



# Impact of WCRCS P25 Radio System Member Changes

April 17, 2020





# Changes to planned WCRCS P25 System Membership

- After Interlocal is signed:
  - If a new member is added to the P25 System:
    - Recalculate O&M for following fiscal year
    - Recalculate P25 Infrastructure payments
    - The result is lower cost per radio for all members
  - If a Partner Agency leaves the Interlocal (or defaults on payments):
    - Recalculate O&M for following fiscal year
    - Utilize debt reserve fund for default → Washoe County responsibility to cover difference.
    - Result is higher cost per radio for O&M but stable for P25 Infrastructure.



# Changes to planned WCRCS P25 System Membership

- Washoe County and JOC member agencies planned and budgeted based on the current WCRCS membership.
  - If a Partner Agency elects, at this late date, not to sign the P25 Radio System Interlocal:
  - Case 1: Small agency, minimal impact (100 radios or less)
    - Redistribute the O&M costs to signing agencies.
    - Redistribute P25 Infrastructure costs to signing agencies.
    - And/or mitigate cost increase for Partner Agencies by reducing P25 Radio System Infrastructure costs
  - Case 2: Large Agency, large impact (greater than 100 radios)
    - Redistribute O&M costs and potentially reduce or eliminate O&M infrastructure contribution (JOC decision)
    - Mitigate cost increase for Partner Agencies by reducing P25 Radio System Infrastructure costs.



# Changes to planned WCRCS P25 System Membership

## Large Agency Example (Reno) – Case 1 Remedy

	LID Count	Debt Options				Difference w/o Reno LIDs – Negative numbers represent greater payments			
Agency Name	FY21 No NSRS No Reno	Lump Sum Prepayment	Total Debt Service	Level Annual Debt Service	Annual Debt Service + Operations	Lump Sum Change	Total Debt Service Change	Level Annual Debt Service (DS) Change	Annual DS + Ops Change
Nevada Air National Guard	32.0	\$103,389	\$132,858	8,857.22	\$14,654	-\$24,387	-\$31,338	-\$2,089	-\$833
Reno-Tahoe Airport Authority	298.0	\$962,806	\$1,237,242	82,482.82	\$150,034	-\$227,099	-\$291,831	-\$19,455	-\$6,398
Drug Enforcement Administration	26.0	\$84,003	\$107,947	7,196.49	\$11,229	-\$19,814	-\$25,462	-\$1,697	-\$744
Federal Bureau of Investigations	29.0	\$93,696	\$120,403	8,026.85	\$13,572	-\$22,100	-\$28,400	-\$1,893	-\$725
Incline Village General Improvement District	3.0	\$9,693	\$12,455	830.36	\$1,587	-\$2,286	-\$2,938	-\$196	-\$57
North Lake Tahoe Fire Protection District	116.0	\$374,784	\$481,611	32,107.41	\$55,044	-\$88,401	-\$113,599	-\$7,573	-\$2,826
Carson City Fire Department	10.0	\$32,309	\$41,518	2,767.88	\$4,028	-\$7,621	-\$9,793	-\$653	-\$315
Nevada Shared Radio System	0.0	\$0	\$0	-	\$425,721	\$0	\$0	\$0	\$42,572
Pyramid Lake Paiute Tribe	94.0	\$303,704	\$390,271	26,018.07	\$44,166	-\$71,635	-\$92,054	-\$6,137	-\$2,334
REMSA	22.0	\$71,080	\$91,340	6,089.34	\$10,122	-\$16,766	-\$21,545	-\$1,436	-\$568
Reno, City of	0	\$0	\$0	-	\$281,167				
Reno-Sparks Indian Colony	68.0	\$219,701	\$282,324	18,821.58	\$31,172	-\$51,821	-\$66,592	-\$4,439	-\$1,766
Sparks, City of	491.5	\$1,587,984	\$2,040,619	136,041.30	\$238,628	-\$374,562	-\$481,326	-\$32,088	-\$11,434
Truckee Meadows Fire Protection District	333.0	\$1,075,887	\$1,382,556	92,170.40	\$167,913	-\$253,772	-\$326,107	-\$21,740	-\$7,123
Truckee Meadows Water Authority	102.0	\$329,551	\$423,486	28,232.38	\$39,827	-\$77,732	-\$99,889	-\$6,659	-\$3,342
University of Nevada, Reno	76.0	\$245,548	\$315,538	21,035.89	\$40,192	-\$57,918	-\$74,427	-\$4,962	-\$1,439
US Department of Veterans Affairs Police	22.0	\$71,080	\$91,340	6,089.34	\$8,610	-\$16,766	-\$21,545	-\$1,436	-\$719
Washoe County School District	976.5	\$3,154,967	\$4,054,252	270,283.47	\$512,382	-\$744,170	-\$956,286	-\$63,752	-\$18,889
Washoe County	1,459	\$4,713,872	\$6,057,505	403,833.68	\$708,946	-\$1,111,873	-\$1,428,799	-\$95,253	-\$33,884



