

**SNOHOMISH
COUNTY**

911



Radio Replacement Project

2025 Cutover Plan



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BACKGROUND

Snohomish County 911 is the technology hub for all county public safety agencies

Includes an integrated technology services team of 22, with 9 technicians specialized in Radio Communications

A vital lifeline for our community and 43 Fire/EMS, Law Enforcement, departments:

Serving: 844,000+ residents

20,000+ businesses

300+ Schools, hospitals and government facilities

Collaborating with Schools, regional and federal fire and police, numerous public/private partnerships

Covering 2,196 square miles of diverse terrain

Dozens of mutual aid partnerships incl. King, Skagit & Island Counties, US Coast Guard, and Washington State Patrol

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What Does It Take To **ANSWER THE CALL?**

Agency handles over 1,500 911 calls/day

A team of 9 highly skilled/trained professionals provide and maintain the radio system:

- 5000+ radios used by Fire, Law Enforcement & EMS teams
 - Responding on land, water, and in the air
- 22 Integrated Emergency radio sites
- Backup Power systems including batteries & generators
- Paging system
- Microwave system
- Multi-Site redundancy
- Snowcat 'Sven' to ensure access to remote facilities

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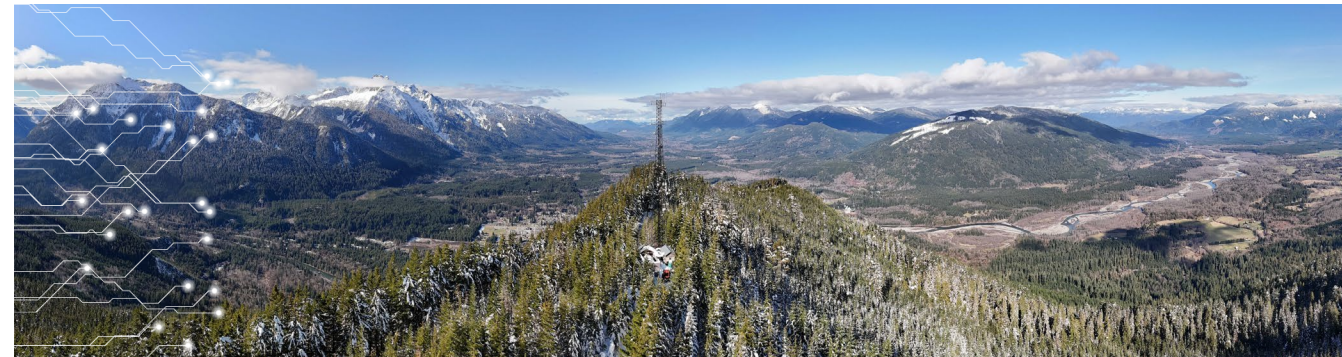
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THE CHALLENGE

- Legacy systems and equipment are at end of life
 - No manufacturer support
 - Finding spare parts from eBay
 - No software patches
- Cyber risk
- Inadequate local funds available to replace, repair, or add new equipment
- County growth requires system expansion
- Coverage challenges in rural areas



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THE SOLUTION SNAPSHOT

The 2018 Emergency Communications Systems and Facilities Sales Tax provides funding for:

- Full system replacement for all equipment at end of life
- \$23M to replace police and fire radios that previously would have been funded by individual agencies
- Funding to replace damaged, lost, or stolen equipment and normal wear and tear repairs
- Robust police/fire input and selection of equipment
- Fleet expansion to support community growth
- Funding for a full system replacement in 15 years
- Support for ongoing system maintenance & technical training
- Improvements to support interoperability with mutual aid partners

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THE TEAM

An elite team of nine highly-skilled and dedicated professionals with diverse expertise in critical areas.



Key Skills

- Cybersecurity implementation
- AC/DC power systems
- Radio frequency engineering
- Project management
- Civil site construction
- Secure networking

Actions

- Requirements gathering
- Site readiness
- Infrastructure installation
- Radio programming
- Coverage validation
- Training development & delivery

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KEY TECHNOLOGY CHANGES

- **2 new tower sites:** Machias & North Stanwood
- Analog to digital audio
- Fully **encrypted police talk groups**
- Double system capacity
- Wi-Fi updates enabling remote programming & frequent updates
- New microwave system w/path redundancy & increased bandwidth
- DC Power replacement
- Alarming, monitoring and remote troubleshooting of support systems
- Ruggedized radios & batteries
- Paging system controllers & transmitter upgrades w/geo-redundancy
- Main system components/software **upgrade every 2 years**

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THE RESULTS

The **Radio Replacement Project** is fulfilling the requirements and needs that have been coordinated with police, fire and EMS throughout every step of the project. From requirements gathered in the RFP to the selection of encryption down to the color of the radios.

Special thank you to the Project Performance Committee:

Darryl Neuhoff

Travis Katzer

Clint Korhonen

Eric Andrews

Raulie Robertson

Dave DeMarco



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Special Thank You

Radio
Advisory
Board

Snohomish
County
Council

Ken Klein

Jason
Biermann

Nathan
Kennedy

Brian Haseleu

County
Executive

County
Leadership

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16+ Year Forecast & Plan

Emergency Communication Systems and Facilities (ECSF) Long-Range Plan Updated: May 1, 2024

