



**Public Safety Wireless
Communications System
Design/Engineering Services
Program Update**

July 11, 2006





FE's major activities in May-June

DATE	DELIVERABLE NUMBER AND DESCRIPTION	
April 17, 2006	4-A	Completed site surveys
April 17, 2006	6-E	Microwave Propagation, Transmission and Availability Goals for the Future State Microwave Network
May 29, 2006	6-A	Existing radio coverage, mobile and portable talk-in
May 29, 2006	6-B	Existing radio coverage (simulated narrowband) mobile talk-in
May 29, 2006	6-C	Existing radio coverage (simulated narrowband) portable talk-in
June 3, 2006	5-A	Outline of Frequency Analysis Report
June 12, 2006	9-A	Overview of Selected Technologies Report
June 12, 2006	4-C	Tower Usability Report
June 12, 2006	4-C	Tower and Site Usability Report
June 26, 2006	8-C	Outline of Microwave Conceptual Design
June 26, 2006	9-A	Recommendations of Technologies
June 26, 2006	9-B	Report and Recommendations Consolidation





Collaboration

- SWIIG
- SIEC Road Show
- Partnership Committee
- Technology Committee
- JLCIMT

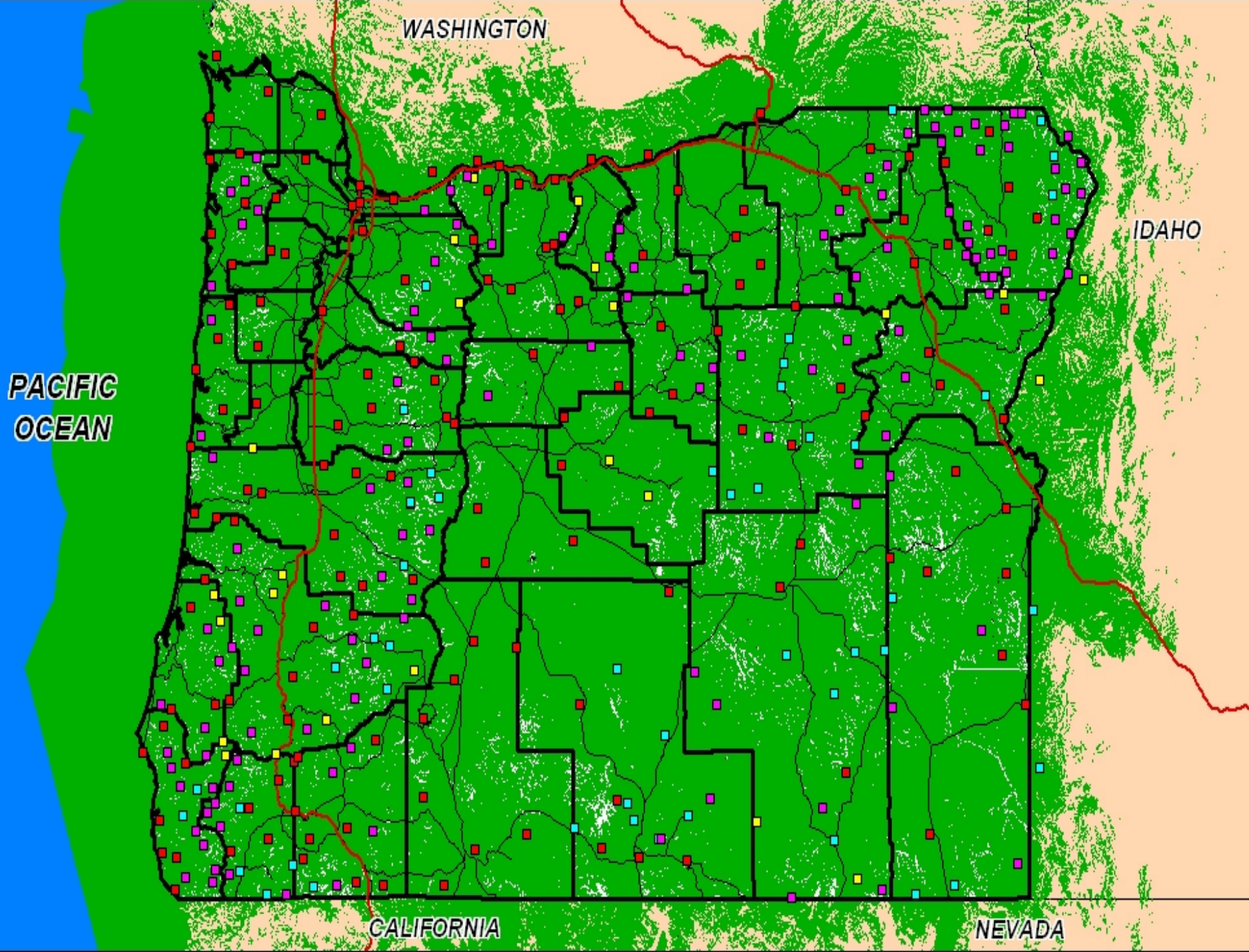




Current status

- *FE* completed engineering estimate on specific sites needed to provide 95% coverage of Oregon by county for VHF band
- *FE*'s work included:
 - Existing State sites
 - State suggested sites
 - FCC licensed sites
 - Arbitrary sites
- The result establishes the ceiling for future considerations for growth of the OWIN system





