User Consultation
  - Understand areas of concern
    - Urban Areas
    - Rural Areas
    - Public safety, private, and dispatcher Interviews

The items above will help generate a general understanding of the overall health of the Pacific County Public Safety radio system. Recommendations with cost estimates will be provided to address any critical repairs identified to allow current system to function at peak performance.

## LONG-TERM MAINTENANCE, MANAGEMENT AND BUDGET ISSUES

Long-term maintenance is critical to Public Safety Radio Systems. It is industry standard at a minimum to perform preventative maintenance on a yearly basis regardless of vendor. This includes antenna systems, shelters, and microwave dishes.

Communications Northwest will make recommendations on when and how to address deferred maintenance, preventative maintenance, and associated costs. Communications Northwest will also provide the manufacturer recommended preventative maintenance schedules.

A thorough study of how the radio system is managed today will be conducted and provided in detailed documentation. Communications Northwest will provide management model recommendations to Pacific County if prevalent.

Auditing the current Pacific County Public Safety radio system will help determine the Public Safety radio system's budgetary needs to perform and maintain the radio system.

## FUTURE RADIO COMMUNICATION SYSTEM REPLACEMENT COSTS

Based on site audits, Communications Northwest will propose options and the associated costs to repair, revamp and/or replace the radio system. This is presented as a rough order magnitude (ROM). Communications Northwest will take the provided site information from the site audits and propose all options to Pacific County and the technologies available to include improvements to current system. This will include coverage maps at the public safety standard of 3.4 DAQ, 95% reliability with portable street level coverage and mobile radio coverage county wide. This will also include microwave paths with 99.99% link reliability, console options, and portable/mobile radio options.

## FUTURE FCC 6.25 KHZ NARROW BANDING AND SPECTRUM ISSUES

Communications Northwest will provide a thorough explanation and audit of all County public safety, and private agency's licensed and unlicensed frequencies (if applicable). Frequency management is critical to a radio systems success and design. Whether it's new or old technology. Communications Northwest will determine if any frequency management needs to take place and associated costs. Reports will include all licensed frequencies for portables, mobiles, repeaters, and microwave.



## NEXT GENERATION RADIO SYSTEM OPTIONS AND RECOMMENDATIONS

A conclusive study will be completed to determine what technologies will best fit the County Public Safety radio system's future needs.

- Coverage Maps
- Network connectivity (Microwave, Fiber, T1, etc.)
- Dispatch recommendations as directed
- Portable and Mobile Radios

Communications Northwest will provide Pacific County with best available options for the future. Options may range from current system enhancements to available new technology. Information will identify the benefits and challenges of the different variants.

## POTENTIAL PARTNERSHIPS WITH OTHER AGENCIES

Communications Northwest will work with neighboring agencies to evaluate any potential benefits that could be achieved with strategic partnerships. This will include:

### Sites

- Identify tower sites that might provide increased coverage (if applicable)?
- Microwave Availability
  - Link Redundancy and available Lines of Site
- Fees
  - Associated User Fees
  - Site Lease Costs
- County Agreements and expectations

## POTENTIAL USE OF PUBLIC LTE

Communications Northwest will provide Pacific County with an overview of public LTE options and its viability within the County. These findings will include current primary provider capabilities.

## UPDATE COUNTY COMMUNICATIONS PLAN

Report findings will provide critical information for the County to update the Pacific County Emergency Communications Plan.

## TOTAL COST OF OWNERSHIP

Communications Northwest will provide total cost of ownership estimations based on each technology. This includes the current system and any new potential system technology. Also included will be any shared radio system total cost of ownership. Life expectancy of current technologies will also be addressed within this report.

## BUDGETARY OPTIONS

Communications Northwest will provide system funding options, resources, and state contracts to explore funding model options for the Pacific County Public Safety radio system. Radio systems can be costly, and we believe that beneficial funding options should be explored as well.

