

**Wideband Community Network  
Market Assessment Report  
Residential Survey**

*Preliminary*

Prepared for:

**The Wideband Community Network Committee**

And

**Los Alamos County**

Prepared by:

**Spivak Associates  
197 Camino Barranca  
Placitas, NM 87043  
Tel: 505-280-5280  
Fax: 505-867-6916  
Email: [espivak@ix.netcom.com](mailto:espivak@ix.netcom.com)**

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## **OBJECTIVE**

The objective of the Residential Survey is to assess the current and future telecommunication needs of the residential community of Los Alamos County.

## **METHODOLOGY**

### **The Sample**

A total of 490 questionnaires were sent to a sample of residents randomly selected from the telephone book. Every 15th resident listed in the local telephone book was mailed a questionnaire. There is minimal bias in the sample due to the entire population of Los Alamos County not being listed in the telephone book (unlisted numbers). 147 questionnaires were returned.

### **The Statistics**

Confidence intervals are reported when appropriate. The confidence intervals reported are at the .05 level of significance. This means that there is 95% certainty that the actual residential population of Los Alamos falls within this confidence interval. Frequency distributions on individual items are also displayed when appropriate.

## **SUMMARY AND FINDINGS**

## DETAILED RESULTS

### Location

**1. Question: *Where do you live White Rock or Los Alamos?***

11 of the respondents omitted this question. Results are as follows:

Residence	Respondents	Percentage
Los Alamos	82	56%
White Rock	54	37%
No Response	11	7%
<b>Total</b>	<b>147</b>	<b>100%</b>

### Telecommunications Service

**2. Question: *How many telephone lines do you have now?***

Phone Lines	Respondents	Percentage
1	104	71%
2	35	24%
3	3	2%
No Response	5	3%
<b>Total</b>	<b>147</b>	<b>100%</b>

The average number of telephone lines is 1.3.

The confidence interval is  $\pm 0.08$ .

**3. Question: *Do you plan to add lines in the future? If so, how many?***

Add Lines	Respondents	Percentage	No. Lines	Respondents	Percentage
Yes	29	20%	1	24	61.50%
No	108	73%	2	1	2.50%
No Response	10	7%	No Response	14	36%
<b>Total</b>	<b>147</b>	<b>100%</b>	<b>Total</b>	<b>39</b>	<b>100%</b>

Note that individuals that did not plan to add additional lines were not included in the above table regarding the number of lines, reducing the total number of respondents to 39.

4. Question: Do you have an office in your home?

Office	Respondents	Percentage
Yes	73	49.6%
No	69	47%
Future	1	0.7%
No Response	4	2.7%

5. Question: Do you operate a business in your home?

Business	Respondents	Percentage
Yes	37	25%
No	101	69%
Future	5	3%
No Response	4	3%
<b>Total</b>	<b>147</b>	<b>100%</b>

6. Question: Do you have an Internet account?

Internet	Respondents	Percentage
Yes	90	61%
No	41	28%
Future	12	8%
No Response	4	3%
<b>Total</b>	<b>147</b>	<b>100%</b>

7. Question: Do you have a fax machine?

Fax	Respondents	Percentage
Yes	36	24.5%
No	90	61.2%
Future	12	8.2%
No Response	9	6.1%
<b>Total</b>	<b>147</b>	<b>100%</b>

**8. Question: Do you have a modem or data service other than the Internet?**

Data Service	Respondents	Percentage
No	70	47.6%
No Response	64	43.5%
LANL	4	2.7%
Employer/Work	3	2%
Email*	3	2%
Modem**	2	1.4%
CompuServe	1	0.7%
<b>Total</b>	<b>147</b>	<b>100%</b>

\*One respondent indicated that they subscribed to Juno Email, e.g. a service provider for Email only.

\*\*Two respondents did not indicate their data service, only that they used a modem.