# Changes to planned WCRCS P25 System Membership

## Large Agency Example (Reno) – Case 2 Remedy

- Case 2 Remedy, Challenge #1: Determine which system infrastructure to remove from the L3Harris contract, equivalent in cost to Reno's Lump Sum Payment - \$3,169,723
  - Potential infrastructure to be removed\*:
    - Cold Springs Greenfield site: **\$1,000,601.84**
      - This site is targeted specifically at increasing coverage for the City of Reno.
    - Red Peak brownfield (tower only): **\$554,118.71**
    - Metro Simulcast channel reduction (-5 Channels): **\$608,100**
    - Mt Rose - Slide Mtn Simulcast reduction (-4 Channels): **\$324,320**
    - Other reductions in services and/or equipment: **~\$680,000**
  - By reducing the amount owed to L3Harris for the P25 System by approximately \$3.1M, the impact on WCRCS P25 Partner Agencies is ***partially reduced***.

\*This is a plausible example, no decision has been made to remove these components from Washoe County's System Purchase Agreement with L3Harris.





# Changes to planned WCRCS P25 System Membership

## Large Agency Example (Reno) – Case 2 Remedy

- Case 2 Remedy, Challenge #2: Reno will continue to use the P25 System Infrastructure in the WCRCS Service area after the contractual infrastructure commitment is substantially reduced.
  - Reno is proposing to pay NDOT for use of the WCRCS service area portion of NSRS, yet NDOT will not own or maintain the NSRS infrastructure Reno will be using.
  - **Remedy:** Shift the costs of the P25 System Infrastructure removed from Washoe County's System Purchase Agreement to NDOT.
    - Washoe County Administrative requirements: Change Orders & potential system re-engineering. P25 System Budget adjustments, changes to financing amount. Contract re-negotiation with L3Harris.
    - NDOT Administrative requirements: Change Orders, budget increases, Potential legislative action. Contract re-negotiation with L3Harris.



# Changes to planned WCRCS P25 System Membership

## Large Agency Example (Reno) – Case 2 Remedy

- Case 2 Remedy, Challenge #3: Who operates and maintains shared infrastructure?
  - WCRCS Staff will continue to operate and maintain WCRCS P25 System infrastructure.
  - However, because Reno would be paying NDOT, WCRCS Partner Agency Operations & Maintenance Costs will go up (see following slides).
    - This would not happen until FY24 - Reno intends to continue paying WCRCS O&M costs until FY24.





# Changes to planned WCRCS P25 System Membership

## Large Agency Example (Reno) – Case 2 Remedy

Case 2 Remedy, Challenge #3 continued:

Cost per radio if **Reno signs** the WCRCS P25 Radio System Interlocal:

**Timeline – Cost per Radio – For discussion only, actual timeline and costs may vary**

	FY20	FY21	FY22	FY23	FY24**
Operations*	\$285.60	\$277.26	\$281.40	\$285.65	\$339.87
P25 Infrastructure (Debt Service Payments)***	\$0	\$232.65	\$232.65	\$232.65	\$232.65
<b>Total Cost Per Radio</b>	<b>\$285.60</b>	<b>\$509.91</b>	<b>\$514.05</b>	<b>\$518.30</b>	<b>\$572.52</b>

\* Assume 10% Infrastructure contribution and 1.5% increase in costs per year.

\*\* FY24 operations allocations are calculated by LID, not active radio. NDOT no longer pays operations cost, which accounts for the increase from FY23.

\*\*\* Includes 10% Debt Service Reserve contribution.





# Changes to planned WCRCS P25 System Membership

## Large Agency Example (Reno) – Case 2 Remedy

Case 2 Remedy, Challenge #3 continued:

Cost per radio if **Reno does not sign** the WCRCS P25 Radio System Interlocal:

**Timeline – Cost per Radio – For discussion only, actual timeline and costs may vary**

	FY20	FY21	FY22	FY23	FY24**
Operations*	\$285.60	\$277.26	\$281.40	\$285.65	<b>\$438.19</b>
P25 Infrastructure (Debt Service Payments)***	\$0	\$232.65	\$232.65	\$232.65	\$232.65
<b>Total Cost Per Radio</b>	<b>\$285.60</b>	<b>\$509.91</b>	<b>\$514.05</b>	<b>\$518.30</b>	<b>\$670.84</b>

\* Assume 10% Infrastructure contribution and 1.5% increase in costs per year.

