Interoperability & FirstNet

Bob Cozzie, State Interoperability Executive Council Chair

William Chapman, Statewide Interoperability Coordinator

Ben Gherezgiher, State Single Point of Contact - FirstNet

Joint Legislative Committee on Information Management and Technology

March 15, 2023

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Agenda

▶ State Interoperability Executive Council

▶ Statewide Interoperability Overview

▶ FirstNet Progress Update

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State Interoperability Executive Council

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State Interoperability Executive Council (SIEC)

▶ Operability vs. Interoperability

▶ SIEC Background

▶ Charter, Accomplishments, Success Indicators

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Operability vs. Interoperability Defined

Operability – Ability to provide and maintain reliable communications functionality throughout the area of responsibility.

Interoperability – Ability of emergency response official to share information via voice and data signals on demand, in real time, when needed, and as authorized.

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State Interoperability Executive Council Background

Membership
- 22 Members defined by statue
- State, Local, County, Tribal Partners
- Public Safety Practitioners, Legislators

Focus Areas
- Governance
- Funding & Sustainment
- Technology
- Training & Exercise

Committees
- Executive
- Strategic Planning
- Broadband
- Technical
- Partnership

Communications Ecosystem
- 911 & Dispatch
- Land Mobile Radio
- Public Safety Broadband
- Alerts, Warnings, & Notifications

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State Interoperability Executive Council (SIEC)

SIEC's Vision: "Seamless, Interoperable, and resilient emergency communications."

The Council Charter:
- Foundational guidance document
- Defines overarching principles and structure
- Defines mission reflective of the ORS
- Outlines success indicators

Historic Accomplishments:
- State Communications Interoperability Plan implementation (SCIP)
- Key driver of interoperability efforts
- Establishment and development of FirstNet

Success Indicators for the SIEC:
- Awareness of SIEC and SCIP
- Consensus on issues of interoperability
- Oregon meets or exceeds National Emergency Communications Plan (NECP) requirements
- SIEC becomes a leader, standard-setter, and statewide resource
- Measurable improvement in interoperability
- Sustainability of critical communications infrastructure
- Successful implementation of FirstNet throughout Oregon

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Statewide Interoperability Overview

▶ Enterprise Information Services (EIS) Strategic Framework version 2.0

▶ Statewide Interoperability Significant Activities

▶ Statewide Interoperability Coordinator

▶ State Communication Interoperability Plan (SCIP) & Strategic Goals

▶ State Interoperability Markers Assessment

▶ OR-Alert & Accomplishments
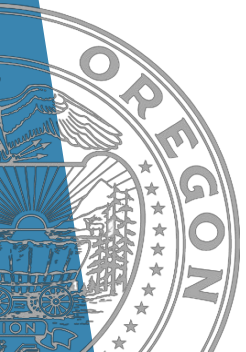
EIS Strategic Framework version 2.0
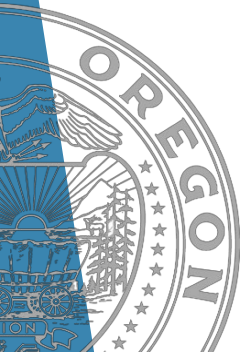
▶ Objective: Deliver Service Excellence

- Goal 2: Mature statewide emergency communications interoperability and resilience.

  - Strategy: Expand and reinforce the use of OR-Alert Program.

  - Strategy: Support the State Interoperability Executive Council (SIEC) via the Statewide Communications Interoperability Plan (SCIP) and continue maturing the resiliency and interoperability of emergency communications for the state.

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Statewide Interoperability Significant Activities

▶ 17 technical assistance projects from Cybersecurity and Infrastructure Security Agency valued at more than $500,000.

▶ 7 Communications Unit Courses for First Responders.

▶ 2 large scale emergency communications exercises.

▶ Air-to-ground Helicopter EMS Channel (VMED29) coordination with Washington, Idaho, and California.

▶ OR-Alert in 35 counties, 16 state agencies, and 2 tribes; OR-Alert Governance Committee.

▶ Supported deployment of FirstNet across the state.

▶ ESF-2 response to 2021 Ice Storms, Wildfire, Arizona Beach (Curry) Landslide, and other events.

▶ Support for the 2022 World Athletic Championships.

▶ Achieved "Best in Enterprise Resilience" Certification: 1st State Government in the country to achieve.

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Statewide Interoperability Coordinator (SWIC)

▶ Established under Enterprise Information Services pursuant to ORS 403.460.

▶ Supports the Statewide Interoperability Executive Council.

▶ Serves as the central coordination point for the Oregon Statewide Communication Interoperability Plan.

▶ Supports OR-Alert and All-Hazards Communications Unit Program.

▶ Serves as a member of the National Council of Statewide Interoperability Coordinators.*

*Each state/territory has a designated SWIC.

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State Communication Interoperability Plan (SCIP)

▶ SCIPs are comprehensive strategic plans which:

- o Describe the current and future interoperable emergency communications environments.

- o Identify goals and specific action steps, including owners and timeframes.

- o Define mechanisms to measure achievements and progress.

- o Guides federal grant dollars for communications projects.

▶ SCIPs are:

- o Supportive of the National Emergency Communications Plan.

- o Stakeholder driven and collaboratively developed.

- o Applicable statewide; multi-jurisdictional; cross-governmental.

