

GRAYS HARBOR COUNTY TELECOMMUNICATIONS SURVEY

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Conducted by



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Executive Summary

Telecommunications plays an important role in the economic growth of contemporary communities. However, there is considerable disparity in the telecommunications infrastructure within Grays Harbor County.

- Aberdeen, Cosmopolis and Hoquiam, where 40% of the county's population reside, are without affordable high speed internet access, even though 72-strand, fiber optic cable connects the I-5 internet trunk to Grays Harbor Bay. Qwest, the area's telephone company, maintains that it is economically unfeasible to provide high-speed access.
- Westport and Grayland receive their phone service through Verizon, which asserts that it is economically unfeasible to provide high-speed access.
- Elma, McCleary, Montesano and smaller communities have phone service through CenturyTel Communications, which is able to provide high-speed DSL internet access for them at an affordable price.
- Ocean Shores is able to connect to the internet via high-speed cable provided by Coast Communications. Qwest provides phone service, but residents claim that they receive no better than 28 kbps dial-up service.
- Although AT&T cable exists from Hoquiam throughout the eastern county, AT&T is unwilling to offer broadband because of cost limitations.

Without affordable high speed internet access, businesses are unlikely to consider relocating to the county or remaining here as the nation's business becomes more dependent upon the internet to improve efficiency and support the workforce. Businesses have reported for years that Grays Harbor has difficulty attracting and maintaining an educated and skilled workforce. The problem will become worse as skilled workers, who depend upon the internet for information and relaxation and will not stay in an area without high-speed services.

Between April and July 2002, the Grays Harbor Telecommunications Committee conducted a survey of county residents and businesses to assess their level of satisfaction with the current telecommunications infrastructure. Over 14% of the county's households responded.

Almost 74% of survey respondents use the internet, but only 15% of them have better than 56k dial-up connections. In several communities, phone lines or switching equipment allows connections at only a small fraction of this speed. More than 62% of internet users requested faster connections and most said they would pay more to get them. The majority of users said that they would support the PUD in bringing high-speed fiber directly to businesses and residences.

This survey determined that a majority of the households in Grays Harbor County believe that the county has serious telecommunication infrastructure problems. The problems affects how residents perceive their community, dissuades talented people and businesses from moving to the area, and discourages residents and businesses from remaining here. The problem

exists in the service provided between the more than adequate high-speed fiber trunk and the internet users' homes and businesses. Because computer and internet use is growing and advancing so rapidly, the problem is certain to discourage business and workers from relocating to the county and leaves the community farther behind every day.

Part of the solution is to help residents understand what a current telecommunications infrastructure means to the community. Another part is for a partnership of county organizations to work aggressively with private phone companies and high-speed internet access providers to resolve the telecommunications problem as quickly as possible. If the current providers cannot or will not resolve the problems, all efforts should be made to support and encourage suppliers that can do so, such as the PUD or alternative private telecommunications providers.

Acknowledgements

The Grays Harbor Telecommunication Committee would like to thank the almost 4000 Grays Harbor County residents, businesses and vacation homeowners who took their valuable time to complete and return this survey. Their strong response is a measure of the seriousness of the telecommunication infrastructure problems that exists in Grays Harbor County. The Committee also wants to thank Grays Harbor Public Utility District #1 and Wishkah Cable Company for their generous support in distributing the survey. Without their assistance, the response to this survey would not have occurred. And finally, thanks to of the members of the Grays Harbor Economic Development Council for donating the organization's resources to develop the survey, compile its results and generating this report.

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Background:

A strong telecommunications infrastructure is a prerequisite for growth in today's economy. The explosive use of the internet to conduct business, supply information and provide leisure-time activities mandates that a high speed, competitive, redundant telecommunication backbone is in place before companies and their skilled workers will consider locating to an area. High-speed internet access is essential for doing business in today's economy and will be vital for all business in the future. Even more important, quality telecommunications services are often key to deciding whether an existing business will be able to remain in a community and compete effectively.

Since its inception in September 2000, the Grays Harbor Telecommunications Committee has been an important resource in bringing telecommunications players together from private and public organizations throughout Grays Harbor County. The committee's mission has been to insure that the county's infrastructure is current and competitive. One of the Committee's first projects was to map the infrastructure in order to understand the telecommunications assets already in existence. With that accomplished, the Committee decided in March 2002, to survey county businesses and residents in order to assess their internet usage and degree of satisfaction with the infrastructure currently in place. See Appendix A for a list of organizations that comprise the telecommunication committee.

Methodology:

Survey Instrument: As the lead agency for the Telecommunications Committee, the Grays Harbor Economic Development Council (GHEDC) developed a survey instrument based upon telecommunications surveys conducted in other communities, knowledge of the issues affecting telecommunications in Grays Harbor County, and experience administering surveys. During its development, Telecommunication Committee members continually reviewed and tested the survey. After it was completed, only minor wording changes were made in the survey's three distributions. Objectives for the survey instrument were to keep it short, easy to complete, and personally non-invasive. A copy of the survey that had the largest distribution is included in Appendix B.

Distribution: Because the survey process was unfunded, GHEDC initially posted it on its website (www.ghedc.com/telesurvey.html) and promoted it in a column in The Daily World Newspaper and through a progressive email campaign that asked interested participants to complete the survey and forward the email to their friends and associates. Submitted surveys were automatically emailed to the GHEDC and transferred to an Excel spreadsheet. In all, 200 surveys were completed on-line.

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Wishkah Cable Company, a telecommunication committee member, volunteered to include a printed copy of the survey in its April 2002 monthly billing statement to their TV cable subscribers. From their mailing, 126 surveys were returned and delivered to GHEDC for spreadsheet entry.

The success of the Wishkah Cable mailing prompted GHEDC to ask the Grays Harbor Public Utility District #1 (PUD) Commissioners to include the survey in the PUD's July statement that was mailed to over 32,500 customers throughout the county. GHEDC paid for printing and folding and the PUD incurred only nominal cost for inserting the one page survey in their mailing. Just over 3600 surveys were returned to the PUD and hand entered into Excel by the GHEDC staff.

The survey assured respondents that all survey information would remain entirely confidential and asked only for the respondent's zip code in order to stratify the data. Respondents' names, companies, home and email addresses, and telephone numbers were optional. Surprisingly, more than one third of all respondents included at least their names and many more included email addresses and/or phone numbers. Although there was little space for additional comments on the form, many respondents included their thoughts in the margins. We attempted to include as many of these comments as possible when recording the data.

Responses: A total of 3930 surveys were returned from the three distributions. Although the PUD survey was distributed both to home and business customers, only 84 responses came solely from business billings. Therefore, it is reasonable to estimate that more than 14% of the county's 26,800 households responded to the survey. The Oakville zip code (98568) had the highest percentage of returned surveys at 44% of households. The McCleary zip code (98557) had the lowest response at 8%. However, McCleary provides power to over 800 of its households and these were not included in the PUD mailing. Only Mox Chehalis households that have the same zip code as McCleary received the PUD mailing and were able to respond.

Completed surveys were returned from all county zip codes. Because smaller communities had fewer total responses, they were grouped together under "Other Towns". These towns and the number of their responses are:

Town	Amanda Park	Copalis Beach	Hump-tulips	Neilton	Pacific Beach	Quin-ault	Satsop	Tahola	Toke-land	Moclips	Malone	Total
Responses	26	30	9	17	19	21	15	12	27	5	4	185

The communities referred to in the remainder of this study, the percent of returned surveys by community and the percentage of returns by household are included in the table on the next page. The Aberdeen zip code includes

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Central Park and Junction City households and the Montesano zip code includes Brady households.

	Aberdeen	Cosi	Elma	Grayland	Hoquiam	McCleary	Montesano	Oakville	Ocean Shore	Westport	Other Towns	Out of County	No Zip	Total
Responses	1083	107	330	118	475	45	377	105	376	208	185	110	411	3930
% Response	27.6%	2.7%	8.4%	3.0%	12.1%	1.1%	9.6%	2.7%	9.6%	5.3%	4.7%	2.8%	10.5%	100%
% Household	14.3%	16.0%	26.9%	23.1%	12.7%	7.6%	24.1%	43.8%	20.0%	20.2%	na	na	na	na

Out of County is a catchall for the responses received from people living in 71 zip codes outside Grays Harbor and, we assume, have second homes or businesses within the county. As a group, they tend to have faster access speeds and more options than are available in Grays Harbor communities. Whether this is the result of their being more affluent and living in communities that provide better internet options, or whether most communities outside Grays Harbor tend to offer better access and options cannot be determined. Although it is interesting to compare Out of County responses to the rest of Grays Harbor communities, this paper will not do so.

The goal of this survey was to assess internet user perceptions of Grays Harbor County’s telecommunications services and backbone. As a result, most of the questions were not relevant to people without access to a computer and the internet. Because non-internet users usually answered only the first one or two questions, survey findings relate specifically to responses from internet users rather than from all respondents, unless otherwise noted. Data in the tables has been highlighted when they are of particular interest to the findings.

Results:

The following is a discussion of responses to each of the survey’s questions. A listing of all response numbers is included in Appendix C. A similar table of response percentages is included in Appendix D.

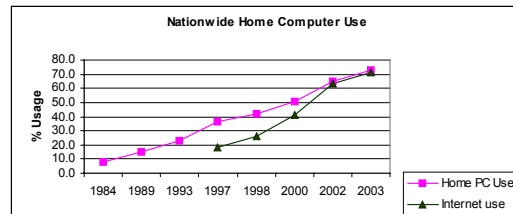
1. Do you use the Internet?

Over 75% of all respondents had access to a computer and almost all of them (74%) accessed the internet. In the following table, the percentage of people with internet access by community is somewhat inflated because non-users often did not proceed to the end of the survey and add their zip code. However, the Total includes those without zip codes and is correct.