**9. Question: How many computers do you have at home?**

Computers	Respondents	Percentage
0	14	10%
1	79	54%
2 - 3	47	32%
4+	5	3%
No Response	2	1%
<b>Total</b>	<b>147</b>	<b>100%</b>

If those responding 2 - 3 computers are assigned a value of 2.5, and those responding 4+ computers are assigned a value of 4, then the average number of computers is 1.5, with a confidence interval of  $\pm 0.16$ . These values may be an underestimate, since those responding 4+ computers may actually have more than 4 computers.

**10. Question: Do you plan on buying another computer within the next six months?**

Buy Comp.	Respondents	Percentage
Yes	35	23.8%
No	101	68.7%
Don't Know	1	0.70%
No Response	10	6.8%
<b>Total</b>	<b>147</b>	<b>100%</b>



## Internet Usage

11. Question: Is your use of the Internet for electronic mail very important, important, somewhat important, or not very important?

Electronic Mail	Respondents	Percentage
Very Important (4)	80	54.4%
Important (3)	28	19.1%
Somewhat Important (2)	10	6.8%
Not Very Important (1)	8	5.4%
No Response	21	14.3%
<b>Total</b>	<b>147</b>	<b>100%</b>

The average is 3.43 (Important/Very Important) with a confidence interval of  $\pm 0.16$ .

12. Question: Is your use of the Internet for research very important, important, somewhat important, or not very important?

Research	Respondents	Percentage
Very Important (4)	45	31%
Important (3)	41	28%
Somewhat Important (2)	22	15%
Not Very Important (1)	14	9%
No Response	25	17%
<b>Total</b>	<b>147</b>	<b>100%</b>

The average is 2.96 (Somewhat Important/Important) with a confidence interval of  $\pm 0.18$ .

13. Question: Is your use of the Internet for work or office very important, important, somewhat important, or not very important?

Work/Office	Respondents	Percentage
Very Important (4)	37	25%
Important (3)	27	18%
Somewhat Important (2)	23	16%
Not Very Important (1)	29	20%
No Response	31	21%
<b>Total</b>	<b>147</b>	<b>100%</b>

The average is 2.62 (Somewhat Important/Important) with a confidence interval of  $\pm 0.22$ .

14. *Question: Is your use of the Internet for buying or shopping very important, important, somewhat important, or not very important?*

Buying/Shopping	Respondents	Percentage
Very Important (4)	11	7%
Important (3)	26	18%
Somewhat Important (2)	35	24%
Not Very Important (1)	48	33%
No Response	27	18%
<b>Total</b>	<b>147</b>	<b>100%</b>

The average is 2 (Somewhat Important) with a confidence interval of  $\pm 0.18$ .

15. *Question: Is your use of the Internet for games or entertainment very important, important, somewhat important, or not very important?*

Games/Entertainment	Respondents	Percentage
Very Important (4)	5	3.4%
Important (3)	10	7%
Somewhat Important (2)	28	19%
Not Very Important (1)	71	48.2%
No Response	33	22.4%
<b>Total</b>	<b>147</b>	<b>100%</b>

The average is 1.55 (Not Very Important/Somewhat Important) with a confidence interval of  $\pm 0.15$ .

16. *Question: Is your use of the Internet for data or information transfer very important, important, somewhat important, or not very important?*

Data/Info Transfer	Respondents	Percentage
Very Important (4)	28	19%
Important (3)	41	28%
Somewhat Important (2)	28	19%
Not Very Important (1)	20	14%
No Response	30	20%
<b>Total</b>	<b>147</b>	<b>100%</b>

The average is 2.66 (Somewhat Important/Important) with a confidence interval of  $\pm 0.19$ .

17. *Question: Is your use of the Internet for news very important, important, somewhat important, or not very important?*

News	Respondents	Percentage
Very Important (4)	17	12%
Important (3)	34	23%
Somewhat Important (2)	32	22%
Not Very Important (1)	37	25%
No Response	27	18%
<b>Total</b>	<b>147</b>	<b>100%</b>

The average is 2.26 (Somewhat Important/Important) with a confidence interval of  $\pm 0.19$ .