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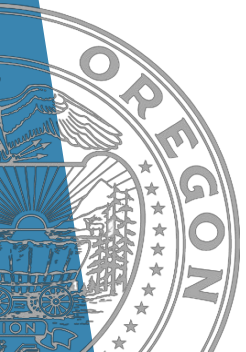
SCIP Strategic Goals

▶ Increase engagement and awareness of interoperable communications.

▶ Modernize 911 in Oregon.

▶ Develop and promote awareness of statewide guidance on interoperable communications.

▶ Document statewide Land Mobile Radio (LMR) System of Systems.

▶ Support Communications Unit (COMU) program and improve communications response capability.

▶ Support continued funding of the SIEC and the EIS Statewide Interoperability Program.

2021 OR SCIP V1.2.pdf (oregon.gov)

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State Interoperability Markers Assessment

Cybersecurity & Infrastructure Security Agency supported states and territories by establishing an interoperability baseline assessment measuring progress against 25 markers to describe a state's level of interoperability "health".
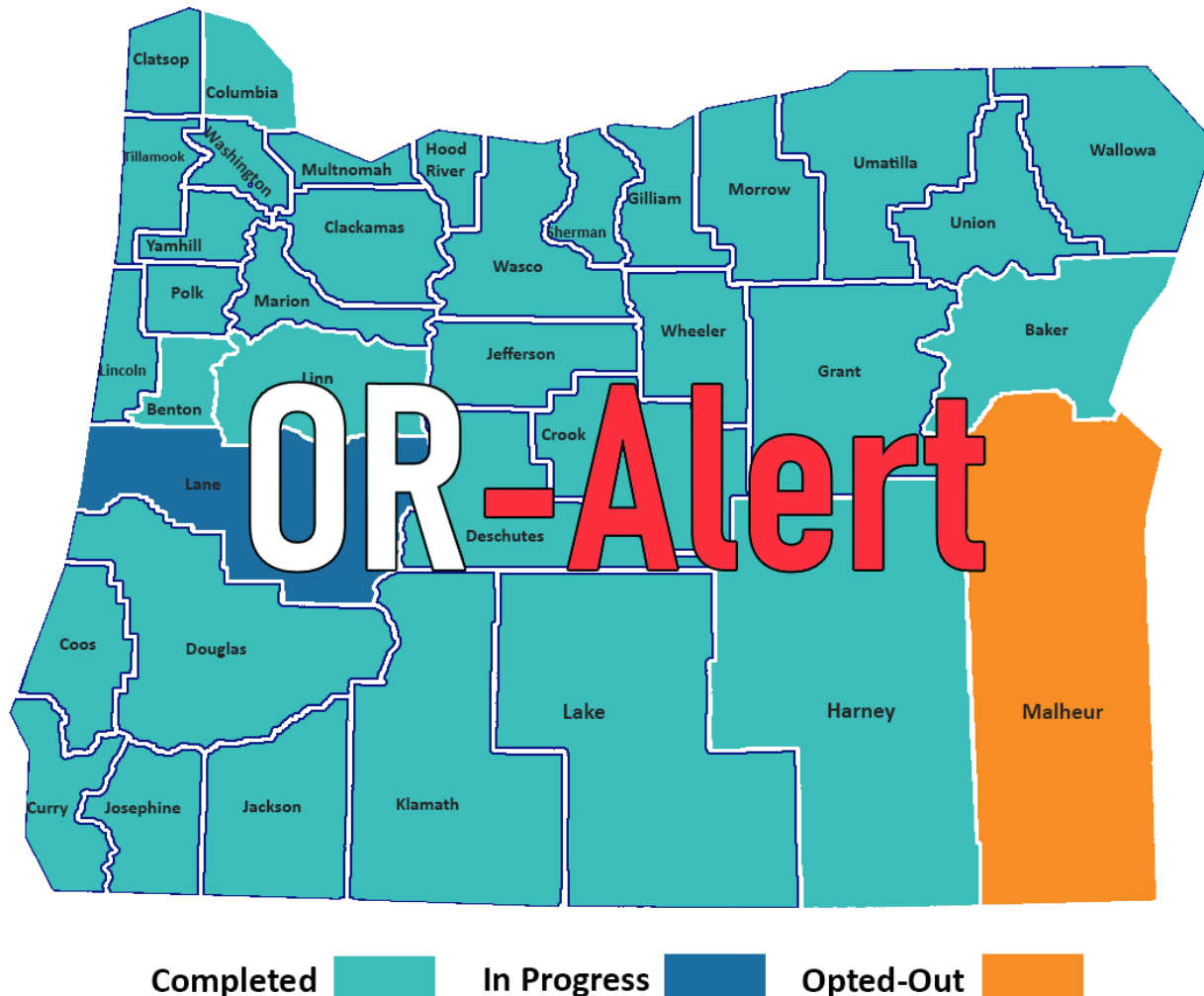
Markers are rated (1) Initial, (2) Defined, or (3) Optimized.

| 88% of Oregon markers were self-assessed as (3) Optimized in 2022. | 2021 Average Marker Assessment Rating: 2.21 | 2022 Average Marker Assessment Rating: 2.46 |

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OR-Alert

Completed — In Progress — Opted-Out

- ▶ 3,782,657 total contacts.
- ▶ Adopted by 16 state agencies.
- ▶ Adopted by 2 tribes.
- ▶ Used to alert the public 4,657 times.
- ▶ 31 statewide templates developed.
- ▶ 4,425 users trained.
- ▶ 25 counties iPAWS (Integrated Public Alert & Warning System) certified.