	Aberdeen	Cosi	Elma	Grayland	Hoquiam	McCleary	Montesano	Oakville	Ocean Shore	Westport	Other Towns	Out of County	No Zip	Total
No Access	16.1%	17.8%	17.0%	30.5%	16.4%	17.8%	16.4%	27.6%	18.1%	15.4%	25.9%	25.5%	82.7%	26.1%
Access	83.7%	80.4%	82.4%	68.6%	83.2%	75.6%	82.2%	70.5%	80.1%	81.3%	71.4%	70.9%	16.3%	73.9%

Residents in the smaller communities highlighted in the table may be less likely to have computers and, therefore, have less access to the internet. For the remainder of communities, there is general uniformity in internet access.

The seemingly high percentage of computer and internet users (74%) in the overall sample population is consistent with national computer usage projections and is probably not a result of computer users being more likely to return the survey. By projecting published US Census data¹ on home computer use into the present, the expected percentage of computer users by mid 2002 ranges from 68% to 72% and the projected percentage of internet users by mid 2002 ranges from 67% to 70%. In addition, survey respondents would answer that they had accessed the internet if they did so anywhere (home, business, libraries, schools, friends, etc.). Therefore, the seemingly high internet access rate found in this survey would seem to be consistent with national computer and internet use projections.



2. Where do you access a computer? (check all that apply)

More than 54% of computer users access computers at two or more locations with Home and Work being the most common. The lower number of Library, School and Friends responses is probably related to the few students who would see a household’s electric and cable TV bills and, thereby, completed the survey. The high number of School responses in Hoquiam came from the survey they completed on the GHEDC website. The relatively high use of Library computers in Other Towns supports the important internet access service that libraries provide in smaller communities.

	Aberdeen	Cosi	Elma	Grayland	Hoquiam	McCleary	Montesano	Oakville	Ocean Shore	Westport	Other Towns	Out of County	No Zip	Total
Home	100%	95.1%	92.0%	94.9%	95.0%	93.5%	95.4%	97.2%	95.4%	95.1%	88.2%	89.6%	95.2%	96.0%
Work	55.8%	51.9%	46.4%	35.4%	55.6%	64.5%	52.8%	35.2%	34.7%	41.4%	44.1%	50.6%	48.4%	49.7%
Library	12.3%	8.6%	17.6%	11.4%	13.1%	6.5%	12.5%	7.0%	8.8%	13.6%	22.8%	11.7%	6.5%	12.6%
School	10.0%	6.2%	8.4%	6.3%	14.1%	3.2%	5.9%	5.6%	3.2%	3.1%	6.3%	3.9%	1.6%	8.0%
Friends	10.3%	4.9%	11.1%	10.1%	11.0%	19.4%	5.3%	1.4%	3.5%	9.3%	6.3%	3.9%	8.1%	8.5%

¹ U.S. Census Report, “Home Computers and Internet Use in the United States”, August 2000, U.S. Department of Commerce Economics and Statistics Administration.

3. How do you primarily connect to the internet? (Check all that apply)

Most internet users in the county connect via dial-up modems. This is true for all communities; even Ocean Shores, which is the only community in the county with cable service, and those living Out of County. Those with lease lines (T-1) usually accessed them at their place of work. Only 2% of users said they did not know how they were connected, and only 7 mentioned Web TV and 11 mentioned satellite. This question required some knowledge of technical jargon, however, and it was clear to those of us inputting data that some respondents were not entirely clear as to how they connected to the internet.

	Aberdeen	Cosi	Elma	Grayland	Hoquiam	McCleary	Montesano	Oakville	Ocean Shore	Westport	Other Towns	Out of County	No Zip	Total
Lease	15.6%	17.3%	10.7%	10.1%	13.3%	9.7%	14.9%	7.0%	6.0%	13.6%	15.0%	16.9%	14.5%	13.3%
DialUp	89.1%	90.1%	77.8%	89.9%	91.1%	90.3%	80.2%	93.0%	70.2%	85.2%	79.5%	67.5%	80.6%	84.2%
Cable	1.0%	2.5%	1.9%	3.8%	1.6%	6.5%	2.3%	0.0%	26.7%	1.9%	5.5%	16.9%	6.5%	4.9%
Wireless	1.9%	0.0%	0.4%	3.8%	0.8%	3.2%	1.7%	0.0%	0.4%	1.2%	0.8%	0.0%	4.8%	1.3%

4 a. What connection speed do you have?

Most users connect via 56 kilobit per second (kbps) dial-up modems. However, over 100 of these respondents commented that, although they had 56 kbps modems, their connection speeds are considerably less because of inadequate local phone lines and old telephone switching equipment. As with question 3, this question also required some technical knowledge. It was left blank by 22% of the users and was misunderstood by others, who mentioned speeds that were not available in their areas or speeds that were inconsistent with their other answers. The higher line speeds in McCleary, Elma and Montesano are through DSL service provided by CenturyTel and in Ocean Shores by cable provided by Coast Communications.

	Aberdeen	Cosi	Elma	Grayland	Hoquiam	McCleary	Montesano	Oakville	Ocean Shore	Westport	Other Towns	Out of County	No Zip	Total
Up to 56	68.1%	69.1%	52.5%	60.8%	68.9%	58.1%	59.1%	63.4%	52.6%	63.0%	54.3%	44.2%	48.4%	61.8%
Up to 128	6.2%	9.9%	11.9%	6.3%	7.8%	9.7%	9.2%	7.0%	6.3%	5.6%	11.0%	5.2%	8.1%	7.7%
Up to 512	2.4%	1.2%	6.1%	3.8%	1.3%	3.2%	5.0%	2.8%	17.2%	3.1%	6.3%	7.8%	1.6%	4.7%
Up to T1	3.0%	4.9%	4.2%	3.8%	1.8%	0.0%	6.6%	0.0%	4.9%	2.5%	4.7%	7.8%	4.8%	3.7%

4 b. What connection speed do you want?

Wanted connection speed was left blank by 45% of the users indicating the technical complexity of the question. Comments such as "not sure" or "anything faster" reflected a discomfort with the jargon used. Those who responded, wanted faster speeds or at least the ability to attain speeds that their modems support. Only 3 respondents commented that they are satisfied with what they currently have. Users in communities like Elma,

Montesano and Ocean Shores, which have faster connection speeds, are generally more satisfied with what they have than users who live in communities like Aberdeen, Cosmopolis, Grayland, Hoquiam, and Westport where affordable fast-line speeds are not available. However, even in the communities where high-speed options exist, the majority of respondents wanted even faster connections.

	Aberdeen	Cosi	Elma	Grayland	Hoquiam	Mc-Cleary	Montesano	Oakville	Ocean Shore	Westport	Other Towns	Out of County	No Zip	Total
Up to 56	2.2%	0.0%	4.2%	0.0%	2.9%	0.0%	2.0%	4.2%	4.9%	3.1%	2.4%	5.2%	3.2%	2.8%
Up to 128	4.8%	2.5%	5.0%	5.1%	7.0%	9.7%	6.3%	5.6%	4.2%	6.2%	4.7%	1.3%	4.8%	5.2%
Up to 512	11.9%	8.6%	9.6%	13.9%	13.6%	16.1%	9.6%	12.7%	11.6%	12.3%	10.2%	7.8%	1.6%	11.3%
Up to T1	31.9%	40.7%	20.3%	24.1%	35.0%	16.1%	21.1%	16.9%	16.5%	22.2%	17.3%	14.3%	9.7%	25.8%
Tot Faster	48.5%	51.9%	34.9%	43.0%	55.6%	41.9%	37.0%	35.2%	32.3%	40.7%	32.3%	23.4%	16.1%	42.3%

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5. What telecommunication services would you want that are not currently available in your community? (Check all that apply.)

This question was more subjective than question 4 above and generated a much higher 71% response rate. Another way to look at this high response rate is that 71% of the users want one or more service that they believe are currently not available in their communities. Even in highlighted communities that currently provide some form of high-speed access, users wanted faster connection speeds, access to new technology and better phone line options. However, the demand for better services was higher in communities without these options than those that provided them. Redundancy, which can be interpreted as the assurance of continuous service that is vital to businesses, was either not much of a concern or its meaning was not familiar to most users.

	Aberdeen	Cosi	Elma	Grayland	Hoquiam	Mc-Cleary	Montesano	Oakville	Ocean Shore	Westport	Other Towns	Out of County	No Zip	Total
Lease	19.8%	19.8%	12.3%	12.7%	18.0%	12.9%	11.6%	14.1%	9.1%	17.9%	9.4%	5.2%	4.8%	15.2%
Faster	51.5%	56.8%	36.0%	46.8%	57.7%	38.7%	36.6%	46.5%	34.4%	45.7%	36.2%	20.8%	32.3%	45.1%
Redundant	2.8%	0.0%	2.7%	3.8%	3.1%	0.0%	3.3%	2.8%	3.5%	1.9%	0.8%	2.6%	1.6%	2.7%
New Tech	54.4%	46.9%	39.5%	55.7%	59.8%	48.4%	36.0%	47.9%	33.7%	54.3%	40.2%	28.6%	33.9%	47.5%

6. Please list applications you use Internet connectivity for. (Check all that apply.)

Internet applications use throughout the county is very consistent with Email and Internet Search applications being used by almost everyone. Those who use most of the listed applications tend to have access to high-speed lines already or tend to be the most vocal in their demand for attaining more speed. Slow line speeds may be one reason for the low use of Teleconferencing, Business applications, Business downloads, Music/video

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downloads and Games as these applications require fast-line speeds to perform well. However, there is no significant difference in the use of any of these applications between communities that have some high-speed access and those that do not. Perhaps high-speed access will need to be more universally available before these applications are more fully utilized.