18. *Question: Is your use of the Internet for chat or discussion groups very important, important, somewhat important, or not very important?*

Chat/Discussion Groups	Respondents	Percentage
Very Important (4)	3	2%
Important (3)	9	6.1%
Somewhat Important (2)	11	7.5%
Not Very Important (1)	93	63.3%
No Response	31	21.1%
<b>Total</b>	<b>147</b>	<b>100%</b>

The average is 1.33 (Not Very Important/Somewhat Important) with a confidence interval of  $\pm 0.13$ .

19. *Question: Is your use of the Internet for general information very important, important, somewhat important, or not very important?*

General Information	Respondents	Percentage
Very Important (4)	25	17%
Important (3)	50	34%
Somewhat Important (2)	27	18.4%
Not Very Important (1)	21	14.3%
No Response	24	16.3%
<b>Total</b>	<b>147</b>	<b>100%</b>

The average is 2.64 (Somewhat Important/Important) with a confidence interval of  $\pm 0.18$ .

20. *Question: Is your use of the Internet for reservations very important, important, somewhat important, or not very important?*

Reservations	Respondents	Percentage
Very Important (4)	11	7.5%
Important (3)	36	24.5%
Somewhat Important (2)	35	23.8%
Not Very Important (1)	36	24.5%
No Response	29	19.7%
<b>Total</b>	<b>147</b>	<b>100%</b>

The average is 2.19 (Somewhat Important/Important) with a confidence interval of  $\pm 0.18$ .

21. *Question: Other uses of the Internet?*

Respondents indicated the following:

Chat with relatives back east.

Electronic Banking and Stock Trading

No plans to use the 'net'.

Use it from work only.

House finances most important

Will use Internet at public access location (UNM-LA library) on rare occasion, if I have a specific address. Browsing is too time consuming. The net is just too big already.

22. *Question: About how many hours per month do you and your family spend using the Internet?*

Hours-Internet	Respondents	Percentage
0 -10	74	50%
11 - 30	45	31%
31 - 80	13	9%
81+	4	3%
No Response	11	7%
<b>Total</b>	<b>147</b>	<b>100%</b>

23. *Question: Overall how would you rate your current Internet service?*

Rate Internet Svc	Respondents	Percentage
Excellent (5)	14	10.00%
Very Satisfactory (4)	30	20%
Satisfactory (3)	40	27%
Marginal (2)	22	15%
Poor (1)	0	0%
No Response	41	28%
<b>Total</b>	<b>147</b>	<b>100%</b>

Average is 3.34 (Satisfactory/Very Satisfactory) with a confidence interval of  $\pm 0.18$ .

24. *Question: If you rated you Internet service as Marginal or Poor, what is the primary reason?*

Reason	Respondents	Percentage
Access Speed	10	33.33%
Slow Response	9	30.00%
Disconnects	6	20.00%
Busy Signal	4	13.33%
Other	1	3.33%
<b>Total*</b>	<b>30</b>	<b>99.99%</b>

Although only 22 respondents indicated that they had marginal service, 7 respondents gave multiple reasons for their poor service, resulting in a total of 30 responses for this question.

Ten of the respondents that rated their Internet service as satisfactory listed a primary reason for dissatisfaction with their Internet service. One of these ten gave two reasons for dissatisfaction (Slow Response and Disconnects), while the remaining nine gave one reason.

Reason (N/A)	Respondents	Percentage
Access Speed	5	45.5%
Slow Response	4	36.4%
Disconnects	2	18.1%
<b>Total*</b>	<b>11</b>	<b>100%</b>

\*There were a total of 11 responses since one of the ten respondents gave two reasons.

## Data & Internet Needs

25. *Question: How important is High Speed Internet Access to you and your family?"*

Hi. Sp. Inter. Acc.	Respondents	Percentage
Very Important (4)	68	46.3%
Important (3)	28	19.0%
Somewhat Important (2)	11	7.5%
Not Very Important (1)	13	9.0%
No Response	27	18.2%
<b>Total</b>	<b>147</b>	<b>100%</b>

Average is 3.26 (Important/Very Important) with a confidence interval of  $\pm 0.18$ .