*Data as of 12/31/2022

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OR-Alert Accomplishments

▶ Real world incident support for multiple fires, tsunami warnings, active violence events, heat advisories and winter weather.

▶ Release of OR-Alert Statewide Alerts and Warnings Guidance.

▶ Enhancements to www.ORAlert.gov:

  o County messages display in real time via map.

  o Ability to link to municipal pages.

  o Provided Oregon Department of Emergency Management with ability post emergency banner through email function.

▶ "Innovation, Collaboration, and Service" Award from the Oregon Emergency Management Association.

▶ State Chief Information Officer's Award for "Making a Difference: OR-Alert Project"
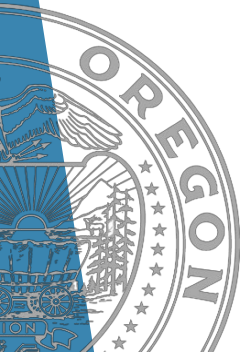
FirstNet Program Update

FirstNet Progress Update

▶ FirstNet - Background

▶ FirstNet National Updates

▶ State of Oregon Updates

▶ Oregon Commitment Accomplishments (State Plan)

▶ RAN Buildout Summary

▶ Looking to the Future: 2023 and Beyond

▶ Deployment Highlights

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FirstNet – Background

▶ The FirstNet Authority was established in light of 9/11 to lead the creation of a dedicated nationwide broadband network using spectrum set aside for the public safety community (Band 14). Through a combination of government, commercial, and public safety partnerships, we are committed to delivering a network and supporting ecosystem of apps, devices, and capabilities that are innovative, reliable, accessible and secure. By modernizing public safety communications with our partners, we can help responders keep America safe—every day and in every emergency.

▶ To learn more, visit FirstNet.gov

FirstNet – Background

FirstNet – Public Advisory Committee
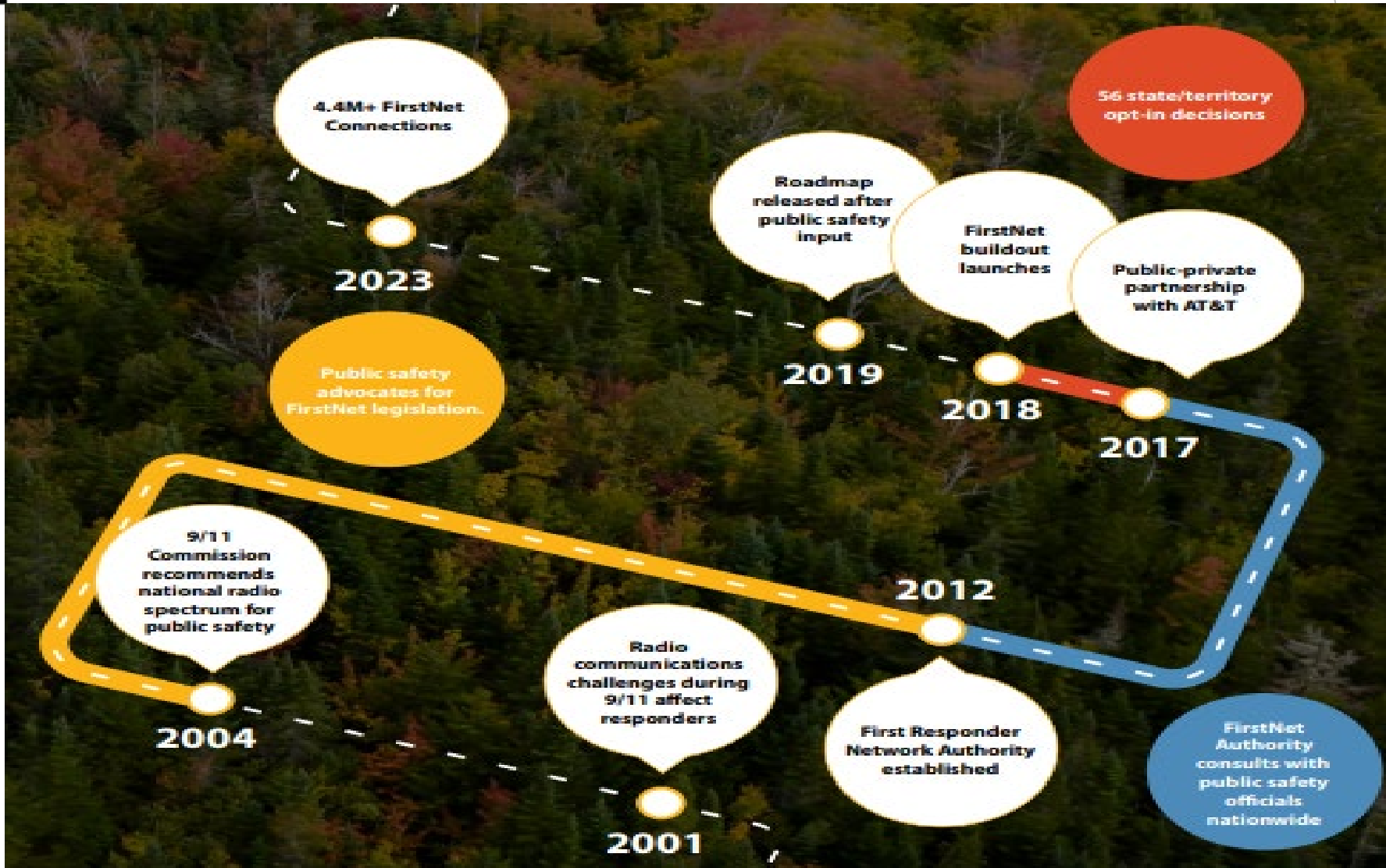
FirstNet Board

▶ FirstNet Board is supported by the Public Safety Advisory Committee (Governance) in passing key resolutions that impact First Responder capability enhancements.