## DELIVERABLE MATERIALS

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### CURRENT SYSTEM DOCUMENTATION AND FINDINGS

After collecting aforementioned information, Communications Northwest would determine the best course of action to address the system needs based on initial findings. Collective documentation and inventories are included to support the steps needed to address the current system issues (if applicable).

This includes but is not limited to:

- Summary of Findings
- Photos and supporting documentation
- Inventory
- Shelter (photographs of all equipment in shelter)
- Tower (photographs of all radio antennae and microwave)
- Action Plan/Recommendations
- Cost Analysis
- Timeline and Deliverables

If it is determined that there are action items to improve the overall system health, those items would be ranked in priority order and cost. Communications Northwest works directly with vendor engineers to determine what hardware and radio system settings should be used to make overall radio system improvements if needed. The cost to improve the Pacific County Public Safety radio system may differentiate from long term preventative maintenance costs. This information will be included in Communications Northwest's report.

#### Documentation Items

- Evaluate existing infrastructure and detail its suitability as part of short term and long-term future options. Infrastructure evaluated should include:
  - Communications Sites
  - FCC Licensing
  - Network evaluation (microwave, fiber, T1, etc.)
  - Radio (LMR) System
  - Dispatch Services Overview
  - End User Radio Equipment
- Understand radio needs and expectations for users of the existing Pacific County Public Safety Radio System.
  - Work with user members of the Pacific County Public Safety Radio System to understand their day-to-day operational needs both current and future:
    - User Interviews
    - System Maintainers
    - Dispatchers
- Provide a report that identifies existing conditions and outlines the current operational capabilities or deficiencies.
- Develop a document that outlines a short- and long-term communications plan to address all aspects of the current system evaluation. This plan should address what methods or practices Pacific County should continue to use in the operations and maintenance of the Radio System as a whole. The plan should also outline short- and long-term goals/objectives that Pacific County can institute to improve system performance and operation.

- Frequency Plan Site Management
  - Radio Asset Management
  - Preventative Maintenance
- Develop a short/long term plan utilizing existing Pacific County Public Safety Radio System owned equipment as practical based upon reliability and compatibility.
  - Develop a frequency allocation plan for law enforcement, fire, and ambulance and the related equipment/infrastructure needs to accomplish the plan.
  - Use of existing networking assets (microwave, fiber, T1, etc.)
  - Develop a detailed report of findings, and a short/long-term plan including recommendations based on a combination of safety, continuity of operations, affordability, efficiency, interoperability and topography.
  - Identify and define potential partnership opportunities with neighboring jurisdictions and existing or future radio systems.
    - Provide detailed evaluation and recommendations of short/long term options available to the Pacific County Public Safety Radio System. Evaluations and recommendations should include suitability of the solution based on identified Pacific County Public Safety Radio system user needs, technical feasibility and use of existing infrastructure and sites. Evaluations should include risk factors and major cost drivers. This will include total cost of ownership based on defined life expectancy of partnership equipment.
  - At the conclusion of the audit, Communications Northwest will provide a written and verbal report and recommendation options to a group of identified stakeholders.
  - These recommendations and evaluations should consider the following:
    - System Design as determined by the frequency plan
    - Network evaluation (microwave, fiber, T1, etc.)
    - Dispatch Services
    - Partner Integration
    - Coverage Maps
    - Current System
    - New Technology

Upon completion of the review and analysis project, Communications Northwest will provide a written report to Pacific County and provide an oral review of the scope to the Pacific County stakeholders to include a final demonstration of capabilities and operation. The final project analysis should include recommendations for implementation both short and long-term utilizing a phased in approach if possible. The recommendation should identify priorities that should be considered by stakeholders for moving forward.

Communications Northwest will provide information to update the Pacific County Communications Plan.

Final review and potential implementation will be the responsibility of the Pacific County stakeholders.