	Aberdeen	Cosi	Elma	Grayland	Hoquiam	McCleary	Montesano	Oakville	Ocean Shore	Westport	Other Towns	Out of County	No Zip	Total
Email	96.6%	96.3%	98.1%	100%	97.7%	100%	96.7%	97.2%	98.6%	98.1%	94.5%	94.8%	93.5%	97.1%
Searches	95.6%	96.3%	95.4%	98.7%	96.6%	100%	98.0%	100%	96.5%	95.7%	96.1%	87.0%	82.3%	95.8%
Purchases	64.7%	64.2%	57.1%	67.1%	69.2%	71.0%	65.0%	56.3%	63.5%	63.6%	48.8%	57.1%	51.6%	63.2%
News	54.7%	53.1%	52.5%	58.2%	55.1%	58.1%	51.8%	47.9%	56.8%	55.6%	52.0%	49.4%	50.0%	54.1%
Browsing	54.8%	56.8%	50.2%	40.5%	53.8%	35.5%	47.5%	40.8%	39.3%	45.7%	42.5%	33.8%	32.3%	48.8%
Games	36.1%	35.8%	40.6%	24.1%	35.2%	25.8%	29.7%	26.8%	24.2%	30.2%	29.1%	27.3%	32.3%	32.8%
Music/vid	37.7%	25.9%	33.7%	19.0%	37.6%	29.0%	30.4%	18.3%	23.9%	23.5%	29.1%	15.6%	9.7%	31.3%
Down Lds	29.0%	28.4%	27.2%	24.1%	29.0%	41.9%	25.7%	32.4%	29.5%	28.4%	29.9%	26.0%	22.6%	28.4%
Bus Apps	16.1%	12.3%	14.6%	15.2%	19.1%	29.0%	15.2%	14.1%	14.4%	12.3%	18.1%	15.6%	12.9%	15.8%
Confernce	10.7%	7.4%	9.6%	11.4%	8.9%	9.7%	8.3%	7.0%	7.4%	9.9%	9.4%	14.3%	11.3%	9.6%

Almost 200 users mentioned additional uses, which we categorized into business, banking and financial transaction applications; on-line education programs; updating of software programs; and researching business or personal interests.

7 a. How much do you currently pay for internet services?

Over 96% of users responded to this question. More than two-thirds now pay \$15-25 per month to their internet service provider (ISP) for internet connectivity. Some of those who pay more than \$25 per month said that they added the cost of a second phone line into the cost. Those who paid nothing often accessed computers at work or the library. Those paying \$25-\$40 were usually located in towns service by DSL from CenturyTel. A larger proportion of people in Ocean Shores, which has cable, paid in the \$40-\$60 range. Most of those paying more than \$60 were businesses with T-1 lines.

	Aberdeen	Cosi	Elma	Grayland	Hoquiam	McCleary	Montesano	Oakville	Ocean Shore	Westport	Other Towns	Out of County	No Zip	Total
Nothing	6.5%	6.2%	4.2%	6.3%	5.7%	6.5%	6.3%	2.8%	6.7%	8.0%	9.4%	13.0%	4.8%	6.4%
<\$15	6.4%	6.2%	3.1%	11.4%	4.2%	6.5%	8.9%	15.5%	8.1%	8.0%	8.7%	11.7%	12.9%	7.1%
\$15-\$25	72.6%	74.1%	67.0%	70.9%	75.2%	74.2%	66.3%	63.4%	47.7%	71.6%	62.2%	41.6%	48.4%	67.1%
\$25-\$40	4.8%	8.6%	12.6%	3.8%	7.8%	12.9%	11.2%	12.7%	15.1%	8.6%	7.9%	15.6%	8.1%	8.7%
\$40-\$60	2.6%	1.2%	8.4%	5.1%	3.1%	0.0%	5.0%	1.4%	16.5%	0.6%	6.3%	10.4%	0.0%	5.0%
>\$60+	1.6%	1.2%	0.4%	0.0%	1.0%	0.0%	0.7%	1.4%	4.2%	0.6%	3.1%	2.6%	1.6%	1.5%

7 b. How much more would you be willing to spend for additional services or higher speed connectivity?

Because most people are reluctant to volunteer for a price increase, it was a surprise that 70% responded to this question and most volunteered to pay more than they are currently paying. While 26% of respondents said they would pay nothing more, 45% said that they would pay from \$5 to \$40 more per month than they currently pay. Not surprisingly, users in towns like Aberdeen, Cosmopolis, Hoquiam, Westport, and Grayland, which are without affordable high-speed access alternatives, are willing to pay more than those in communities in which affordable high-speed alternatives already exists. The following table includes a summation of the total percentage of those willing to pay more than they are currently paying.

	Aberdeen	Cosi	Elma	Grayland	Hoquiam	Mc-Cleary	Montesano	Oakville	Ocean Shore	Westport	Other Towns	Out of County	No Zip	Total
Nothing	21.5%	29.6%	31.4%	24.1%	14.9%	29.0%	39.3%	33.8%	35.4%	28.4%	23.6%	32.5%	14.5%	26.2%
\$5-\$10	19.1%	16.0%	18.4%	24.1%	22.5%	12.9%	15.8%	15.5%	17.9%	17.9%	17.3%	11.7%	11.3%	18.4%
\$10-\$20	13.3%	12.3%	10.7%	12.7%	12.8%	12.9%	7.3%	9.9%	8.4%	12.3%	11.8%	7.8%	8.1%	11.3%
\$20-\$30	10.4%	9.9%	3.4%	6.3%	11.5%	3.2%	5.0%	2.8%	5.6%	8.6%	9.4%	0.0%	4.8%	7.9%
\$30-\$40	6.4%	6.2%	2.3%	3.8%	6.8%	9.7%	3.3%	4.2%	2.5%	6.8%	3.9%	0.0%	0.0%	4.9%
>\$40+	2.8%	6.2%	0.8%	6.3%	3.9%	9.7%	1.0%	2.8%	0.7%	2.5%	0.0%	3.9%	0.0%	2.4%
Tot Pay +	52.1%	50.6%	35.6%	53.2%	57.4%	48.4%	32.3%	35.2%	35.1%	48.1%	42.5%	23.4%	24.2%	44.9%

8. Do you believe your community lacks essential telecommunication equipment or ability?

Although towns with cable or DSL service are viewed more positively by their residents than towns without high-speed internet services, the percentage of users who believe that their communities lack essential services is quite high in all communities within the county. Nowhere was the problem worse, however, than in Hoquiam, Aberdeen, Cosmopolis, Oakville, Westport, and Grayland where affordable high-speed options are not available. This negative view is in stark contrast to the lower number of respondents who live outside the county and believe their communities lack essential services.

	Aberdeen	Cosi	Elma	Grayland	Hoquiam	Mc-Cleary	Montesano	Oakville	Ocean Shore	Westport	Other Towns	Out of County	No Zip	Total
Yes	63.9%	63.0%	45.2%	55.7%	69.7%	41.9%	38.6%	62.0%	39.3%	61.1%	43.3%	28.6%	35.5%	54.6%
No	22.9%	29.6%	39.5%	27.8%	17.2%	45.2%	46.5%	19.7%	43.9%	24.1%	36.2%	45.5%	19.4%	30.0%

Representative comments from 167 of the 1,010 users who added written comments to support what they believe is lacking in the community are listed in Appendix E. In the table below, each comment was categorized into what we considered to be its most representative grouping.

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Speed	High-speed Services	Infrastructure	Competition	Phone Options	Other	Total
314	346	226	55	44	25	1010
31.1%	34.2%	22.4	5.4%	4.4%	2.5%	100%

Although each comment was placed into only one group, responders often wrote comments that included several topics (e.g., even though a comment might include Phone Company, ISP Company and Equipment problems, it might be categorized under Phone Company because that seemed the user’s main concern). In addition, the different groups often address similar problems (e.g., Cable, DSL and Speed all involve higher access speed).

9. In your estimation, will your personal or business goals be met in the next 3 years if you do not have access to high-speed bandwidth telecommunication services?

Although users believe that their communities lack telecommunications infrastructure in question 8 above, they are more evenly divided as to whether telecommunications infrastructure will or will not affect their ability to achieve their personal or business goals over the next 3 years. Heavy users of the internet and area businesses indicated that they are less likely to achieve their goals than relatively light users. This is a dangerous trend in a community dependent upon its businesses and highly skilled and professional workers to support the economy.

	Aberdeen	Cosi	Elma	Grayland	Hoquiam	McCleary	Montesano	Oakville	Ocean Shore	Westport	Other Towns	Out of County	No Zip	Total
Yes	34.6%	35.8%	34.9%	38.0%	31.1%	35.5%	46.9%	39.4%	38.9%	38.9%	38.6%	35.1%	21.0%	36.3%
No	35.6%	34.6%	26.8%	31.6%	40.2%	41.9%	23.8%	29.6%	25.6%	33.3%	25.2%	29.9%	16.1%	31.7%

Representative comments from 120 of the 316 users who believed that their goals would not be reached are listed in Appendix F. We organized the comments according to what we determined was the responders primary concern and gathered them below. The Action refers to actions, such as moving, that users suggest. Although fewer written responses were submitted to this question than in Question 8 above, the percentage of replies by category is very similar.