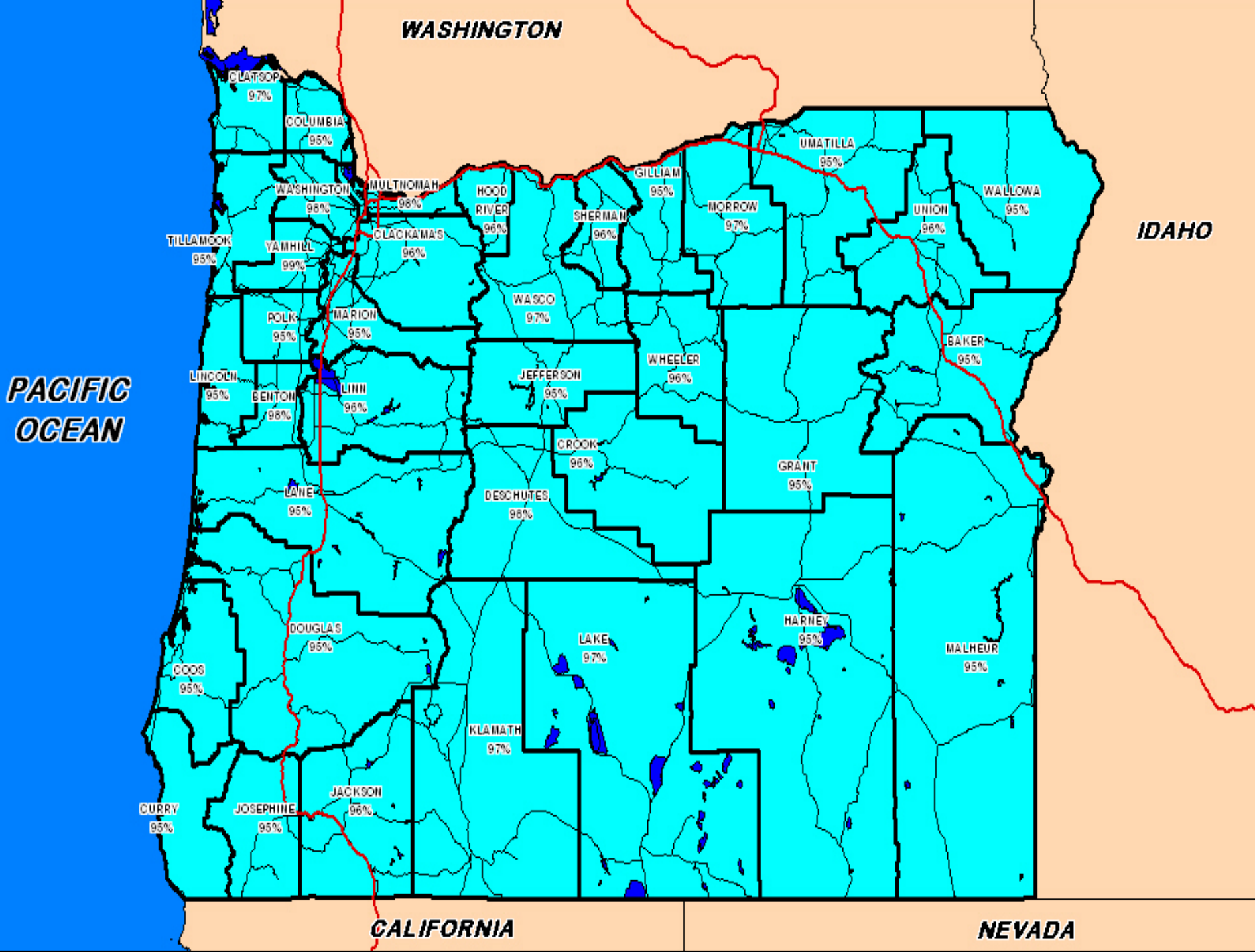
The net result for 95% coverage



365

sites







Coverage by county – 365 sites

95%		96%	97%	98%	99%
Baker	Josephine	Clackamas	Clatsop	Benton	Yamhill
Columbia	Lane	Crook	Klamath	Deschutes	
Coos	Lincoln	Hood River	Lake	Multnomah	
Curry	Malheur	Jackson	Morrow	Washington	
Douglas	Marion	Linn	Wasco		
Gilliam	Polk	Sherman			
Grant	Tillamook	Union			
Harney	Umatilla	Wheeler			
Jefferson	Wallowa				





Ownership of the 365 Sites

- State sites: 156
- State suggested sites: 24
- FCC listed sites: 48
- Arbitrary sites: 137





OWIN reaction

- It is unreasonable to expect that OWIN can produce a 95% solution
- We need to do what will support state emergency response operability problems
- We need to do what will support solving interoperability problems
- We have the data from the engineering to look at reasonable alternatives





What does this tell us?

- It establishes the ceiling of coverage for the entire state
- It lets us gauge levels of existing coverage for all users
- It identifies those sites that are most effective and those that are needed for specific coverage problems
- We see that all state agencies' coverage would be greatly enhanced by the consolidation of existing state sites