\*\* FY24 operations allocations are calculated by LID, not active radio. NDOT & Reno no longer pay operations cost, which accounts for the increase from FY23.

\*\*\* Includes 10% Debt Service Reserve contribution.



# Changes to planned WCRCS P25 System Membership

## Large Agency Example (Reno) – Case 2 Remedy

- **Side note #1:** Comparison of costs for Radio additions to the WCRCS P25 System and Radio additions to the NSRS under NDOT: *Adding Radios to the WCRCS system is substantially cheaper than adding radios to NSRS under NDOT.*
- The P25 Interlocal sets Partner Agency Infrastructure costs based on FY21 LID counts
  - Partner Agency Infrastructure costs cannot increase over time but may decrease (P25 Interlocal Section 13).

- FY21 Example:

	FY21 LID Count	Infrastructure (debt) cost	O&M	Total cost
WCRCS P25	100	232.65	277.26 \$	50,991
NDOT	100		705 \$	70,500

- FY22 Example – Add 10 radios:

	FY21 LID Count	Added Radios	Infrastructure (debt) cost	O&M	Total cost
WCRCS P25	100	10	232.65	277.26 \$	53,764
NDOT	100	10		705 \$	77,550

- WCRCS P25 Total Cost = (FY21 LIDs \* Level Debt) + (SUM(FY21 LIDs, Added Radios) \* O&M)
- WCRCS P25 Total Cost = (100 \* 232.65) + (110 \* 277.26)
- NDOT Total Cost = SUM(FY21 LIDs, Added Radios) \* O&M
- NDOT Total Cost = 110 \* 705



# Changes to planned WCRCS P25 System Membership

## Large Agency Example (Reno) – Case 2 Remedy

- **Side note #2:** Comparison of costs total costs of membership on the WCRCS P25 System and use of the NSRS under NDOT over 15 years\*: **Total cumulative costs for the use of the NSRS under NDOT are *greater than* the costs of membership on the Washoe County Regional Communication System P25 System by approximately \$1.3 million to \$2.13 million.**
  - Three Growth scenarios:
    - No growth in cost per radio or total number of radios
    - Moderate growth: 1.5% increase in cost per radio/year, addition of 3 radios/year.
    - Faster but still moderate growth: 2% increase in cost per radio/year, addition of 5 radios/year. (*see this scenario in the table below*).