Speed	High-speed services	Infrastructure	Competition	Action	Applications	Other	Total
91	98	71	15	28	2	11	316
28.8%	31.0%	22.5%	4.7%	8.9%	0.6%	3.5%	100%

10. Question 10 was stated in the webpage survey as “If various telecommunication providers and businesses in Grays Harbor County were to hold a Telecommunications Showcase this fall, would you

attend?” The webpage survey received a 72% positive response, or that that they would attend. In the PUD and Wishkah cable survey the question was changed to **“Would you be interested in attending a conference organized to showcase the region’s telecommunications assets and learn more about how they can be utilized?”** This question received a 61% negative response, or that they would not attend. It isn’t clear whether users interpreted the second question as meaning more of a conference than a showcase or whether website users are more likely to attend such an event than those who respond on paper. In any event, there are enough positive replies that a showcase of telecommunication information and area providers is being planned for spring 2003.

11. Would you support the PUD in bringing high-speed fiber directly to your home or business?

This question was added to the survey distributed in the PUD billing. Of internet users, 53% said that they would support the PUD’s involvement and 9% were opposed to it. The positive response was less in communities that already had high-speed options available but was still around 50%.

	Aberdeen	Cosi	Elma	Grayland	Hoquiam	McCleary	Montesano	Oakville	Ocean Shore	Westport	Other Towns	Out of County	No Zip	Total
Yes	58.3%	53.8%	47.7%	57.0%	67.0%	44.1%	43.3%	54.2%	48.6%	53.2%	48.8%	48.1%	27.8%	53.3%
No	7.8%	6.3%	8.7%	5.1%	7.4%	8.8%	10.6%	6.9%	9.3%	7.1%	11.0%	19.5%	14.8%	8.8%

Because this decision affects all residents of the county, the response from non-internet responders who might be less likely to support the PUD’s involvement in telecommunications was factored back in. When this happens, 40% of **all** survey respondents tend to support the PUD’s involvement in bringing high-speed fiber access directly to homes and businesses and 14% are opposed. Although there was no write-in comment space for this question, 150 users added comments of which 21 were highly in favor, 16 were strongly opposed, and the remainder were interested in how much it would cost.

Summary and Conclusions:

This telecommunications survey elicited a strong, representative response from almost 1 in 7 households in all communities within Grays Harbor County. Because the survey was distributed primarily to bill payers, respondents were primarily adults in a broad spectrum of ages. Only McCleary residents, who are serviced by the city’s electric company and did not receive the PUD mailing, were somewhat under-represented in the survey.

Almost 75% of respondents access the internet; a proportion consistent with the general U.S. population. They use the internet for a variety of

applications; chief of which are email and finding information. Almost all users access the internet from their homes and the majority of the users also access it from where they work.

Affordable high-speed internet access is wanted by well over half the users in communities without high-speed access and over a third of the users in communities that have high-speed alternatives available. In written comments, many users asked for more choice of services and options. Almost half said they would pay more than they are currently paying in order to obtain high-speed access. The majority is also willing to support the PUD's involvement in bringing high-speed internet access directly to their homes and businesses if private companies cannot do so.

Affordable, high speed internet access is an essential infrastructure asset within any modern economy. Without it, Grays Harbor County will not be considered attractive to new businesses and unable to retain the businesses that currently support the community. It is a serious problem for the county and requires immediate attention from a coalition of public and private organizations.

Recommendations:

1. A telecommunications showcase should be held in which local suppliers and users answer questions, present products, explain applications, and discuss what Grays Harbor offers because:
 - There is considerable interest and considerable confusion in the telecommunications infrastructure of Grays Harbor County.
 - Technology is advancing so rapidly that it is difficult for those not working with it day-to-day to understand what is available, how it works, how it can benefit people now and what it holds for the future.
2. The findings of this survey should be made available to the general public in order for them to understand the impact of telecommunications infrastructure on the county's economic growth.
3. The information and conclusions provided by this survey should be marketed to high-speed access providers so that they understand:
 - a. the size of the market that exists,
 - b. the importance of these services to the community, and
 - c. the impact of their hesitancy to provide services upon the economic future of Grays Harbor County.
4. The results of this survey should be presented to city, county, state and federal governments in order to enlist their assistance in working with telecommunication providers and their financial support to facilitate infrastructure improvements.
5. The telecommunication coalition should assist the PUD and the private service providers in determining costs and soliciting public support to bring high speed access to Grays Harbor County's homes and businesses.

APPENDIX

**Appendix A: Grays Harbor Telecommunications Committee
Representatives**

- Aberdeen School District #5
- Bramstedt Sales, Inc.
- CELL Center
- CenturyTel
- City of Aberdeen
- City of Cosmopolis
- City of Forks
- City of McCleary
- City of Ocean Shores
- Coast Communications Company
- Dave Johnson Insurance Inc.
- Grays Harbor Chamber of Commerce
- Grays Harbor College
- Grays Harbor Community Hospital
- Grays Harbor Computer
- Grays Harbor Council of Governments
- Grays Harbor County
- Grays Harbor Economic Development Council
- Hoquiam School District
- Infocus
- Ocean Shores Chamber of Commerce
- Office of U.S. Senator Patty Murray
- Olynet Olympic Network
- Port of Grays Harbor
- Public Development Authority
- Public Utility District #1
- Qwest Communications
- Rey Com
- Techline, Inc.
- TechTel, Inc.
- The Daily World
- Timberland Regional Library
- Office of U.S. Representative Norm Dicks
- Westport Shipyard, Inc.
- Weyerhaeuser Company
- Wishkah Cable

Appendix B: Grays Harbor Telecommunications Questionnaire

We need your help! The PUD and the Grays Harbor Economic Development Council need your views on telecommunications in Grays Harbor. Please complete the following survey and mail it with your payment. Your response will help determine planning and investment in the county. If you have already submitted this survey on-line or through Wishkah Cable TV, it is not necessary to resubmit it.

1. Do you use the Internet?

- Yes
- No

2. Where do you access a computer? (check all that apply)

- Home
- Work
- Library
- School
- Friends
- I don't access a computer

3. How do you primarily connect to the Internet? (check all that apply.)

- Dedicated phone line, e.g., T-1, ISDN
- Dial up connection via phone line
- Cable connection
- Wireless
- Other (please specify) _____
- Don't know

4. What connection speed do you ...

HAVE?

- Up to 56 kbps
- Up to 128 kbps
- Up to 512 kbps
- T1 or faster (1.5Mbps)
- Other (please specify) _____

WANT?

- Up to 56 kbps
- Up to 128 kbps
- Up to 512 kbps
- T-1 or faster

5. What telecommunication services would you want that are not currently available in your community? (Please check all that apply.)

- Dedicated phone line, e.g., T-1, ISDN
- Faster connection
- Redundancy
- New technology (DSL/ broadband, satellite, wireless, etc.)
- Other (please specify) _____

6. Please list applications you use Internet connectivity for? (check all that apply)

- E-mail
- Internet searches for information
- Internet browsing, i.e., ICQ, messenger, chat, bulletin boards
- Internet shopping
- News
- Games
- Video conferencing or communication
- Business applications, i.e., B2B, B2C, inventory controls, central sales server

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- Downloading files or graphics for business
- Downloading music or video
- Other (please specify) _____

7. How much do you currently pay for internet services and how much more would you be willing to spend for additional services or higher speed connectivity?

- | Pay Now | Pay Additional |
|---|---|
| <input type="checkbox"/> Nothing | <input type="checkbox"/> Nothing |
| <input type="checkbox"/> Less than \$15/month | <input type="checkbox"/> \$ 5 - \$10/month |
| <input type="checkbox"/> \$15 - \$25/month | <input type="checkbox"/> \$10 - \$20/month |
| <input type="checkbox"/> \$25 - \$40/month | <input type="checkbox"/> \$20 - \$30/month |
| <input type="checkbox"/> \$40 - \$60/month | <input type="checkbox"/> \$30 - \$40/month |
| <input type="checkbox"/> More than \$60/month | <input type="checkbox"/> More than \$40/month |

8. Do you believe your *community* lacks essential telecommunications equipment or ability?

- Yes
 - No
- If yes, describe what you believe is missing. _____
-

9. In your estimation, will your personal or business goals be met in the next 3 years if you do not have access to high-speed bandwidth telecommunication services?

- Yes
 - No
 - Not applicable
- If no, what are your ideas to improve this situation? _____
-

10. Would you be interested in attending a conference organized to showcase the region's telecommunication assets and learn more about how they can be utilized?

- Yes
- No

11. Would you support the PUD in bringing high-speed fiber directly to your home or business?

- Yes
- No
- Do not know

12. In order to properly record your response, what is your Zip Code? _____

Is your PUD billing for a: business? residence?

Note: Your survey will be kept in the strictest confidence. The following is optional:

Name _____ Business _____
Phone _____ E-mail address _____

If you have questions, please contact Michael Tracy @ 360-532-7888 or e-mail at mtracy@ghedc.com

Thank you for participating in this survey. Please return it with your payment.