26. *Question: How important is Access to County Information to you and your family?"*

Acc. Co. Info.	Respondents	Percentage
Very Important (4)	6	4%
Important (3)	19	13%
Somewhat Important (2)	42	28.6%
Not Very Important (1)	48	32.7%
No Response	32	21.7%
<b>Total</b>	<b>147</b>	<b>100%</b>

Average is 1.85 (Not Very Important/Somewhat Important) with a confidence interval of  $\pm 0.16$ .

27. *Question: How important is Access to School Information to you and your family?"*

Acc. School Info.	Respondents	Percentage
Very Important (4)	6	4%
Important (3)	17	12%
Somewhat Important (2)	33	22%
Not Very Important (1)	59	40%
No Response	32	22%
<b>Total</b>	<b>147</b>	<b>100%</b>

Average is 1.74 (Not Very Important/Somewhat Important) with a confidence interval of  $\pm 0.17$ .

28. *Question: How important is Access to Health Information to you and your family?"*

Acc. Health Info.	Respondents	Percentage
Very Important (4)	8	5.44%
Important (3)	37	25.2%
Somewhat Important (2)	28	19%
Not Very Important (1)	40	27.21%
No Response	34	23.13%
<b>Total</b>	<b>147</b>	<b>99.98%</b>

Average is 2.12 (Somewhat Important/Important) with a confidence interval of  $\pm 0.18$ .

29. *Question: How important are Local News and Issues to you and your family?"*

Local News	Respondents	Percentage
Very Important (4)	8	5.4%
Important (3)	27	18.4%
Somewhat Important (2)	44	29.9%
Not Very Important (1)	38	25.9%
No Response	30	20.4%
<b>Total</b>	<b>147</b>	<b>100%</b>

Average is 2.04 (Somewhat Important) with a confidence interval of  $\pm 0.17$ .

30. *Question: How important are Electronic Connections to LANL to you and your family?"*

Elec. Conn. LANL	Respondents	Percentage
Very Important (4)	36	24%
Important (3)	29	20%
Somewhat Important (2)	23	16%
Not Very Important (1)	28	19%
No Response	31	21%
<b>Total</b>	<b>147</b>	<b>100%</b>

Average is 2.63 (Somewhat Important/Important) with a confidence interval of  $\pm 0.21$ .

**31. Question: How important are Electronic Connections to Local Businesses to you and your family?"**

<b>Elec. Conn. Loc. Bus.</b>	<b>Respondents</b>	<b>Percentage</b>
Very Important (4)	8	5.4%
Important (3)	18	12.2%
Somewhat Important (2)	26	17.7%
Not Very Important (1)	61	41.5%
No Response	34	23.1%
<b>Total</b>	<b>147</b>	<b>99.90%</b>

Average is 1.76 (Not Very Important/Somewhat Important) with a confidence interval of  $\pm 0.18$ .

**32. Question: How important is Telecommuting to Work to you and your family?"**

<b>Tele-Com-Work</b>	<b>Respondents</b>	<b>Percentage</b>
Very Important (4)	25	17%
Important (3)	24	16%
Somewhat Important (2)	20	14%
Not Very Important (1)	46	31%
No Response	32	22%
<b>Total</b>	<b>147</b>	<b>100%</b>

Average is 2.24 (Somewhat Important/Important) with a confidence interval of  $\pm 0.22$ .

**33. Question: How important is Distance Learning to you and your family?"**

<b>Distance Learning</b>	<b>Respondents</b>	<b>Percentage</b>
Very Important (4)	12	8.2%
Important (3)	27	18.4%
Somewhat Important (2)	25	17%
Not Very Important (1)	49	33.3%
No Response	34	23.1%
<b>Total</b>	<b>147</b>	<b>100%</b>

Average is 2.02 (Somewhat Important) with a confidence interval of  $\pm 0.2$ .