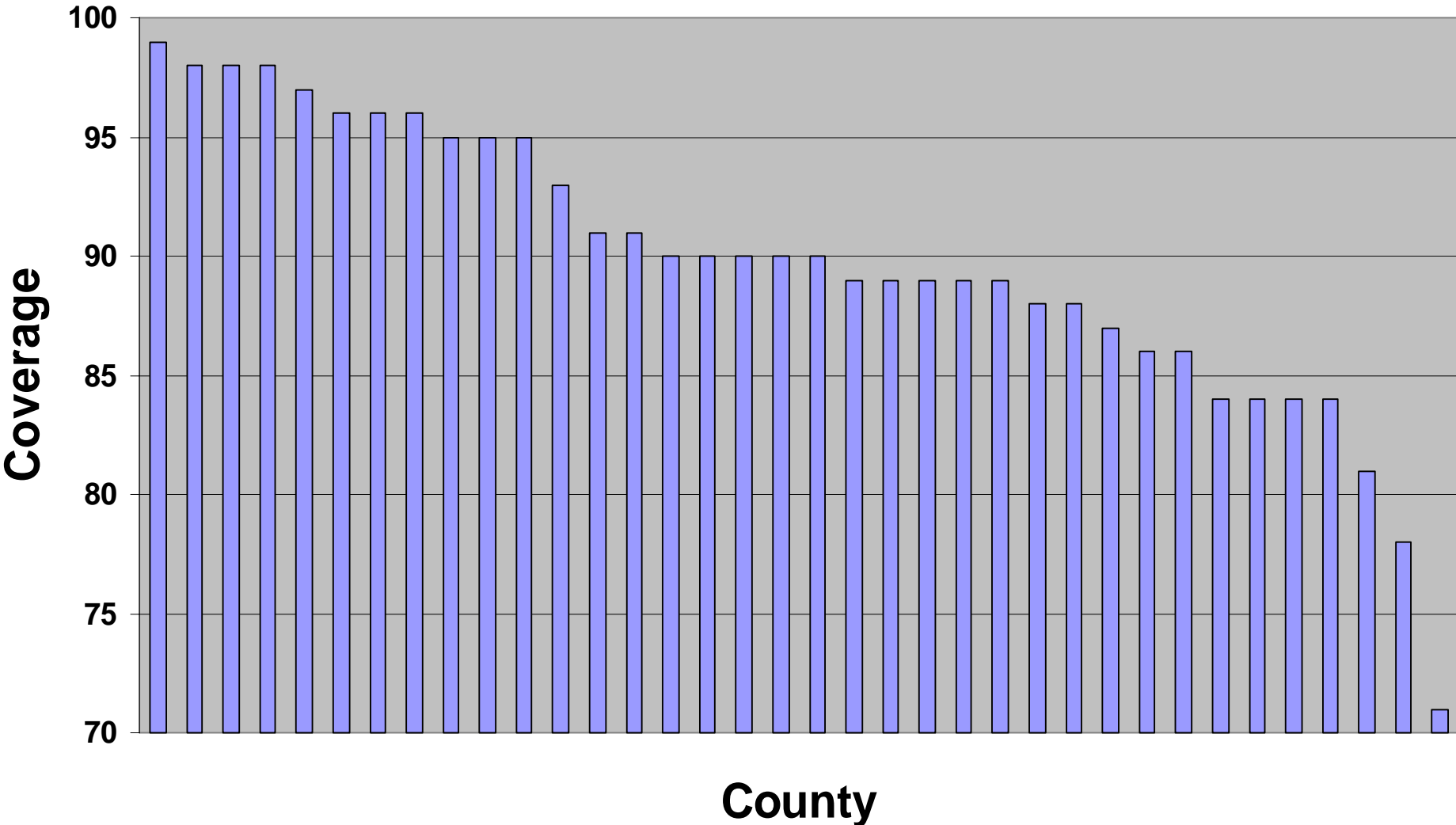
What does this tell us?

- We have a set of coverage shortages based upon user interviews and surveys
- Using 179 of the 365 sites will get us to about 88%, greatly enhancing emergency communications operability and interoperability
- This number of sites is consistent with OWIN's estimates that were used to gauge the cost of OWIN
- Interoperability for all Oregon entities would be greatly enhanced by use of the same 179 sites