The PSAC associations' combined membership reaches approximately 6 million public safety personnel

Consultation

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FirstNet – Core Service Domains

CORE

- Generational Updates (e.g., 4G to 5G)
- Priority and Preemption, including Uplift on 5G
- Mission Critical Services Platforms and Enablers on 5G
- Network Security on 5G

COVERAGE

- Outdoor Coverage Expansion
- Indoor Coverage Expansion
- Unique Coverage Solutions Advancement

SITUATIONAL AWARENESS

- Locate and Present Personnel Location
- Location Services Integration

VOICE COMMUNICATIONS

- Operationalize FirstNet Push-to-Talk
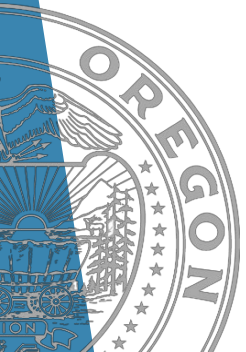- Active Role in Standards
- Critical Features

SECURE INFORMATION EXCHANGE

- Database Integration
- Application Integration

USER EXPERIENCE

- Mission-Enabling Applications
- Mission-Capable Devices

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FirstNet – National Dashboard

FIRSTNET.
Built with AT&T

BY THE NUMBERS

The **only** dedicated communications platform in the country that brings first responders:

- *Always-on, 24x7* priority and preemption across voice and data communications
- A physically separate network core **fully dedicated** to public safety
- Government oversight and accountability from the **FirstNet Authority**

Updated: 1/25/2023

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~4.4M+ FirstNet connections
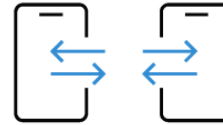
24K+ Public safety agencies and organizations subscribed
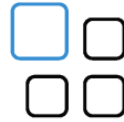
200+ apps in the FirstNet App Catalog

560 FirstNet Ready® devices

AMERICA'S PUBLIC SAFETY NETWORK

2.81M+ Square miles of coverage

50K+ Square miles more than commercial networks

150+ Dedicated assets in the FirstNet fleet

30+ ROG the Dog therapy animals

1.2K+ Solutions deployed for public safety in 2022

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FirstNet – Five Year Growth Indicators
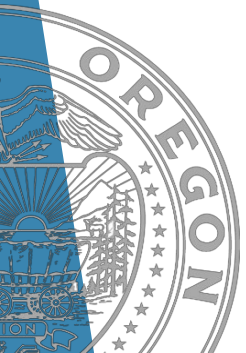
▶ FY 2018: 2,500 agencies and 150,000 connections

▶ FY 2019: 9,000 agencies and 750,000 connections

▶ FY 2020: 13,000 agencies and 1.5 million connections

▶ FY 2021: 18,500 agencies and 2.8 million connections

▶ FY 2022: 21,800 agencies and 3.7 million connections

FirstNet Authority

Advancing Public Safety Communications Through Innovation and Insight

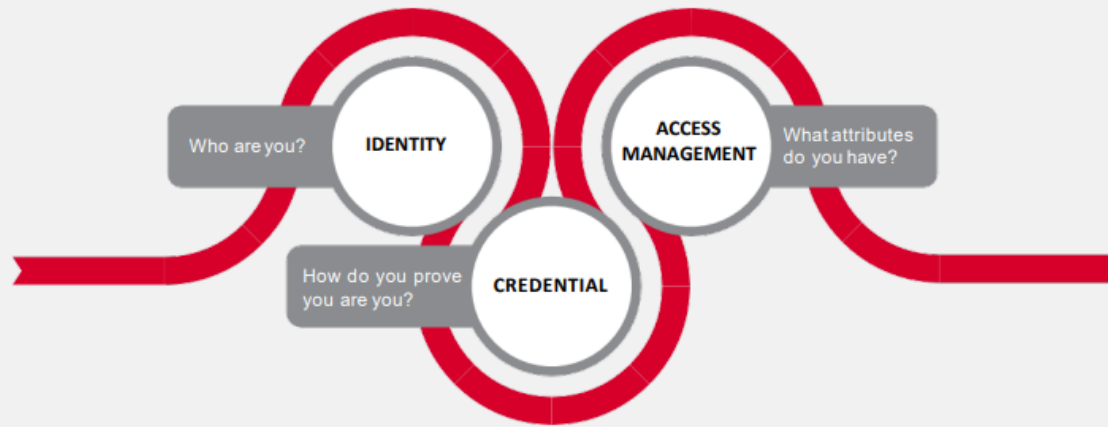FISCAL YEAR 2022 ANNUAL REPORT TO CONGRESS

FEBRUARY 2023

Submitted to the United States Senate Committee on Commerce, Science, and Transportation and the United States House of Representatives Committee on Energy and Commerce

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FirstNet – Cybersecurity Side

FirstNet Identity Credential Access Management (ICAM)

Who are you? → IDENTITY

ACCESS MANAGEMENT ← What attributes do you have?