Grays Harbor Telecommunications Survey

Appendix C: Number Responses by Question and Community

		Aberdeen 98520	Cosi 98526	Elma 98541	Grayland 98547	Hoquiam 98550	McCleary 98557	Montesano 98563	Oakville 98568	Ocean Shores 98569	Westport 98595	Other Town s	Out of County	No Zip	Total
No Comp		174	19	56	36	78	8	62	29	68	32	48	24	336	970
No internet		3	2	2	1	2	3	5	2	7	7	5	4	4	47
Access		906	86	272	81	395	34	310	74	301	169	132	78	65	2905
Total		1083	107	330	118	475	45	377	105	376	208	185	106	405	3922
Households		7590	645	1195	502	3640	555	1565	233	1789	983	na	na	na	26808
1.	Use Net	901	86	269	81	392	34	310	74	297	168	86	77	65	2890
2. Computer Access	Home	841	82	249	77	373	31	296	72	284	160	78	71	61	2716
	Work	505	45	128	29	220	22	166	27	102	70	39	41	32	1445
	Library	109	8	47	9	51	2	38	6	26	22	17	10	4	362
	School	92	5	21	5	55	1	19	5	10	5	4	4	1	231
	Friends	93	4	29	8	42	6	16	2	11	15	4	4	5	243
3. Primary Connection	Lease	142	15	29	8	52	3	45	5	17	23	11	16	9	384
	Dial-Up	815	78	209	71	357	30	250	69	208	144	67	50	51	2439
	Cable	9	2	5	5	6	2	7	0	79	2	5	12	4	142
	Wireless	17	0	1	3	3	1	5	0	1	2	1	0	3	37
4a. Have Connection	<56	625	60	140	48	269	19	182	48	155	106	46	33	31	1789
	<128	58	8	31	5	31	4	29	5	19	10	12	5	5	225
	<512	22	1	16	4	5	1	16	2	50	4	5	6	1	137
	T1	27	4	12	3	8	0	20	0	14	5	4	6	4	109
4b. Want Connection	<56	19	0	11	0	12	0	6	3	14	5	2	4	2	79
	<128	45	2	13	4	27	3	19	5	13	10	3	1	3	151
	<512	109	7	26	11	53	6	29	9	35	21	10	4	1	327
	<T1	293	35	54	19	136	6	64	12	47	39	14	13	6	747
5. Want Unavailable	Lease	180	18	34	10	73	4	35	10	27	30	6	4	3	441
	Faster	469	48	98	37	226	13	113	36	102	78	35	17	20	1308
	Redundant	25	0	7	3	13	0	10	2	11	4	0	1	2	79
	New Tech	499	41	106	45	235	17	110	35	100	93	33	21	22	1378
6. Applications Used	Email	881	83	264	81	382	33	300	72	292	165	82	74	60	2816
	Search	870	82	257	80	379	34	303	74	287	161	81	68	53	2778
	Browse	505	49	136	33	213	12	145	31	119	79	34	26	21	1427
	Purchase	594	55	154	54	272	23	201	41	189	108	43	45	33	1836
	News	500	45	140	47	218	18	159	35	169	95	46	39	32	1568
	Games	331	31	106	20	139	8	91	21	70	51	26	22	21	951
	Conference	98	7	25	9	37	4	25	6	21	17	6	11	7	280
	Applicatnss	146	12	40	12	75	9	47	10	41	22	15	12	8	459
	Down Load	269	25	73	20	114	14	80	24	87	51	24	23	14	833
	Music/Vid	344	22	89	16	146	10	94	14	71	39	24	13	7	903
7a. Now Pay	0	59	5	12	5	22	2	19	2	19	14	9	10	4	185
	<15	60	7	8	9	17	3	28	12	24	13	7	10	8	211
	15-25	663	63	180	57	295	24	206	47	143	120	57	32	31	1944
	25-40	45	7	35	4	30	4	35	9	43	15	5	10	5	255
	40-60	23	1	22	4	13	0	15	1	51	0	6	9	0	148
	60+	14	1	1	0	4	0	2	1	12	2	1	2	1	44
7b. Add Pay	0	196	28	84	20	60	10	120	24	106	48	24	24	11	764
	5-10	174	13	50	19	88	4	48	12	55	29	13	9	7	532
	10-20	120	11	29	10	49	4	22	8	24	21	10	6	5	324
	20-30	97	8	12	5	45	2	15	3	17	14	9	1	3	235
	30-40	59	5	6	3	29	3	11	3	7	11	4	0	0	142
	40+	26	5	2	5	15	3	3	2	2	6	0	4	0	74
8. Comm Lacks	Yes	587	56	124	45	274	15	120	47	116	105	35	22	22	1593
	No	202	24	104	23	68	14	143	14	132	39	36	44	13	857
9. Goals Growth	Yes	310	30	93	30	124	11	145	30	115	64	33	31	14	1044
	No	323	31	73	26	156	15	73	22	79	57	20	27	10	925
10. Show- case	Yes	346	37	81	21	153	12	86	26	88	58	28	6	8	966
	No	503	42	173	49	206	19	204	43	183	97	52	81	26	1686
11. PUD Fiber	Yes	434	43	126	45	207	15	128	39	141	82	38	39	15	1380
	No	58	5	23	4	23	3	31	5	27	11	12	25	8	228
12. PUD Bill	home	662	74	232	76	284	29	270	66	255	138	82	81	23	2288
	bus	55	5	19	7	30	2	17	4	23	11	3	3	2	186

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Appendix D: Percent Responses by Question and Community

