

**State Route 96 Broadband Project  
Orleans and Other Area Information**

**Part 1**



**Figure 1—Orleans from Redcap Road**

February 22, 2010

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**State Route 96 Broadband Project  
Orleans and Other Area Information**

*Table of Contents*

Overview.....	7
Purpose of this report.....	7
Use of the report findings .....	7
Information sources.....	7
Meet Orleans .....	8
Demographics:.....	9
Selected social characteristics for Humboldt County .....	9
Census 2000 Demographic Profile Highlights for 95556:.....	9
More detail on social characteristics for zip code 95556.....	10
Employment Status and Industry Sectors for 95556.....	13
Retired persons for 95556.....	15
Population statistics by census block .....	16
Health care .....	17
Public Safety.....	18
Transportation.....	18
Government .....	19
Education and workforce development .....	19
Infrastructure—Airports .....	20
Information helpful to determining potential demand for broadband services. ....	20
Residences/Households.....	20
Potential Anchor Tenants (all sizes) .....	21
Orleans Businesses .....	22
Additional Orleans Businesses.....	24
Weitchpec to Johnsons businesses.....	26
Weitchpec Johnsons other entities.....	26
Orleans Community Computer Center/Panamniik Library .....	26
Other information valuable for profiling a community or area.....	28
School Computer and Internet Access Statistics – Humboldt County .....	29
Orleans Broadband Survey .....	30
1a. Are you interested in getting broadband at your Home? .....	30
1b. Are you interested in getting broadband at your Business? .....	31
2a. Is Home internet access available? .....	32
2b. Is Business internet access available? .....	33
3a. Do you already have Home internet? .....	34
3b. Do you already have Business internet?.....	34
4a. How important is having Home access to the internet? .....	35
4b. How important is having Business access to the internet? .....	36
5a. How important is having high-speed Home access to the internet? .....	37
5b. How important is having high-speed Business access to the internet? .....	38
6a. What kind of Home internet service do you currently have? .....	39
6b. What kind of Business internet service do you currently have? .....	40
7a. What do you use the Home internet for (or, how would you like to use it)? .....	41
7b. What do you use the Business internet for (or, how would you like to use it)? .....	42

8a.	Do you have any of the following issues with your current Home internet service? ..	43
8a(1)	How much is Home internet? .....	44
8b.	Do you have any of the following issues with your current Business internet service?	
	45	
8b(1)	How much is Business internet? .....	46
9a.	Do you have more than one Home telephone line? .....	47
9b.	Do you have more than one Business telephone line? .....	47
10a.	Which Home telecommunications services are you most interested in? .....	48
10b.	Which Business telecommunications services are you most interested in? .....	49
11a.	How much would you be willing to pay for these Home services? .....	50
11b.	How much would you be willing to pay for these Business services? .....	51
12.	What other changes do you want to see for our community? .....	52
	Survey respondents: .....	53
	Tribal Vision Statements .....	57
	Karuk Tribe vision statement .....	57
	Yurok Tribe vision statement .....	57
	Maps and Aerial Photos .....	58
	Potential Routes for 96, 299 & 101 .....	58
	Orleans Area Aerial Photos and Maps .....	59
	Orleans Terrain Profiles .....	61
	Yurok Tribal Land Maps .....	76
	Infrastructure Considerations .....	93
	Route investment .....	93
	Estimated revenues .....	94
	Notes from field observations: .....	95
	Options .....	97
	Orleans Issues: .....	97
	Karuk Tribe plans for Orleans .....	99
	SR 96 Data from Redwood Coast Connect (RCC) Report .....	101
	Unserved and Underserved Communities Prioritized by Demand, Supply and Revenues (Humboldt County) .....	101
	Redwood Coast Served/Unserved Communities .....	102
	3.5 Humboldt County Supply/Demand Summary .....	103
	Aggregated Demand in Underserved Communities .....	103
	Estimated Market Revenues and Buildout Costs in Underserved Communities .....	104
	Differences between the CBTF maps and the RCC maps .....	104
	Community Service Districts (CSDs) and SB1191 .....	105
	California Advanced Service Fund (CASF) Possibilities .....	105
	6. Highway 96 Scenario Capital and Revenue .....	106
	Appendix I. Presentations Given about Redwood Coast Connect .....	107
	Redwood Coast schools .....	108
	Appendix II. Rural Health Survey Map .....	109
	Appendix VII. Humboldt Town-by-Town Analysis .....	110
	Wireline Broadband Availability .....	112