How do you prove you are you? → CREDENTIAL

ICAM is the front-end application through which FirstNet users can create and manage digital identities and credentials. Users can log onto FirstNet directly utilizing FirstNet-issued credentials, or have the flexibility to federate with existing credentials.

First responders will be "identity proofed" by their local agencies through ICAM and, if approved, the system will issue credentials that verify their identity and allow access to the services and applications they need. Key benefits include:

One touch mobile Single Sign-On | Federated Single Sign-On | Biometric or other multifactor authentication | End-user authentication with advanced encryption | Identity management

SECURING PUBLIC SAFETY

Your network is built with security at its core.

FIRSTNET.
Built with AT&T

FirstNet – Oregon State Plan Commitment

FIRSTNET Updates
Built with AT&T

January 31, 2019
Data Through

STATE OF OREGON 1859

Band 14 New Sites (NSB) – 45 NSBs committed
- All 45 sites are in planning and candidates have been approved

Band 14 added to Existing Sites – 646 sites committed
- 104 sites on air

New AT&T BAU Sites – 0 sites committed
- 5 sites are on air

Hardening Status – 0 sites committed
- 15 fixed generators have been installed at an existing AT&T site
- All FirstNet new site builds will have backup power

Adoption Update
- Agencies – 69 Agencies
- 85% Primary (25% of these are Subscriber Paid) and 15% Extended Primary
- 200% growth since September

Band 14 Coverage Update (as of 12/31/18)
- Non-Rural: 605 square miles (100% of FOC commitment)
- Rural: 7,558 square miles (28% of FOC commitment)

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FirstNet Overview
- About FirstNet
- The value of FirstNet

Coverage
- Nationwide coverage
- Rural providers

State Plan Consultation
- State/territory consultation
- Nationwide outreach

Network Architecture
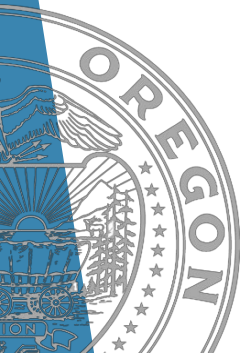- RAN
- Core network
- Implementation
- Security

Governor's Decision
- Executive summary
- Acceptance and opt-out guides

Products & Services
- Features
- Devices
- Rate plans
- Applications

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FirstNet – Oregon Dashboard as of January 2023

Adoption: 35,000+ Connections 363+ Public safe organization subscribing		
RAN Buildout Activities – State Plan 46 sites on air out of 46 target sites		**100% Complete**
OREGON ADOPTION FIRSTNET Built with AT&T Extended Primary 43% • Primary 57%		**Primary** • LE, Fire, EMS, PSAP community, State Level Emergency Management, Trauma center staff **Secondary** • Support users, utilities, education, transportation, etc.
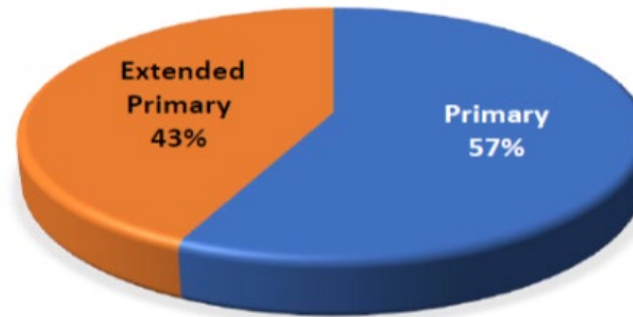
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FirstNet – Oregon State Government

▶ 30,800 sq miles of new voice and data coverage added to the state of Oregon

▶ State agency adoption:

- Oregon Dept Emergency Management
- Oregon State Patrol
- Oregon Dept of Human Services
- Oregon Public Utility Commission
- Oregon Dept of Education
- Oregon Youth Authority
- Oregon Dept of Justice
- Secretary of State
- Oregon Housing & Community Services
- Oregon Board of Parole

- Oregon Dept of Corrections
- Oregon Department of Forestry
- Oregon Health Authority
- Oregon Dept of Energy
- Oregon Dept of Environmental Quality
- Oregon Dept of Fish & Wildlife
- Oregon Judicial Dept
- Governor's Office
- Oregon Bureau of Labor & Industries
- Dept of Public Safety Standards Training

FirstNet – Oregon RAN Buildout Summary

▶ FirstNet Band 14 Coverage

- o Percent of planned FOC coverage currently in place:
  - • Non-Rural Square Miles: 100%
  - • Rural Square Miles: 100%

▶ Band 14 New Sites – 46 sites committed

- o 46 sites are On-Air: 100%

▶ As of December 31, Rural Band 14 Coverage in Oregon:

- o 47,512 sq miles planned
- o 47,512 sq miles of planned area actually covered
- o **52,464 sq miles total actually covered**

▶ *Summary, everywhere rural that we planned to have Band 14, we have it, and we have it in other areas that weren't planned.*