		Aberdeen 98520	Cosi 98526	Elma 98541	Grayland 98547	Hoquiam 98550	McCleary 98557	Montesano 98563	Oakville 98568	Ocean Shores 98569	Westport 98595	Other Towns	Out of County	No Zip	Total
No Comp		16.1%	17.8%	17.0%	30.5%	16.4%	17.8%	16.4%	27.6%	18.1%	15.4%	25.9%	22.6%	83.0%	24.7%
No Internet		0.3%	1.9%	0.6%	0.8%	0.4%	6.7%	1.3%	1.9%	1.9%	3.4%	2.7%	3.8%	1.0%	1.2%
Internet		83.7%	80.4%	82.4%	68.6%	83.2%	75.6%	82.2%	70.5%	80.1%	81.3%	71.4%	73.6%	16.0%	74.1%
Households		27.6%	2.7%	8.4%	3.0%	12.1%	1.1%	9.6%	2.7%	9.6%	5.3%	4.7%	2.7%	10.3%	100.0%
Households		7590	645	1195	502	3640	555	1565	233	1789	983	na	na	na	26808
1.	Use Net	82.4%	80.4%	81.3%	68.6%	82.5%	75.6%	82.2%	70.5%	80.0%	81.3%	42.6%	75.5%	16.0%	74.1%
2. Computer Access	Home	93.3%	95.3%	92.6%	95.1%	95.2%	91.2%	95.5%	97.3%	95.6%	95.2%	81.1%	92.2%	93.8%	93.4%
	Work	56.0%	52.3%	47.6%	35.8%	56.1%	64.7%	53.5%	36.5%	34.3%	41.7%	36.0%	53.2%	49.2%	46.3%
	Library	12.1%	9.3%	17.5%	11.1%	13.0%	5.9%	12.3%	8.1%	8.8%	13.1%	20.7%	13.0%	6.2%	10.8%
	School	10.2%	5.8%	7.8%	6.2%	14.0%	2.9%	6.1%	6.8%	3.4%	3.0%	6.1%	5.2%	1.5%	7.8%
	Friends	10.3%	4.7%	10.8%	9.9%	10.7%	17.6%	5.2%	2.7%	3.7%	8.9%	5.6%	5.2%	7.7%	7.5%
3. Primary Connection	Lease	15.8%	17.4%	10.8%	9.9%	13.3%	8.8%	14.5%	6.8%	5.7%	13.7%	14.2%	20.8%	13.8%	0.7%
	Dial-Up	90.5%	90.7%	77.7%	87.7%	91.1%	88.2%	80.6%	93.2%	70.0%	85.7%	74.4%	64.9%	78.5%	81.9%
	Cable	1.0%	2.3%	1.9%	6.2%	1.5%	5.9%	2.3%	0.0%	26.6%	1.2%	5.6%	15.6%	6.2%	4.5%
	Wireless	1.9%	0.0%	0.4%	3.7%	0.8%	2.9%	1.6%	0.0%	0.3%	1.2%	0.8%	0.0%	4.6%	1.2%
4a. Have Connection	<56	69.4%	69.8%	52.0%	59.3%	68.6%	55.9%	58.7%	64.9%	52.2%	63.1%	50.5%	42.9%	47.7%	0.0%
	<128	6.4%	9.3%	11.5%	6.2%	7.9%	11.8%	9.4%	6.8%	6.4%	6.0%	9.8%	6.5%	7.7%	7.4%
	<512	2.4%	1.2%	5.9%	4.9%	1.3%	2.9%	5.2%	2.7%	16.8%	2.4%	4.3%	7.8%	1.5%	4.5%
	T1	3.0%	4.7%	4.5%	3.7%	2.0%	0.0%	6.5%	0.0%	4.7%	3.0%	4.5%	7.8%	6.2%	3.2%
4b. Want Connection	<56	2.1%	0.0%	4.1%	0.0%	3.1%	0.0%	1.9%	4.1%	4.7%	3.0%	2.3%	5.2%	3.1%	0.9%
	<128	5.0%	2.3%	4.8%	4.9%	6.9%	8.8%	6.1%	6.8%	4.4%	6.0%	3.9%	1.3%	4.6%	5.0%
	<512	12.1%	8.1%	9.7%	13.6%	13.5%	17.6%	9.4%	12.2%	11.8%	12.5%	10.4%	5.2%	1.5%	10.8%
	<T1	32.5%	40.7%	20.1%	23.5%	34.7%	17.6%	20.6%	16.2%	15.8%	23.2%	15.9%	16.9%	9.2%	24.9%
5. Want Unavailable	Lease	20.0%	20.9%	12.6%	12.3%	18.6%	11.8%	11.3%	13.5%	9.1%	17.9%	8.3%	5.2%	4.6%	0.0%
	Faster	52.1%	55.8%	36.4%	45.7%	57.7%	38.2%	36.5%	48.6%	34.3%	46.4%	35.1%	22.1%	30.8%	43.6%
	Redundant	2.8%	0.0%	2.6%	3.7%	3.3%	0.0%	3.2%	2.7%	3.7%	2.4%	0.8%	1.3%	3.1%	2.4%
6. Applications Used	New Tech	55.4%	47.7%	39.4%	55.6%	59.9%	50.0%	35.5%	47.3%	33.7%	55.4%	37.3%	27.3%	33.8%	45.5%
	Email	97.8%	96.5%	98.1%	100%	97.4%	97.1%	96.8%	97.3%	98.3%	98.2%	85.5%	96.1%	92.3%	0.0%
	Search	96.6%	95.3%	95.5%	98.8%	96.7%	100.0%	97.7%	100.0%	96.6%	95.8%	86.1%	88.3%	81.5%	90.9%
	Browse	56.0%	57.0%	50.6%	40.7%	54.3%	35.3%	46.8%	41.9%	40.1%	47.0%	37.3%	33.8%	32.3%	47.6%
	Purchase	65.9%	64.0%	57.2%	66.7%	69.4%	67.6%	64.8%	55.4%	63.6%	64.3%	43.6%	58.4%	50.8%	61.2%
	News	55.5%	52.3%	52.0%	58.0%	55.6%	52.9%	51.3%	47.3%	56.9%	56.5%	45.1%	50.6%	49.2%	52.1%
	Games	36.7%	36.0%	39.4%	24.7%	35.5%	23.5%	29.4%	28.4%	23.6%	30.4%	25.5%	28.6%	32.3%	31.9%
	Conference	10.9%	8.1%	9.3%	11.1%	9.4%	11.8%	8.1%	8.1%	7.1%	10.1%	9.8%	14.3%	10.8%	9.2%
	Apps	16.2%	14.0%	14.9%	14.8%	19.1%	26.5%	15.2%	13.5%	13.8%	13.1%	16.4%	15.6%	12.3%	14.6%
	DnLd	29.9%	29.1%	27.1%	24.7%	29.1%	41.2%	25.8%	32.4%	29.3%	30.4%	25.1%	29.9%	21.5%	27.5%
	Music	38.2%	25.6%	33.1%	19.8%	37.2%	29.4%	30.3%	18.9%	23.9%	23.2%	24.0%	16.9%	10.8%	30.1%
7a. Now Pay	0	6.5%	5.8%	4.5%	6.2%	5.6%	5.9%	6.1%	2.7%	6.4%	8.3%	6.1%	13.0%	6.2%	0.2%
	<15	6.7%	8.1%	3.0%	11.1%	4.3%	8.8%	9.0%	16.2%	8.1%	7.7%	8.6%	13.0%	12.3%	7.1%
	15-25	73.6%	73.3%	66.9%	70.4%	75.3%	70.6%	66.5%	63.5%	48.1%	71.4%	56.6%	41.6%	47.7%	65.7%
	25-40	5.0%	8.1%	13.0%	4.9%	7.7%	11.8%	11.3%	12.2%	14.5%	8.9%	9.3%	13.0%	7.7%	8.6%
	40-60	2.6%	1.2%	8.2%	4.9%	3.3%	0.0%	4.8%	1.4%	17.2%	0.0%	3.8%	11.7%	0.0%	5.0%
	60+	1.6%	1.2%	0.4%	0.0%	1.0%	0.0%	0.6%	1.4%	4.0%	1.2%	3.0%	2.6%	1.5%	1.4%
7b. Add Pay	0	21.8%	32.6%	31.2%	24.7%	15.3%	29.4%	38.7%	32.4%	35.7%	28.6%	21.2%	31.2%	16.9%	25.2%
	5-10	19.3%	15.1%	18.6%	23.5%	22.4%	11.8%	15.5%	16.2%	18.5%	17.3%	17.8%	11.7%	10.8%	17.8%
	10-20	13.3%	12.8%	10.8%	12.3%	12.5%	11.8%	7.1%	10.8%	8.1%	12.5%	9.1%	7.8%	7.7%	10.7%
	20-30	10.8%	9.3%	4.5%	6.2%	11.5%	5.9%	4.8%	4.1%	5.7%	8.3%	7.8%	1.3%	4.6%	7.7%
	30-40	6.5%	5.8%	2.2%	3.7%	7.4%	8.8%	3.5%	4.1%	2.4%	6.5%	3.8%	0.0%	0.0%	4.7%
40+	2.9%	5.8%	0.7%	6.2%	3.8%	8.8%	1.0%	2.7%	0.7%	3.6%	0.8%	5.2%	0.0%	2.5%	
8. Comm Lacks	Yes	65.1%	65.1%	46.1%	55.6%	69.9%	44.1%	38.7%	63.5%	39.1%	62.5%	39.9%	28.6%	33.8%	52.5%
	No	22.4%	27.9%	38.7%	28.4%	17.3%	41.2%	46.1%	18.9%	44.4%	23.2%	31.4%	57.1%	20.0%	27.7%
9. Growth	Yes	34.4%	34.9%	34.6%	37.0%	31.6%	32.4%	46.8%	40.5%	38.7%	38.1%	33.5%	40.3%	21.5%	0.0%
	No	35.8%	36.0%	27.1%	32.1%	39.8%	44.1%	23.5%	29.7%	26.6%	33.9%	23.4%	35.1%	15.4%	30.1%
10. Showcase	Yes	38.4%	43.0%	30.1%	25.9%	39.0%	35.3%	27.7%	35.1%	29.6%	34.5%	28.3%	7.8%	12.3%	0.0%
	No	55.8%	48.8%	64.3%	60.5%	52.6%	55.9%	65.8%	58.1%	61.6%	57.7%	53.2%	105.2%	40.0%	55.1%
11. PUD Fiber	Yes	48.2%	50.0%	46.8%	55.6%	52.8%	44.1%	41.3%	52.7%	47.5%	48.8%	46.0%	50.6%	23.1%	0.0%
	No	6.4%	5.8%	8.6%	4.9%	5.9%	8.8%	10.0%	6.8%	9.1%	6.5%	9.4%	32.5%	12.3%	7.2%
12. PUD Bill	home	73.5%	86.0%	86.2%	93.8%	72.4%	85.3%	87.1%	89.2%	85.9%	82.1%	79.8%	105.2%	35.4%	0.0%
	bus	6.1%	5.8%	7.1%	8.6%	7.7%	5.9%	5.5%	5.4%	7.7%	6.5%	6.1%	3.9%	3.1%	5.6%

Appendix E: Question 8 Comments

Q: If you believe your community lacks essential telecommunications equipment or ability, what do you believe is missing?

Speed:

- Aberdeen area has terrible speed - surrounding areas are faster. I can't do work at home due to lack of speed.
- Aberdeen is like being at the end of the earth. If you're not on the I-5 corridor you are so rural nothing is available.
- Aberdeen is the highest population in GH, but we have no DSL or cable
- Ability for everyone in the entire community to have a faster connection
- Ability: where is the ability to connect my home on lower Wishkah to high speed?
- Access to RBOC infrastructure. RBOC's are the reason we do not have true broadband internet access and other incumbent interests.
- Affordable high speed telecommunications. A telecommunications provider that cares about the area.
- Any such equipment that could improve the connectivity speed for the residents of the community
- Areas surrounding Aberdeen/Hoquiam (e.g.. Raymond, the beaches) have a much faster and better system.
- Availability of faster connections other than dial up
- Bad phone lines in east Hoquiam, hard to get connected at a decent speed
- Being able to connect quickly, wait sometimes as long as 1 hour.
- Broadband access. No adequate telecommunications infrastructure
- Broadband to the last mile
- Can only connect at 28 kbps here to phone lines " noise", would like new cable or whatever it takes for high speed (local cable company charges extra to use their cable if you don't have cable TV)
- Central Park-bad phone lines usually no faster than 26k
- Connection speed, digital access lines, community communication center
- Connection speeds significantly better than the phone company's 56k.
- Current connection speeds are way too slow to be of much practical use.
- Decent connection speeds, more reliable access, less down time, less busy signals
- Fast connections, we want to fly on the internet, not live with the dinosaurs
- Fast connection service available to homes, like what is available at library and cell center, etc.
- Faster connection speed for rural areas. Also cell phone service could be much better.
- Faster connection, my connection speed is only 14 kbps. The phone line is the limiting factor
- Faster connections in upper Quinault valley
- Faster internet connections (ex. DSL) and poor cell phone-not enough towers
- Faster internet connections throughout the county, but especially in the Central Park area
- Grays Harbor needs more high speed access
- Hi speed internet, broadband, also poor cell service in spots
- High quality phone lines and high speed access
- High-speed connection DSL or cable connect for residential use
- High-speed connections; we are the Flintstones of the internet era.
- High speed for general public/small business
- High-speed internet access is now almost a necessity-lets look ahead.
- High speed internet connection and choice of cable service
- High speed internet is not available in Aberdeen and Hoquiam, yet 90% of high speed fiber in King Co is dark
- High-speed internet access from home-the technology is in place, but the providers are limited on a variety of levels