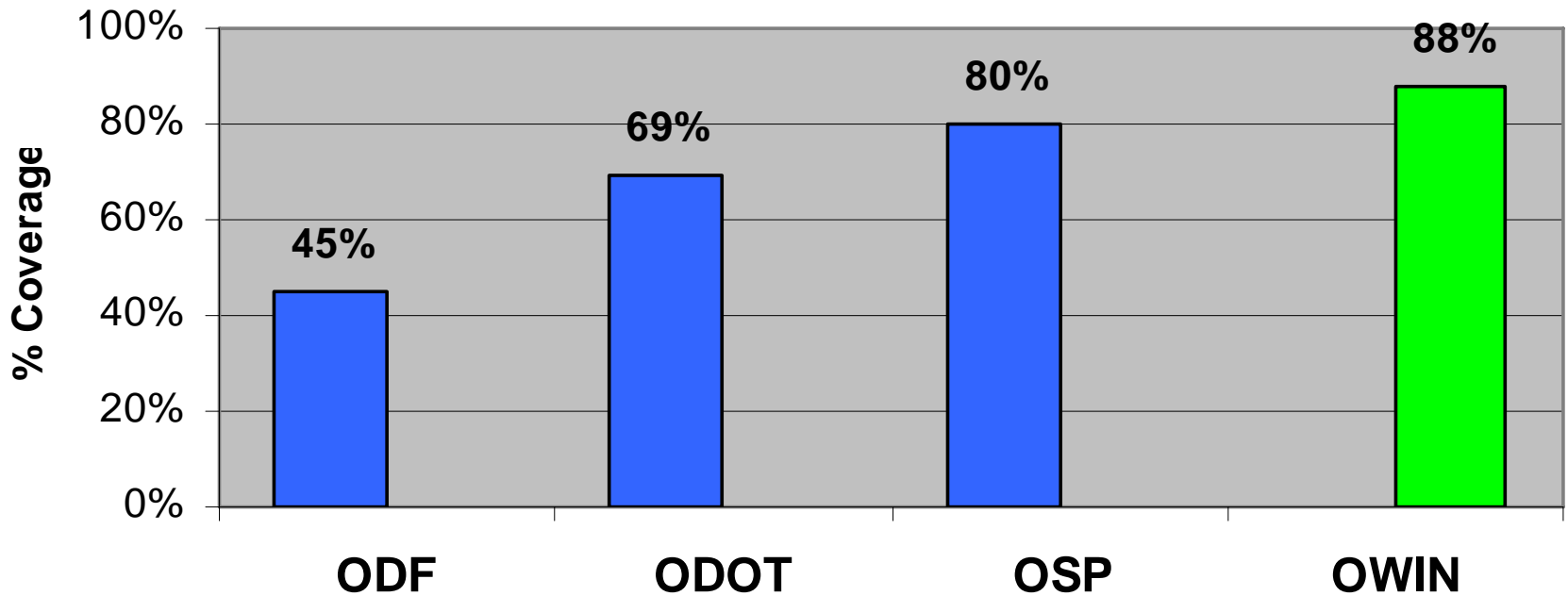
Estimated VHF coverage by county – 179 sites





Statewide coverage

VHF COVERAGE ESTIMATES - 179 Sites





700 MHz vs. VHF estimates

COUNTY	VHF (365)		700 MHz	
	# SITES	COVERAGE	# SITES	COVERAGE
Benton	1	98	42	95
Deschutes	3	98	7	97
Douglas	27	95	77	68
<i>Harney</i>	<i>20</i>	<i>95</i>	<i>147</i>	<i>95</i>
<i>Malheur</i>	<i>5</i>	<i>95</i>	<i>208</i>	<i>95</i>
Marion	5	95	79	95
Multnomah	6	98	15	95
<i>Wallowa</i>	<i>36</i>	<i>95</i>	<i>63</i>	<i>68</i>





Next work products

1. Using the *current site* information - confirm the coverage of the individual (existing) ODF, ODOT, and OSP systems
 - This establishes the baseline to gauge improved coverage by system consolidation and trunking
2. Confirm proposed statewide coverage using the information of the 179 sites



Work Plan



3. Determine the total increased coverage due to consolidation
4. Include changes to core sites that occur during the comment phase
5. Produce the microwave system conceptual design based on the 179 sites



Work Plan



6. Include any coverage changes that are needed as a result of any local interest in co-location or use of the OWIN system
7. Develop coverage estimates for 700 MHz voice and data systems
8. Develop frequency plan(s)
9. Develop accurate cost estimates for all OWIN phases based upon the 179 sites





Open Discussion