FY	WCRCS per radio O&M	WCRCS per radio Debt Payment	WCRCS Cost per radio total	WCRCS Active Radios	LIDs	WCRCS total O&M Cost	WCRCS Finance Cost	WCRCS Total	WCRCS Cumulative	Cost Difference NDOT - WCRCS	NDOT Cumulative	NDOT Total Cost	NDOT Cost per radio
21	\$ 277.26	\$ 232.65	\$ 509.91	1,115		\$ 309,144.90	\$ 298,489.95	\$ 607,634.85	\$ 607,634.85	\$ (298,489.95)	\$ 309,144.90	\$ 309,144.90	WCRCS O&M Payments
22	\$ 281.40	\$ 232.65	\$ 514.05	1,120		\$ 315,168.00	\$ 298,489.95	\$ 613,657.95	\$ 1,221,292.80	\$ (298,489.95)	\$ 624,312.90	\$ 315,168.00	
23	\$ 285.65	\$ 232.65	\$ 518.30	1,125		\$ 321,356.25	\$ 298,489.95	\$ 619,846.20	\$ 1,841,139.00	\$ (298,489.95)	\$ 945,669.15	\$ 321,356.25	
24	\$ 339.87	\$ 232.65	\$ 572.52		1,283	\$ 436,053.21	\$ 298,489.95	\$ 734,543.16	\$ 2,575,682.16	\$ 169,971.84	\$ 1,850,184.15	\$ 904,515.00	\$ 705.00
25	\$ 346.67	\$ 232.65	\$ 579.32		1,288	\$ 446,507.61	\$ 298,489.95	\$ 744,997.56	\$ 3,320,679.72	\$ 163,042.44	\$ 2,758,224.15	\$ 908,040.00	\$ 705.00
26	\$ 353.60	\$ 232.65	\$ 586.25		1,293	\$ 457,205.77	\$ 298,489.95	\$ 755,695.72	\$ 4,076,375.44	\$ 192,331.88	\$ 3,706,251.75	\$ 948,027.60	\$ 733.20
27	\$ 360.67	\$ 232.65	\$ 593.32		1,298	\$ 468,153.25	\$ 298,489.95	\$ 766,643.20	\$ 4,843,018.63	\$ 185,050.40	\$ 4,657,945.35	\$ 951,693.60	\$ 733.20
28	\$ 367.89	\$ 232.65	\$ 600.54		1,303	\$ 479,355.74	\$ 298,489.95	\$ 777,845.69	\$ 5,620,864.33	\$ 215,728.29	\$ 5,651,519.33	\$ 993,573.98	\$ 762.53
29	\$ 375.24	\$ 232.65	\$ 607.89		1,308	\$ 490,819.08	\$ 298,489.95	\$ 789,309.03	\$ 6,410,173.35	\$ 208,080.21	\$ 6,648,908.57	\$ 997,389.24	\$ 762.53
30	\$ 382.75	\$ 232.65	\$ 615.40		1,313	\$ 502,549.20	\$ 298,489.95	\$ 801,039.15	\$ 7,211,212.51	\$ 240,210.81	\$ 7,690,158.54	\$ 1,041,249.97	\$ 793.03
31	\$ 390.40	\$ 232.65	\$ 623.05		1,318	\$ 514,552.21	\$ 298,489.95	\$ 813,042.16	\$ 8,024,254.66	\$ 232,171.38	\$ 8,735,372.08	\$ 1,045,213.54	\$ 793.03
32	\$ 398.21	\$ 232.65	\$ 630.86		1,323	\$ 526,834.31	\$ 298,489.95	\$ 825,324.26	\$ 8,849,578.92	\$ 265,821.58	\$ 9,826,517.92	\$ 1,091,145.84	\$ 824.75
33	\$ 406.18	\$ 232.65	\$ 638.83		1,328	\$ 539,401.88	\$ 298,489.95	\$ 837,891.83	\$ 9,687,470.75	\$ 257,376.17	\$ 10,921,785.92	\$ 1,095,268.00	\$ 824.75
34	\$ 414.30	\$ 232.65	\$ 646.95		1,333	\$ 552,261.41	\$ 298,489.95	\$ 850,751.36	\$ 10,538,222.11	\$ 292,616.06	\$ 12,065,153.34	\$ 1,143,367.42	\$ 857.74
35	\$ 422.59	\$ 232.65	\$ 655.24		1,338	\$ 565,419.57	\$ 298,489.95	\$ 863,909.52	\$ 11,402,131.63	\$ 283,746.60	\$ 13,212,809.46	\$ 1,147,656.12	\$ 857.74
36	\$ 431.04	\$ 232.65	\$ 663.69		1,343	\$ 578,883.15	\$ 298,489.95	\$ 877,373.10	\$ 12,279,504.72	\$ 320,649.52	\$ 14,410,832.07	\$ 1,198,022.61	\$ 892.05
<b>Total</b>								<b>\$ 12,279,504.72</b>		<b>\$ 2,131,327.35</b>		<b>\$ 14,410,832.07</b>	

\* Washoe County's System Finance period is 15 years



# Changes to planned WCRCS P25 System Membership

## Conclusion

- The Washoe County Regional Communication System has been a model for regional cooperation for the last 20 years – The WCRCS P25 Interlocal can continue that cooperation for another 20 years.
- Washoe County and the JOC worked together:
  - To develop a mutually beneficial Interlocal agreement
  - Plan and build budgets based on current WCRCS membership
- If the city of Reno decides to Join the NSRS under NDOT, both Washoe County and NDOT will be required to take action to mitigate the impacts, including but not limited to:
  - NSRS system re-engineering, contract renegotiation, contract change orders, financing changes, and potential legislative action.
  - Washoe County intends to mitigate the impact of Reno's decision to join NSRS under NDOT by:
    - Working with JOC members to reduce O&M infrastructure contribution.
    - Working with L3Harris to reduce the County's P25 Radio System Infrastructure in an amount equal to \$3.1 million (Reno's total Infrastructure cost) .
    - Working with NDOT to find common ground on the transfer or responsibilities for system infrastructure construction, operation and maintenance.
- **Washoe County has requested that Reno inform the County of their decision by May 15<sup>th</sup>.**