Forecasted Growth Factor	0.500%																	
		2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	
REVENUE		Incl 5% Inflation																
ECSF Revenue		\$21,000,000	\$21,105,000	\$22,160,250	\$22,271,051	\$22,382,407	\$22,494,319	\$22,606,790	\$22,719,824	\$22,833,423	\$22,947,590	\$23,062,328	\$23,177,640	\$23,293,528	\$23,409,996	\$23,527,046	\$23,644,681	
Interest		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	
RADIO SYSTEM EXPENDITURES																		
Debt Service (County)		\$2,794,800	\$2,794,800	\$2,794,800	\$2,794,800	\$2,794,800	\$2,794,800	\$2,794,800	\$2,794,800	\$2,794,800	\$2,794,800	\$2,794,800	\$2,794,800	\$0	\$0	\$0	\$0	
System Upgrades and Maintenance (Fund 70)		\$1,622,753	\$324,081	\$1,320,390	\$1,365,127	\$1,411,992	\$1,547,271	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	
Radio Infrastructure Capital (Fund 85)		\$0	\$657,750	\$552,687	\$1,057,321	\$9,548,883	\$2,560,720	\$800,506	\$2,825,531	\$672,807	\$3,040,347	\$509,164	\$538,470	\$657,188	\$676,598	\$696,723	\$710,170	
Radio Subscriber Fleet Expansion Reserve (Fund 140)		\$600,000	\$0	\$300,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000									
Future Radio Infrastructure Reserve (Held at County)		\$5,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$0	\$0	
SNO911 EXPENDITURES																		
Future Facility Proj (Fund 150) & Debt Service (Fund 155)		\$3,000,000	\$3,000,000	\$3,000,000	\$3,479,232	\$4,258,250	\$4,258,750	\$4,258,000	\$4,255,750	\$4,256,750	\$4,255,500	\$4,256,750	\$4,260,000	\$4,259,750	\$4,255,750	\$4,257,750	\$0	
Operations Support (Fund 70)		\$3,500,000	\$5,100,000	\$5,865,000	\$6,011,625	\$6,161,916	\$6,315,964	\$6,473,863	\$6,635,709	\$6,801,602	\$6,971,642	\$7,145,933	\$7,324,581	\$7,507,696	\$7,695,388	\$7,887,773	\$8,084,967	
ECC Infrastructure (Fund 125)		\$0	\$4,950,000	\$900,000	\$5,400,000	\$900,000	\$900,000	\$900,000	\$900,000	\$900,000	\$900,000	\$900,000	\$900,000	\$900,000	\$900,000	\$900,000	\$1,000,000	
		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Beginning Fund Balance	N/A	\$15,472,228	\$19,964,675	\$18,253,044	\$19,690,417	\$15,713,363	\$6,879,929	\$4,856,743	\$4,596,364	\$2,264,398	\$2,181,862	(\$322,836)	(\$357,155)	(\$487,366)	\$1,991,528	\$4,383,788	\$12,678,588	
Revenue	N/A	\$21,010,000	\$21,115,000	\$22,170,250	\$22,281,051	\$22,392,407	\$22,504,319	\$22,616,790	\$22,729,824	\$22,843,423	\$22,957,590	\$23,072,328	\$23,187,640	\$23,303,528	\$23,419,996	\$23,537,046	\$23,654,681	
Planned Expenditures	N/A	(\$10,917,553)	(\$11,876,631)	(\$13,532,877)	(\$14,708,105)	(\$24,175,841)	(\$17,477,505)	(\$15,827,169)	(\$18,011,790)	(\$16,025,959)	(\$18,562,289)	(\$16,206,647)	(\$16,417,851)	(\$13,924,634)	(\$14,127,736)	(\$14,342,246)	(\$10,295,137)	
Transfers to Reserves		(\$5,600,000)	(\$10,950,000)	(\$7,200,000)	(\$11,550,000)	(\$7,050,000)	(\$7,050,000)	(\$7,050,000)	(\$7,050,000)	(\$6,900,000)	(\$6,900,000)	(\$6,900,000)	(\$6,900,000)	(\$6,900,000)	(\$6,900,000)	(\$900,000)	(\$1,000,000)	
Ending Fund Balance (1)	\$15,472,228	\$19,964,675	\$18,253,044	\$19,690,417	\$15,713,363	\$6,879,929	\$4,856,743	\$4,596,364	\$2,264,398	\$2,181,862	(\$322,836)	(\$357,155)	(\$487,366)	\$1,991,528	\$4,383,788	\$12,678,588	\$25,038,132	
SNO911 Reserve Funds (Anticipated Balance)																		
Future Radio System Fund (2)	\$10,000,000	\$15,000,000	\$21,000,000	\$27,000,000	\$33,000,000	\$39,000,000	\$45,000,000	\$51,000,000	\$57,000,000	\$63,000,000	\$37,000,000	\$43,000,000	\$49,000,000	\$55,000,000	\$61,000,000	\$61,000,000	\$1,000,000	
ECC Infrastructure Fund 125	0	\$0	\$4,950,000	\$5,850,000	\$11,250,000	\$7,650,000	\$8,550,000	\$9,450,000	\$10,350,000	\$11,250,000	\$12,150,000	\$13,050,000	\$13,950,000	\$14,850,000	\$15,750,000	\$16,650,000	\$17,650,000	
Long-Terms Projects (3)					\$4,500,000	South Campus Improvement				\$32,000,000	Subscriber Replacement						\$60,000,000	New Radio System

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FUTURE READY

- Funding plan established to maintain, support, and replace systems when needed
- Wi-Fi added to radios to allow remote programming and updating
- Full Fleet Replacement when subscribers are at end of life
- Planned expansion to support community growth
- Centralized support, repair, and purchasing of mobile and portable radios, ensuring availability and saving communities \$23M+
- Funds set aside for entire system replacement in 15 years
- Enhance the system's adaptability, efficiency, and interoperability, make it well-prepared for future technological advancements and evolving emergency communication needs

You're invited: SNO911 Board Event
March 20, 2025 - 9:30ish

(Immediately following regular board meeting)



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Questions?

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