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- I get only 28k in Cosi, do I need to say more?!!!
- It seems incomprehensible to me that the Hoquiam/Aberdeen area is the only place that high speed internet access is unavailable. Cable modem access is available in Ocean Shores, DSL is available in the Montesano area and here we sit with nothing better than poor dialup connections in Aberdeen and Hoquiam. I know that the Port of GH is wired for high-speed access and that access is available to any business that wants to expand it out to the area residents. When I moved to Hoquiam from Ocean Shores, both the phone co and cable co said that I was looking at a year before high-speed access would be available. Now, 3 years later, it's looking like it'll be another 5 years before we'll have it here. It seems to me that both city governments are burying their collective heads in the sand by not forcing the issue with the two major communication monopolies here in the area. To compete in today's marketplace, high speed access is a given and new businesses may be forced to locate elsewhere because of that lack
- More efficient and speedy connections would improve communications and business opportunities
- Needs faster access ability
- Old phone lines won't carry faster connection speeds
- Options for faster connection at a reasonable price
- Our lines are very poor, cable internet is constantly slower than advertised and shut s down often.
- Our local telephone company, Qwest, is not supplying any high-speed connections at this time. Other competitors say they can provide this service in Aberdeen, but have not provided information or returned calls
- Quicker access that will allow you to stay connected and download faster
- Slow connection speeds discourage the use of a tool that can provide crucial and timely information. Some method of faster connection is missing in Grays Harbor
- So. Aberdeen, especially where we live, does not even guarantee 56k dial up! My OLD phone line will only allow about 28k at the most! We have cable digital TV-why can't we have internet access the same way?
- Speed and choice of services
- Speed and consistency despite where people live (i.e. West Hoquiam residents receive sub-par connection speeds)
- Speed is horribly slower than where I used to live and it wasn't great there
- Telephone connecting at 26.4 kbps with Earthlink services in Calif. 49 kbps
- The community is lacking the access to faster information gathering
- The area lacks technological access, which is essential. People are choosing not to locate in Aberdeen due to lack of high-speed access.
- We are in the internet dark ages here. Before moving to the Harbor we had in-home ethernet @1.5 mbps
- We don't have any options for faster connections like other counties do unless we want to pay outrageous prices.
- When the best you can do is 28 kbps you are a dinosaur in a in a modern world

Equipment:

- 2nd line without paying so much
- Because we had to go with the more expensive connection with the cable because our phone lines do not support a computer
- Better phone lines, we can connect up to 56k but we never get above 28
- Cleaner signals through improve lines and equipment
- Consistency in equipment and ability
- Ocean Shores is not connected to the main line with fiber
- I can't believe how far behind we are in Internet technology here on the Harbor. We live so close to the hub of technology in Seattle, but fall short of what many of us should expect in these modern times. You see advertisement all the time on television about high speed Internet access. It becomes frustrating when you call and they say, for the past 6 years, there is no high-speed service in your area available, but we'll put you on our list and call you when it becomes a viable option.

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- I know the broadband backbone is here, but we can't connect to it: the last mile is missing
- I live in S Elma-we're lucky to have touch-tone phones. Some people still have party lines
- I live in South Aberdeen. I routinely connect at 12 kbps. I range from a low of 9 kbps to a high of 26.4 kbps. You have something that will improve that? If so, I'll take it.
- I think it's strange that surrounding areas (of less population) have more up-to-date communication methods than Aberdeen and Hoquiam. It doesn't say much for the two towns
- I think that our community is growing fast and that we should have better equipment for our population
- If you don't live in downtown Montesano you cannot get anything besides dial up by phone
- In outlying areas--Central Park, North River, Wishkah....only modem hookup is available
- More available bandwidth- usually takes 3-4 times to connect to local ISP's and that's at 45
- No broadband, little competition among carriers, poor infrastructure, shortage of phone lines in many areas
- Ocean Shores has primitive telephone lines
- Phone and cable companies are not willing to invest equipment in this area to upgrade available technology
- Phone lines are not up to date, need cable hook ups for speed.
- Phone lines need upgraded, internet will only connect at 32 kbps because of phone lines
- The last mile, connections to homes and businesses. You have fiber optic lines to BPA substations now...do something with it. Qwest will never do anything for faster service.
- They tell us our phone lines are to enable us to have faster internet. We never get better than 33 kbps.
- This area has always lagged behind in any innovations and equipment
- Up-to-date last mile connections, adequate central switching vis-a-vis geographic coverage
- W. Hoquiam phone lines are out of date- slowest in area.
- We are behind the times in our phone system here in Aberdeen. Everyone should have access to fiber optics
- We live in Oakville so location is the primary problem or the reason we can't get better internet service.
- We need better connections to the rest of the world because we are so isolated
- We need to move into the 21st century. We are so far behind in our telecommunications
- We need updated telecommunications to keep up with current technology.
- We use wireless at this time because we have no phone service for basic internet
- Westport has limited options for telecommunications
- What is essential. I know we are not caught up with the rest of the world.
- When I can only connect at 24,000 that is lacking for today's world.
- Without a modern telecommunications infrastructure we are limiting ourselves as to the types of business that will locate here and are not allowing for telecommuting

Phone Companies and Internet Service Providers

- A decent phone company that cares
- A reliable, affordable and experienced provider
- AT&T does not reach local Ocean Shores, limits internet access at Ocean Shores area
- Competition that lowers prices and improves service (Tacoma model)
- Competitive prices offered by several providers
- Harbor is always last to get new services from phone company, cable etc. Wishkah valley is even worse.
- I believe the choices offered are not acceptable, Qwest and AT&T have refused to offer broadband to our area.
- In Ocean Shores we have internet cable access but it is too expensive to hook up to - \$80/mo
- I believe the personal touch and I care is missing (everyone here wants money)
- Lack of competition between ISPs and telephone cos. Not much available to compete

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- More options, I do understand some things are available, but a huge cost.
- No cable internet, pathetic lack of interest from Verizon
- Oakville is not worth the \$ for Qwest to improve service i.e. we can not have voice mail
- Qwest should deliver what it promises; our telephone system needs to be scrapped and replaced, as in brought into at least the late 20th century. Or, the ATT folks could bring broadband Internet over the TV cable to the Harbor as it has in most other places
- The support of the telecommunications companies (Qwest, AT&T Broadband)
- We have broadband access, but it's \$50/month per computer. Rates have to become cheap to get me on the internet. We already pay for telephone & cable-internet access should be free if one subscribes to telephone and cable.
- We should have more local access companies with state of the art technology to choose from. We have rural, slow telecommunications.
- We have fiber optics to Aberdeen but Qwest will not make it available!
- We have no access to high speed internet. Neither Verizon nor ATT Broadband has any plan to bring these services to the Westport Grayland area. Just across the Elk River bridge in Ocosta, Century Tel provides DSL. Why can't Verizon?
- We lack people with brains or foresight for essential telecommunications
- When living in Aberdeen I was unable to have a 2nd computer line because I was told there was not enough cable access to provide two lines

Services: Cable, DSL, etc.

- Adequate phone lines and or cost effective cable
- All internet access must be done via dial-up modem. We need DSL or T1
- Appropriate cable-Tahola has fiber optic. satellite
- Better phone lines and internet and cable access to Oakville
- Cable like ocean shores, Elma and most of I-5 - Need speed
- Cable TV line down highway 12 between Oakville and Elma
- I wanted to use cable internet but it is not available in our small market.
- Low cost, high-speed access in Aberdeen. Additional options (cable) would be good
- No cable or DSL to Westport, Grayland area.
- The required infrastructure for certain types of broadband i.e. cable
- We have DSL but no cable connection to the internet
- Affordable broadband to homes and small businesses in Aberdeen/Hoquiam. It's pathetic that you can get affordable DSL in Humptulips but not Aberdeen and Hoquiam
- Decent phone lines and DSL capabilities for the whole county
- Digital technology that would allow for DSL, broadband connections
- DSL is missing. We shouldn't be limited to the internet and have to pay outrageous pricing for low end technology
- DSL access to residential areas. This is the only area in that State of Washington that has neither DSL nor Cable Internet access for non-businesses
- DSL and upgraded services that are available to everyone
- DSL at all business and residences in GHC; T1, ISDN, fiber available to all that request this service. This county is an embarrassment & joke when it comes to connectivity
- DSL capable switches, digital cable infrastructure for data transfer
- DSL for sure and no fiber to the downtown business area and out tot he industrial airport area
- DSL is not available at our location in Aberdeen. Something should change
- DSL is not available in some areas, in Montesano you can connect for around \$40 and in Aberdeen around \$80
- DSL or Cable modem existing phone lines will not support 28.8 kbps connection or more
- DSL or other broadband should be available to most everyone - it is not at this time
- DSL to central park not available, cable modem to Aberdeen, fiber to homes. ATT service for TV and not for internet in inexcusable.

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- DSL, new phone lines for faster connection on dial-up for those unable to afford DSL
- DSL, clear phone lines, reliable redundant telecommunications facilities
- DSL/cable internet access in rural areas
- Emphatically! At least new phone lines for 56k, it really needs cable or DSL
- Extending DSL out all roads where there is power
- Fiber optic lines, all surrounding areas on the harbor have DSL except Aberdeen and Cosi.
- If wishkah can have DSL why can't Aberdeen, hoquiam, etc.
- Like we are at the end of the world, can't get cable, DSL access, nothing except dialup
- More options for DSL, satellite, wireless (I live in Lake Quinault)
- No broadband, not much if any DSL or ISDN, no competition for what's there
- No DSL in Aberdeen, due to Qwest/AT&T, its pretty bad when surrounding areas like Tahola, Ocean Shores & Montesano can get DSL or cable internet connections.
- No DSL outside of Aberdeen/Hoq/Cosi city limits, spotty cellular service
- No DSL/ Phone lines to Westport and Grayland need upgraded.
- Phone lines capable of high speed internet connection such as DSL
- Porter needs DSL
- Qwest doesn't offer DSL
- Readily available, non-wireless DSL. East county and beaches have it,-we should
- This is worst location for internet connectivity. Poor satellite access; no DSL; no choice but slow modem
- Very limited options, no cable, no DSL, hard to get additional phone lines
- We are one of the few places in the area without DSL capability. Verizon has indicated they may never provide any high speed service in Westport
- We need DSL- this would open up our community to bring in hi-tech jobs that would bolster our job market and make it more desirable for our children to have a future here and want to stay.
- Wider DSL connection, redundancy, internet competition in DSL

Appendix F: Question 9 Comments

Q: If your goals will not be met, what are your ideas to improve the situation?

