

District:	Number of Schools in District	How many schools in your district are connected through the following types of connections?						
		Ethernet	T1/DS1	DSL	Cable	Lit (managed) Fiber	Dark (leased or owned) Fiber	Wireless
Carson	10					10		
Churchill	6					6		
Clark	358	18	12	0	0	0	327	1
Douglas	13					11		2
Elko	21							
Esmeralda	3		3					
Eureka	3	3	1				2	3
Humboldt	14		7			6		1
Independence HS	1	0	0	0	1	0	0	0
Lander	5					4		1
Lincoln	9					5	5	

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		Ethernet	T1/DS1	DSL	Cable	Lit (managed) Fiber	Dark (leased or owned) Fiber	Wireless
Lyon	18						3	15
Pershing	4	3	1					
Storey	4	0	4	4	0	0	0	4
Washoe	93	0	1	0	0	92	0	0
White Pine	7		1			6		

District:	For the schools reported in the previous question, what is the total district bandwidth for the types of connections below?					
	T1/DS1	DSL	Cable	Lit (manage) Fiber	Dark (leased or owned)	Wireless
Carson				10-500		
Churchill				1gb		
Clark	9 Mb/s	N/A	N/A	N/A	1 Gb/s	1 Mb/s
Douglas				200Mb		20Mb
Elko		3mb/640k	1@100mb ,4@20mb	100mb	100mb	2@20mb, 3@2mb/512k
Esmeralda	1.5					
Eureka	1.5				1gb	
Humboldt	1.5 Mbps			1 Gbps		300 Mbps
Independence HS			Unknown			
Lander				1GB		100MB
Lincoln				100 Mbps	100 Mbps	?

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	T1/DS1	DSL	Cable	Lit (manage) Fiber	Dark (leased or owned)	Wireless
Lyon					1Gb	25Mb
Pershing	1					
Storey	6 Mb	6 Mb				50 Mb
Washoe	1.44Mbps	0		100Mbps ES, 250Mbps HS, 10Gbps Data Centers	0	0
White Pine		1.5 meg		20 meg		

District:	How many schools in your district are connected to the WAN/data center through fiber-optic cable?			Count Day Enrollment	Count Day Enrollment that does not have access to both fiber WAN and Internet connection	Percentage of students connected through fiber
	District Owned Fiber	Dark fiber leased from a vendor	Lit fiber (managed) service from a vendor			
Carson			10	7,525	0	100.00%
Churchill			6	3,260	3,260	0.00%
Clark	8	319	0	314,643	10,485	96.67%
Douglas			11	6,200	123	98.02%
Elko	2		7	9,591	2,874	70.03%
Esmeralda	0			75	75	0.00%
Eureka	2	2		230	32	86.09%
Humboldt	1		5	3,517	251	92.86%
Independence HS	0	0	0	60	60	0.00%
Lander	4			1,121	0	100.00%
Lincoln	5		5	973	0	100.00%

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	District Owned Fiber	Dark fiber leased from a vendor	Lit fiber (managed) service from a vendor			
Lyon	3			8,108	8,108	0.00%
Pershing	0	0	0	708	708	0.00%
Storey	0	0	0	398	398	0.00%
Washoe	0	0	92	62,986	8	99.99%
White Pine	0	0	0	1,353	1,353	0.00%

District:	What is your district's monthly expenditure for:		
	ISP service?	ISP Connection (if separate)?	WAN?
Carson	\$0.00		\$13,107.00
Churchill	\$1,040.00	\$2,410.00	
Clark	\$23,000.00	N/A	\$240,000.00
Douglas	\$2,500.00		\$9,600.00
Elko	\$4,700.00		\$12,300.00
Esmeralda	\$2,500.00		
Eureka			\$750.00
Humboldt	\$0.00		\$4,155.00
Independence HS	\$0.00	\$0.00	\$0.00
Lander	\$0.00	\$0.00	\$0.00
Lincoln		\$3688 Panaca to Las Vegas	\$2765 LAN fiber