34. Question: *How important is Videoconferencing to you and your family?"*

Videoconferencing	Respondents	Percentage
Very Important (4)	7	5%
Important (3)	7	5%
Somewhat Important (2)	19	13%
Not Very Important (1)	80	54%
No Response	34	23%
<b>Total</b>	<b>147</b>	<b>100%</b>

Average is 1.48 (Not Very Important/Somewhat Important) with a confidence interval of  $\pm 0.16$ .

35. Question: *How important is Internet Shopping or Buying to you and your family?"*

Internet Shop.	Respondents	Percentage
Very Important	4	3%
Important	26	18%
Somewhat Important	30	20%
Not Very Important	55	37%
No Response	32	22%
<b>Total</b>	<b>147</b>	<b>100%</b>

Average is 1.82 (Not Very Important/Somewhat Important) with a confidence interval of  $\pm 0.17$ .

36. Question: *How important are Internet Sales or Advertising to you and your family?"*

Internet Sales	Respondents	Percentage
Very Important (4)	4	2.7%
Important (3)	9	6%
Somewhat Important (2)	27	18.4%
Not Very Important (1)	71	48.3%
No Response	36	24.5%
<b>Total</b>	<b>147</b>	<b>99.90%</b>

Average is 1.51 (Not Very Important/Somewhat Important) with a confidence interval of  $\pm 0.15$ .

37. Question: *How important is Web Site Hosting to you and your family?"*

Web Site Hosting	Respondents	Percentage
Very Important (4)	8	5.4%
Important (3)	7	4.8%
Somewhat Important (2)	19	12.9%
Not Very Important (1)	77	52.4%
No Response	36	24.5%
<b>Total</b>	<b>147</b>	<b>100%</b>

Average is 1.51 (Not Very Important/Somewhat Important) with a confidence interval of  $\pm 0.17$ .

38. Question: *Other uses?*

Responses were as follows:  
 Work Only.  
 Transfer of files to lawyers.

39. Question: *How would you describe you and your family's computer and Internet expertise?*

Knowledge Level	Respondents	Percentage
Expert (4)	16	11%
Very Good (3)	45	31%
Satisfactory (2)	52	35%
Need Help or Coaching (1)	16	11%
No Response	18	12%
<b>Total</b>	<b>147</b>	<b>100%</b>

Average is 2.47 (Satisfactory/Very Good) with a confidence interval of  $\pm 0.15$ .

40. Question: *How often do you send large files (1meg+) to others?*

Large Files	Respondents	Percentage
Monthly	52	35.4%
Weekly	21	14.3%
Daily	6	4%
Rarely	1	0.7%
Never/No	8	5.4%
No Response	59	40.1%
<b>Total</b>	<b>147</b>	<b>99.9%</b>

## Comments

*41. Question: Do you have other telecom or Internet needs that were not covered in the Questionnaire? If so, please describe.*

The following responses were provided:

I don't have Internet services at the present time, but plan to get them.

I use modem and access to LANL data services.

Have fax capability through computer.

Other needs: HDTV.

Would like ADSL connectivity.

Stock investments.

I want high quality FM radio and concert broadcasting.

Why not put cable TV through on a high bandwidth line?

I connect with LANL Crays for guest scientist research.

Slow response is a big problem with US West lines when moving large files.

I am trying to encourage telecommuting an use of our Internet connection at work & the barrier has been the poor quality of local phone lines.

It will do no good for networking until US West gets new lines up on the hill. Had a long wait to get a line for computer. I hope this is not going to turn into another "Blue Wail" \$\$\$.

Internet access not worth the money. Please do not spend any of our money on this!

We just changed Internet service because the previous one had too many disconnects.

Juno is inexpensive, but no data transfer.

Internet service is satisfactory at midnight.

Internet and fax available outside my home and used occasionally.

All our Internet use comes from working out of the home. I do not want it in my home.

I don't have access to the Internet.

I am going to avoid the Internet as long as possible. Time and money waster.

NO INTERNET, PLEASE!

No use of Internet.

Don't have it (Internet access).

Do not use Internet.

We have no computer. Not involved with Internet.

No computer at home.