Speed Concerns:

- I cannot even download files for the classes I teach at the college from home because it would take too long with my internet speed
- Internet business at 56 kbps is not an option
- Better phone lines....faster internet service...MUCH better Customer Service from phone service company
- Can not download education and business due to speed and being knocked off all the time.
- Competitive high speed access via cable, satellite, phone lines or fiber optics
- Faster connections to save time spent on downloads and to increase overall satisfaction
- Faster internet access, but not so expensive as my \$90/month satellite access.
- Get faster service in Westport. If not I will probably conduct more of my business in Olympia and thus shop more in Olympia. We have fiber optic cable, let's put it to use.
- Get high-speed services ASAP and stop living in the old decade. Every major metro city has high speed and doesn't have to pay a higher price for it either. The problem with Grays Harbor is that it has poor technology capability
- Higher speed internet connections is becoming more and more important for social interaction. I maintain contact with most of my family throughout the country via email, but I can only videoconference with one other family member at a time due the low throughput of my ISDN connection. If my employer didn't pay for my ISDN I would be stuck with dialup and unable to video/VOIP at all
- High-speed access. I could work from home one day per week if this were available
- I can not do the things I want to because my dial up is too slow
- I can see much more need for higher speed connectivity each year
- I do GIS work via a server, I need transmission speed
- I feel that high-speed internet access will be essential in the coming years for the transmission of ideas and information. If Grays Harbor doesn't have it, the communities will suffer.
- I need faster service. I would like to teach online college courses but it is almost impossible now because we have such slow service. I have taken an online college course and had trouble accessing Chat rooms and such with the slow internet service we have available now
- I telecommute to work in Seattle and a faster connection.
- More and more people, trying to get on-line, too slow hookup speed now. Need change, NOW!!!
- Move to an area that has what I need; that is how bad I want a faster connection.
- So far the DSL is working fine for us but can see the need for more reliable and faster connection speeds in future as we become more dependent on the internet
- Somehow make it available to all GH residents, encourage providers to invest in necessary infrastructure to provide high-speed connection.
- There are a lot of times I give up on using the internet because of the speed of the phone lines
- We need connection speed to share info between our Aberdeen shop and Seattle Shop

Infrastructure Changes:

- Only use the internet when I am not in a hurry or frustrated, you will get disconnected at very inopportune times.
- More phone lines dedicated to the Aberdeen area. Very unhappy with choices for the Harbor. A relative uses TSS out of Olympia and the services have gone down hill, I feel that Techline isn't much better from what I have heard from other users. I work for the Aberdeen School District and their system for accessing the internet is wonderful. However we are limited to using it for school

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business and during school hours only. For the general public the telecommunications are poor especially for the prices they have to pay. Lots of hidden costs and crummy service! Give state agencies and schools a great deal. In hard times the first things to be cut from the budget seem to be technology. Especially with DSHS. WE NEED VIDEO CONFERENCING ABILITIES TO BE ABLE TO KEEP UP!!!!!!!

- Newer phone lines at the minimum to allow faster dial up so I can connect faster, do my work faster, and stay connected instead of being bumped off constantly. As is, I waste valuable time trying to connect and do my work
- Where is the fiber optics, we have the technology yet we are still stuck in backwaters.
- Would access to better services attract new businesses? I hope so.
- Broadband of some sort in Aberdeen/Hoquiam - DSL, Cable, etc
- Get the lines down here to make broadband accessible- SOON!!!
- Reduce cost of cable service or increase telephone band width-24k in Ocean Shores
- Ephrata, WA has every home and business connected to high speed systems via grant county PUD. We should too.
- All businesses will rely on the ability to transfer larger amounts of data electronically to be efficient and stay competitive on many different levels
- ALL new websites on the internet "assume" that people have large bandwidths. In the Westport Grayland area, Verizon has stated that we may never get high speed access because they feel that it's not "economically feasible" for them to bring it to our area
- As technology grows and expectations rise as to what can be accomplished, the same tasks for communication that we want now in our area needs to keep pace
- Can't keep up with changing times, games, downloading, video conferencing
- Elect politicians that recognize the importance of this.
- Everything I want to do later on deals with computers and the internet
- Federal project to install nationwide, like the freeway system
- First, we would need a real leadership in the political arena - politicians elected in a real competitive, two-party environment (This will never happen, of course.) Then we need tax exemptions for new high-tech businesses. The growth of technology is being stunted in Grays Harbor by the same forces that hold us back otherwise: fanatical loyalty to industries that are passing away and unopposed elections which promote a group of leaders who look down on us peasants. The perfect illustration of what is wrong with the Harbor was shown by what happened when the Cable TV company wanted to remove MTV; there were protests and the company couldn't cave fast enough. Meanwhile, the few viewers who wanted the Sci-Fi channel in Aberdeen had to wait until they felt like providing it to us
- Grays Harbor must move rapidly to participate in telecommunication activities both for attracting/holding business and private use.
- Have Qwest sell out Aber/Hoq lines to CenturyTel or a third party for creating better access.
- How can it? I feel so behind the curve with the current standard of dial up service that before we know it, computer companies will stop offering modems. Then we'll be forced to bring DSL or any other high-speed access at an even greater cost. I have considered buying the Satellite service, but it is costly and it has me on the shelf as far as making a big commitment in making such a purchase. But I've had plenty of time to think about it and save a little and have grow closer to making the decision to buy for the sake of high speed access and what it offers. I did the same with AT&T digital cable. I thought about their service and concluded that they were no deal and the competition had much more to offer, price and service. Needless to say I've gone to Satellite for my television viewing and I'm probably going to satellite for my Internet purposes
- I plan on starting a web design business and with my current connection it would cause major problems in the uploading of information
- I believe more job opportunities would be available if we had better telecommunication service
- I work for SafeHarbor, and we are highly dependent on connectivity that is competitive with our business peers/vendors/customers
- New residences to the community will look elsewhere for homes in areas that are more internet friendly.

Grays Harbor Telecommunications Survey

- Other areas have high speed phone connections that are not now available in Aberdeen
- PUD should become a service provider to help increase variety of services offered and end monopoly provider.
- Thanks to coast communications we have high speed before everywhere else in the county
- The closest high speed internet service is in Monte. It's not available in Aberdeen
- The govt. subsidizes railroads, highways. Let the govt. subsidize broadband infrastructure
- Upgrades for us on the south beach. We're on the wrong side of the digital divide
- We will receive more and more requests for internet based services and information that we won't be able to meet
- Will be outdated and slow to complete any working ability if not brought up to speed.
- Would be unable to keep up with competition
- Infrastructure that makes high speed access available

Proposed Actions:

- A group of organizations, businesses need to come together to share the cost of this common goal that would benefit all
- I am moving in 2003
- I believe that we must keep up with the times or we will always be behind. Must keep connections available to ensure reliability.
- I may have to move.
- In order to continue to learn the skills needed for my job I must have access to better internet connections. I'm not going to waste my time waiting for the phone and cable monopolies
- Insurance Cos. are mandating internet billing. My staff spends a lot of time waiting for transmissions
- Move to a location that has the services that I need
- Move to an area that has what I need
- Move to offer high speed access, figure out a way to bypass stonewalling by Qwest
- Move to Seattle
- Moving to an area that has more options
- My business is growing and is very dependent on good fast reliable internet service. If I can't get this over the next year or so I may need to move my business someplace other than here
- Need to move Aberdeen/Hoquiam areas into the leadership role of technology
- Somebody needs to bring us into the new millennium
- Someone needs to address rural needs, check out rural in Alaska
- Upgrade the systems as much as possible. Educate the public to what is available, giving them the vision for possibilities in our community.
- We're considering and probably will move away for we see no real prospect of change. Current cable monopoly in OS is too expensive and inflexible
- Will move in all probability
- Work with telephone company to improve phone infrastructure

Faster Alternatives:

- Will go to satellite if I can't get service any other way
- I have seriously considered investing in 2-way satellite ground station
- Looking into satellite connection
- Bring DSL to McCleary, yes it is already here but full.
- DSL everywhere & T1, ISDN high speed availability to any home or business if requested
- DSL is essential for my business to survive
- DSL or cable broadband something better than 54k and a service that I can get on and not get a busy signal for 45 minutes

Grays Harbor Telecommunications Survey

- DSL or cable connections in Grayland would be fantastic
- DSL or other broadband should be available to most everyone - and it should be affordable
- Get DSL at cost effective price
- Get reasonable DSL priced plans in this area
- Get us DSL on south shore rd, all of south shore road
- High speed access via DSL, cable modem, or any other available technology
- Is there any way possible to even have DSL? T-1 or ISDN?
- Need cable/ DSL to access Aberdeen business application from Westport
- Need to update phone lines and make DSL available
- The schools have DSL. I live 2 blocks away. There is no reason at all it can't be expanded to everyone
- We need connectivity to internet, put fiber optic on poles; get DSL to everyone.
- We need the current technologies that are available to all other communities except Aberdeen, Hoquiam and Cosmopolis (DSL)
- Appropriate cable-Tahola has fiber optic. satellite
- As a minimum, provide data access via TV cable in this area
- Force the cable co to bring in cable access that was promised as long ago as 1995, bring in DSL as every place around us has
- Internet service through the cable, DSL (at a price the average single female can afford), fiber-optic cable. Having up-to-date communication equipment such as computers without the needed services is like having a car and no gas
- Must have reliable always on, high speed internet access through broadband cable
- Provide high speed telecomm and cable like Tacoma city light does
- We need to have internet service added to our digital cable service.

Competition and Choice:

- Have no choices, there is very little within my control.
- Replace Qwest with a new telecom provider
- Replace Qwest with a responsive responsible provider.
- We need more competition in order to provide better service and cost effectiveness
- More choices in telecommunication services
- Improve the options available
- More options on connecting to the internet via high speed
- Alternative access to bandwidth/speed for applications such as videoconferencing