District:	What is your district's monthly expenditure for:		
	ISP service?	ISP Connection (if separate)?	WAN?
Lyon	\$12,500.00		
Pershing	\$2,534.00	\$1,231.00	
Storey	\$2,808.35		\$1,116.60
Washoe	\$4,813.00		\$45,968.00
White Pine	\$1,285.99		

District:	If you own fiber:					
	Miles of fiber	provider/contractor	Cost to install	Paid in lump sum or monthly?	If monthly, please indicate the cost.	additional monthly fees to lease the line
Carson						
Churchill						
Clark	less than 1	CCSD Facilities	Not available, but minimum, always for adjacent sites on wholely own CCSD property.	lump sum	N/A	N/A
Douglas						
Elko	1 mile	local contractor	?	lump sum		
Esmeralda		AT & T	200000	Lump sum		
Eureka		2 State of Nevada				
Humboldt	0.125	None	Internal staff	0	0	0
Independence HS						
Lander		2 UNK	150000	Lump Sum		
Lincoln		2 self, district	NA	lump sum		

District:	If you own fiber:					
	Miles of fiber	provider/contractor	Cost to install	Paid in lump sum or monthly?	If monthly, please indicate the cost.	additional monthly fees to lease the line
Lyon	<1 mile	District	Installed 10 plus years ago			
Pershing						
Storey						
Washoe						
White Pine						

District:	Please add any comments you wish concerning successes and challenges in connecting schools in your district through fiber-optic cabling? Do you have ideas on how the State could help improve connection in your district?
Carson	
Churchill	
Clark	Note: Costs given in #8 above are not adjusted for E-Rate, these are the undiscounted costs. CCSD's E-Rate discount varies but is typically in the 60-70% range annually.
Douglas	We have 70Mb fiber connection from our data center to our school sites These connections are provided by Charter Communications. the cost of each link is \$600 per month. We need high speeds. To get to 1Gb fiber speed between sites, Charter's price is approximately \$3,000 per month per site. This is cost prohibitive to our district.
Elko	It would be beneficial to the state as a whole if they would expand Nevadanet into a state wide fiber network that connected all schools, libraries, hospitals and governmental agencies. This network would need to include last mile connections to each entity.
Esmeralda	
Eureka	
Humboldt	We have received bids in the past to connect Orovada, Denio, Kings River, Paradise Valley and McDermitt Combined Schools. The costs are prohibitive based on enrollment numbers at these schools. Leveraging State funds to run fiber along State highways would help get us close to that goal.
Independence HS	
Lander	
Lincoln	Our leased lines seem quite expensive. However, we have not compared. We plan on bumping up the speed on the primary feed and to all remote schools in July. One-on-One and BYOD are bandwidth intensive.

District:	Please add any comments you wish concerning successes and challenges in connecting schools in your district through fiber-optic cabling? Do you have ideas on how the State could help improve connection in your district?
Lyon	District owned fiber is used to connect schools that are on same property. Each property is then connected to WAN via wireless (District currently increasing WAN and WAN links from 45Mb to 250Mb). District is currently at 100Mb to the Internet and is in process of upgrading to 200Mb. Cost will increase to \$17,500.00 a month. WAN costs are the major portion of our costs.
Pershing	We would like to install fiber and have talked with SCS (NSHE), but the cost will be significant; and cost will be the main challenge.
Storey	I'm currently working with AT&T to bring at least 100 Mb service up to Virginia City. I don't know how much it will cost yet. They say that we're close enough to fibre that they can deliver high bandwidth service, probably using copper for the last mile. I have contacted NSHE and they indicated that they have the capacity to provide the internet bandwidth through their network. It would be helpful if the state incentivized the network operators to build out to the remote and sparsely populated areas in some way. The market evidently does not provide enough incentive due to high cost and low return on investment. Universal service at the federal level similar to what the Communications Act of 1934 did for telephone connectivity would be ideal.
Washoe	Idea for State help: Allow local school districts to utilize unused State-owned fiber to connect schools.
White Pine	#5. No fiber available - all connected via wireless State College owns the fiber and donates segment to the school district.