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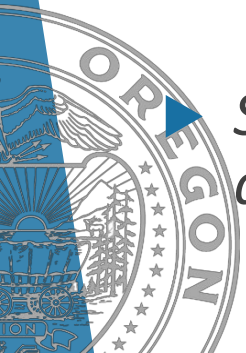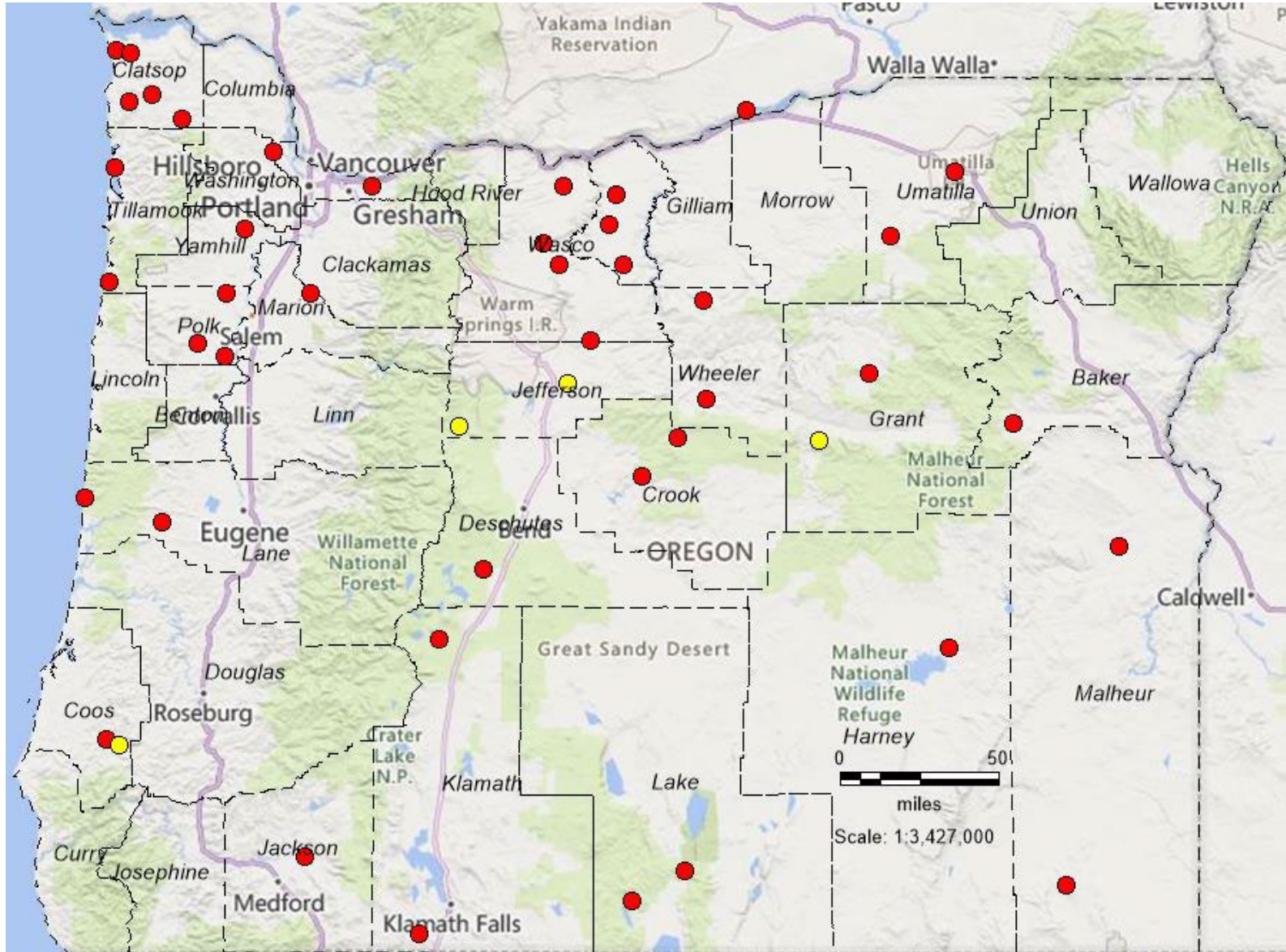
Complete On Air (46)