Ownership of the finished product, as well as real and intellectual property shall be retained by Pacific County.



## Contractor Responsibilities

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Contractor shall provide documentation listed in the deliverable section of SOW 301.

Contractor also understands that proprietary vendor information may be included in this study and will be flagged as such throughout the related documentation. Contractor must adhere to Vendor proprietary disclaimers and will be defined thoroughly as it pertains to vendor specific items.

## CLIENT RESPONSIBILITIES

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Pacific County requests that consistent and constant communication between Administrative Staff, Technical Staff, User Members as necessary and designated Stakeholders occur on a regular basis to include an open outline with progress reports and updates throughout the analysis process.

The scope of this project with the recommendation from Communications Northwest for review and discussion with Pacific County.

Client also understands that proprietary vendor information may be included in this study and will be flagged as such throughout the related documentation. Client must adhere to Vendor proprietary disclaimers and will be defined thoroughly as it pertains to vendor specific items.

## FEE SCHEDULE

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This engagement will be conducted on a Time & Materials basis. There are provisions within the NASPO 00318 contract under Tait Communications that can be used for procurement. Communications Northwest will perform said services identified in this statement of work for the sum of \$32,500. Fifty (50%) percent to be paid to Communications Northwest from Pacific County at the time of initiation of the project. The remaining 50 percent to be invoiced monthly as progress billing.

If additional expenses are needed, Contractor and Client will discuss the issue and if agreed, a Project Change Request will be issued.

Bill To Address	Client Project Manager	Purchase Order Number

## INVOICE PROCEDURES

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Client will be invoiced for one payment of \$16,250 at the execution of this agreement.

At the conclusion of each month of work on the project, Pacific County will be billed for work performed in that month. Each invoice will provide the necessary details for work performed in that previous month.

Net 30 terms apply to all invoices.

## COMPLETION CRITERIA

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Contractor shall have fulfilled its obligations when any one of the following first occurs:

- Contractor accomplishes the Contractor activities described within this SOW, including delivery to Client of the materials listed in the Section entitled "Deliverable Materials," and Client accepts such activities and materials without unreasonable objections. No response from Client within 5-business days of deliverables being delivered by Contractor is deemed acceptance.
- Contractor and/or Client has the right to cancel services or deliverables not yet provided within 20 business days after advanced written notice to the other party.

## ASSUMPTIONS

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Contractor assumes worst case scenario and assumes this report should take no more than 180 days from the execution of the contract.

## CONFIDENTIALITY

Communications Northwest (Contractor) agrees to abide by the County's confidentiality policies and procedures. Pacific County is a public entity and routinely handles sensitive public information. Every effort will be made to ensure the protection of any such information that the Contractor is provided. All information will be returned to Pacific County should a termination of contract occur.

## PROJECT CHANGE CONTROL PROCEDURE

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The following process will be followed if a change to this SOW is required:

- A Project Change Request (PCR) will be the vehicle for communicating change. The PCR must describe the change, the rationale for the change, and the effect the change will have on the project.
- The designated Project Manager of the requesting party (Contractor or Client) will review the proposed change and determine whether to submit the request to the other party.
- Both Project Managers will review the proposed change and approve it for further investigation or reject it. Contractor and Client will mutually agree upon any charges for such investigation, if any. If the investigation is authorized, the Client Authorized Signer will sign the PCR, which will constitute approval for the investigation charges. Contractor will invoice Client for any such charges. The investigation will determine the effect that the implementation of the PCR will have on SOW price, schedule and other terms and conditions of the Agreement.



- Upon completion of the investigation, both parties will review the impact of the proposed change and, if mutually agreed, a Change Authorization will be executed.
- A written Change Authorization and/or PCR must be signed by both parties to authorize implementation of the investigated changes.

**IN WITNESS WHEREOF**, the parties hereto have caused this SOW to be effective as of the day, month and year first written above.

Pacific County

Communications Northwest

By: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_