FirstNet – Oregon RAN Buildout Summary

Coverage on 5/30/2018

Coverage as of 09/30/2022
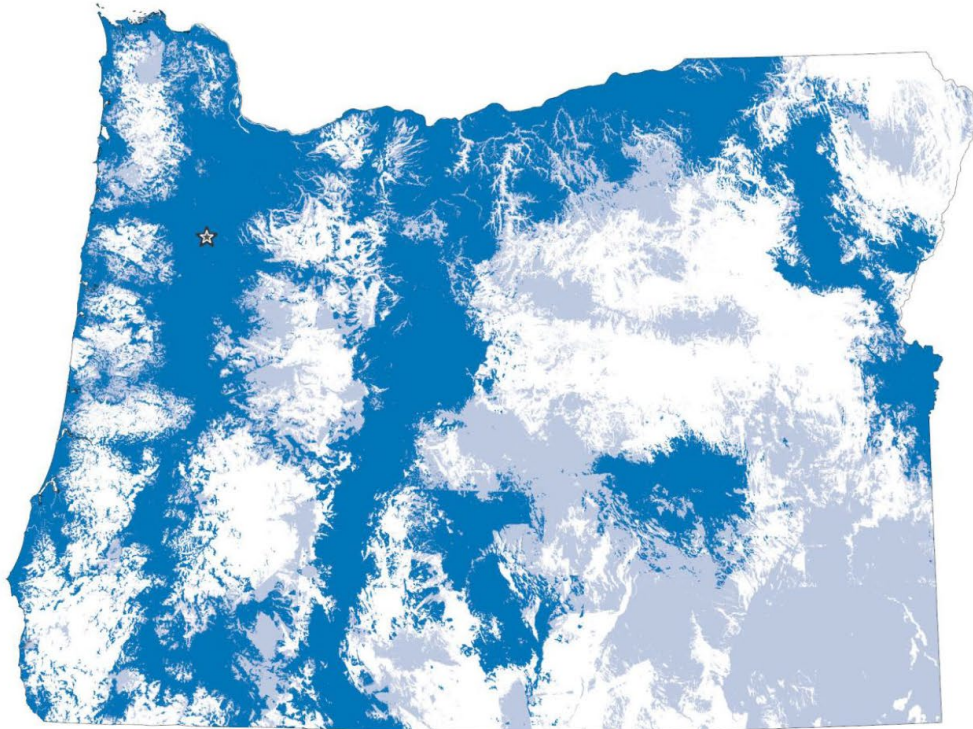
Non-Band 14
- LTE with Priority/Preemption (on 5/30/2018)
- Other Non-Band 14 (on 5/30/2018)
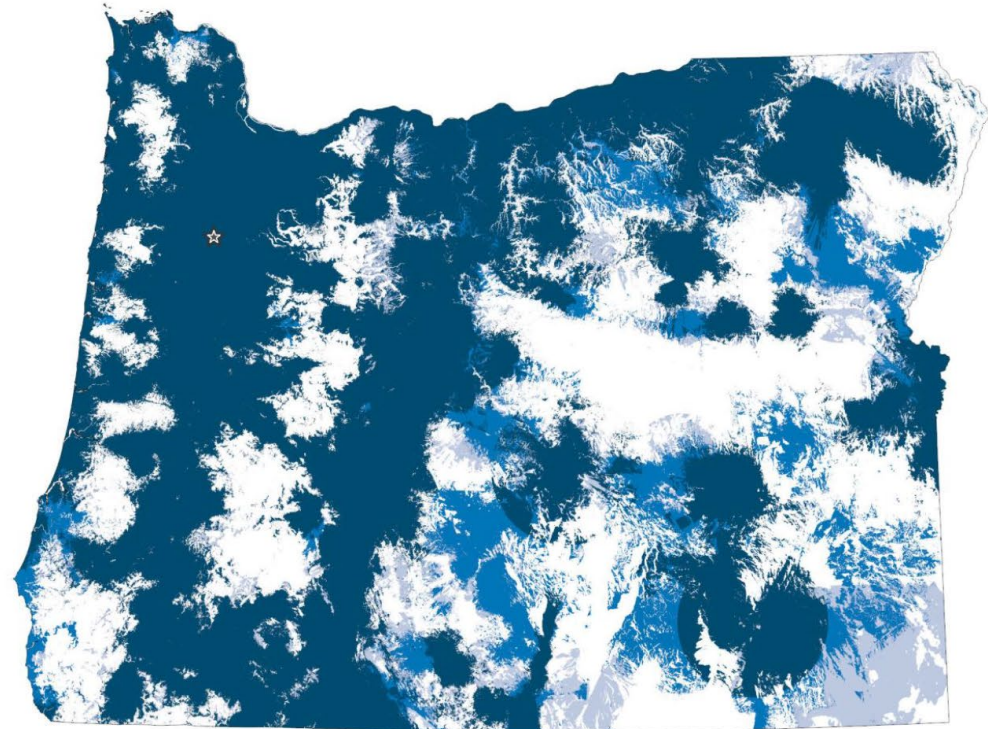
Coverage is displayed at the contractually required signal levels. Band 14 at -122dB and Non-Band 14 (LTE and Other Non-Band 14) at -110dB.

☆ Salem

Band 14
- B14 On-Air (as of 09/30/2022)

Non-Band 14
- LTE with Priority/Preemption (as of 09/30/2022)
- Other Non-Band 14 (as of 09/30/2022)

Coverage is displayed at the contractually required signal levels. Band 14 at -122dB and Non-Band 14 (LTE and Other Non-Band 14) at -110dB.

☆ Salem

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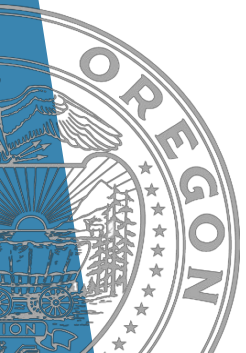
FirstNet – Looking to the Future: 2023 and Beyond

▶ Continued public safety engagement is essential.

    ○ Further development of operational and communication needs.

    ○ Ongoing input into coverage needs.

▶ Furthering mutual aid capabilities for Oregon public safety agencies.

    ○ Cellular Push to Talk Interoperability between agencies/organizations and integration of LMR and Cellular PTT networks.

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FirstNet – Oregon Deployment Highlights

Bootleg Fire – Bly, Or

Bootleg Fire – Chiloquin, Or

Lewis Rock Fire – Mitchell, Or

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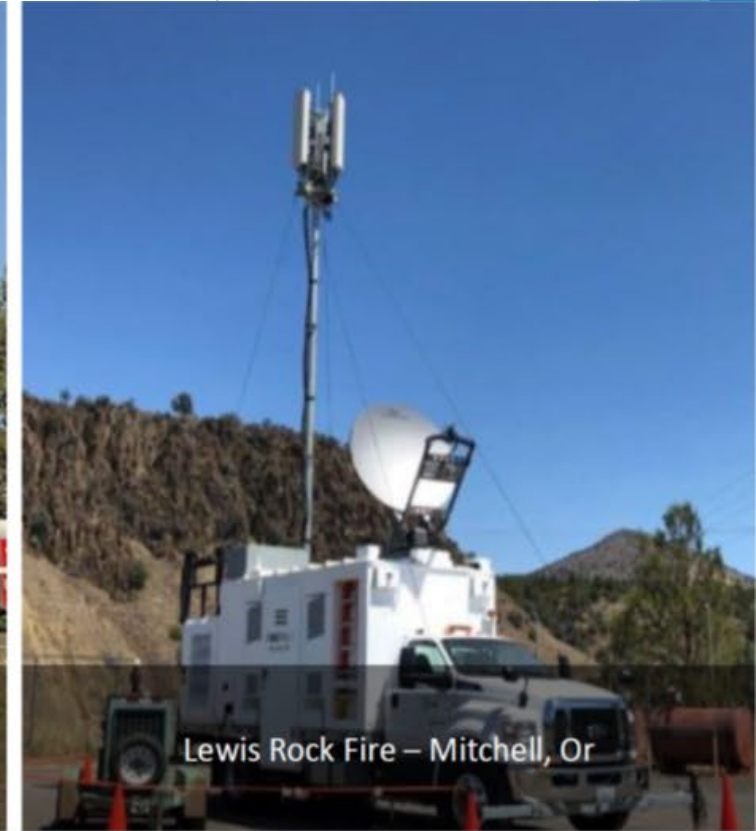
FirstNet – Oregon Deployment Highlights

Mill City – Beachie Creek and Lionshead Fires 2020

Mitchell, Oregon 2021

Cedar Creek Fire 2022

Thank you

Shirlene A Gonzalez
Legislative & Communications Director
shirlene.a.gonzalez@das.oregon.gov

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FirstNet – Oregon RAN Buildout Summary

#	County	Planned	Preferred Location Identified	Site Acquisition Complete	Under Construction	Construction Complete	On-Air
1	Baker	X	X	X	X	X	X
2	Clatsop 1	X	X	X	X	X	X
3	Clatsop 2	X	X	X	X	X	X
4	Clatsop 3	X	X	X	X	X	X
5	Clatsop 4	X	X	X	X	X	X
6	Clatsop 5	X	X	X	X	X	X
7	Coos 1	X	X	X	X	X	X
8	Coos 2	X	X	X	X	X	X
9	Crook 1	X	X	X	X	X	X
10	Crook 2	X	X	X	X	X	X
11	Deschutes	X	X	X	X	X	X

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FirstNet – Oregon RAN Buildout Summary

#	County	Planned	Preferred Location Identified	Site Acquisition Complete	Under Construction	Construction Complete	On-Air
12	Grant 1	X	X	X	X	X	X
13	Grant 2	X	X	X	X	X	X
14	Harney	X	X	X	X	X	X
15	Jackson	X	X	X	X	X	X
16	Jefferson 1	X	X	X	X	X	X
17	Jefferson 2	X	X	X	X	X	X
18	Klamath 1	X	X	X	X	X	X
19	Klamath 2	X	X	X	X	X	X
20	Klickitat, WA	X	X	X	X	X	X
21	Lake 1	X	X	X	X	X	X
22	Lake 2	X	X	X	X	X	X

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FirstNet – Oregon RAN Buildout Summary

#	County	Planned	Preferred Location Identified	Site Acquisition Complete	Under Construction	Construction Complete	On-Air
23	Lane 1	X	X	X	X	X	X
24	Lane 2	X	X	X	X	X	X
25	Malheur 1	X	X	X	X	X	X
26	Malheur2	X	X	X	X	X	X
27	Marion	X	X	X	X	X	X
28	Multnomah 1	X	X	X	X	X	X
29	Multnomah 2	X	X	X	X	X	X
30	Polk 1	X	X	X	X	X	X
31	Polk 2	X	X	X	X	X	X
32	Polk 3	X	X	X	X	X	X
33	Sherman 1	X	X	X	X	X	X

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FirstNet – Oregon RAN Buildout Summary

#	County	Planned	Preferred Location Identified	Site Acquisition Complete	Under Construction	Construction Complete	On-Air
34	Sherman 2	X	X	X	X	X	X
35	Sherman 3	X	X	X	X	X	X
36	Tillamook 1	X	X	X	X	X	X
37	Tillamook 2	X	X	X	X	X	X
38	Umatilla 1	X	X	X	X	X	X
39	Umatilla 2	X	X	X	X	X	X
40	Wasco 1	X	X	X	X	X	X
41	Wasco 2	X	X	X	X	X	X
42	Wasco 3	X	X	X	X	X	X
43	Wasco 4	X	X	X	X	X	X
44	Wheeler 1	X	X	X	X	X	X

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FirstNet – Oregon RAN Buildout Summary

#	County	Planned	Preferred Location Identified	Site Acquisition Complete	Under Construction	Construction Complete	On-Air
45	Wheeler 2	X	X	X	X	X	X
46	Yamhill	X	X	X	X	X	X

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