## *List of Tables*

Table 1—Residences/Households .....	20
Table 2—Potential Anchor Tenants All sizes .....	21
Table 3—Orleans Businesses .....	24
Table 4—Other Orleans Entities .....	25
Table 5—Weitchpec Other Entities .....	26
Table 6—Other information valuable for profiling a community or area .....	28
Table 7—Karuk Tribal Household Query .....	29
Table 8—Are you interested in getting broadband at Home? .....	30
Table 9—Are you interested in getting broadband at your Business? .....	31
Table 10—Is Home internet access available? .....	32
Table 11—Is Business internet access available? .....	33
Table 12—Do you already have Home internet? .....	34
Table 13—Do you already have Business internet? .....	34
Table 14—How important is having Home access to the internet? .....	35
Table 15—How important is having Business access to the internet? .....	36
Table 16—How important is having high-speed Home access to the internet? .....	37
Table 17—How important is having high-speed Business access to the internet? .....	38
Table 18—What kind of Home internet service do you currently have? .....	39
Table 19—What kind of Business internet service do you currently have? .....	40
Table 20—What do you use the Home internet for (or, how would you like to use it)? .....	41
Table 21—What do you use the Business internet for (or, how would you like to use it)? .....	42
Table 22—Do you have any of the following issues with your current Home internet service? ..	43
Table 23—How much is Home internet? .....	44
Table 24—Do you have any of the following issues with your current Business internet service? .....	45
Table 25—How much is Business internet? .....	46
Table 26—Do you have more than one Home telephone line? .....	47
Table 27—Do you have more than one Business telephone line? .....	47
Table 28—Which Home telecommunications services are you most interested in? .....	48
Table 29—Which Business telecommunications services are you most interested in .....	49
Table 30—How much would you be willing to pay for these Home services? .....	50
Table 31—How much would you be willing to pay for these Business services? .....	51
Table 32—What other changes do you want to see for our community? .....	52
Table 33—SR 96 Fiber Segments.....	93
Table 34—SR 196 Segments.....	93
Table 35—All Telephony Outages Alarms at Orleans Medical Clinic - 2009.....	98
Table 36—Unserved and Underserved Communities Prioritized by Demand, Supply and Revenues (Humboldt County).....	101
Table 37—Potential Anchor Tenants.....	101
Table 38—Redwood Coast Served/Unserved Communities.....	102
Table 39—Humboldt Broadband Supply and Demand by Town.....	102
Table 40—Aggregated Demand in Underserved Communities .....	103
Table 41—Estimated Market Revenues and Buildout Costs in Underserved Communities .....	104
Table 42—Differences between the CBTF maps and the RCC maps .....	105
Table 43—California Advanced Service Fund (CASF) Possibilities .....	105
Table 44—CASF website postings by zip code for SR 96 .....	105
Table 45—Highway 96 Scenario Capital and Revenue .....	107
Table 46—Presentations Given about Redwood Coast Connect .....	107
Table 47—Redwood Coast Schools.....	108
Table 48—Rural Health Survey Map.....	109
Table 49—Wireline Broadband Availability.....	112

## *List of Maps*

Map 1—Relationship of Projects for SR 96 to SR 299 and SR 101 .....	58
Map 2—Orleans Aerial Photo.....	59
Map 3—Orleans Topographical Map.....	59
Map 4—Orleans Aerial Photo Showing Detail to the West of Town.....	60
Map 5—Orleans Aerial Photo Showing Detail East of Town.....	60
Map 6—Orleans Detail Showing Housing Directly South Across River .....	61
Map 7—Profile 1 .....	62
Map 8—Profile 2 .....	63
Map 9—Profile 3 .....	64
Map 10—Profile 4 .....	65
Map 11—Profile 5 .....	66
Map 12—Profile 6 .....	67
Map 13—Profile 7 .....	68
Map 14—Profile 8 .....	69
Map 15—Profile 9 .....	70
Map 16—Profile 10 .....	71
Map 17—Profile 11 .....	72
Map 18—Profile 12 .....	73
Map 19—Profile 13 .....	74
Map 20—Profile 14 .....	75
Map 21—Yurok Ancestral Territory .....	76
Map 22—Yurok Tribal Census Tract .....	77
Map 23—Weitchpec to Johnsons.....	78
Map 24—Weitchpec to Johnsons Aerial Photo.....	79
Map 25—Weitchpec Aerial Photo.....	80
Map 26—Weitchpec Detail Topological Map .....	80
Map 27—Johnsons Aerial Photo.....	81
Map 28—Johnsons Topological Map .....	81
Map 29—Yurok Tribal Areas .....	82
Map 30—Requa Area .....	83
Map 31—Klamath Gen Area .....	84
Map 32—Ah Pa Area .....	85
Map 33—Blue Creek Area .....	86
Map 34—Johnsons Area.....	87
Map 35—Sregon Area .....	88
Map 36—Cappell Area.....	89
Map 37—Tully Creek Area .....	90
Map 38—Martins Ferry Area .....	91
Map 39—Weitchpec Area .....	92
Map 40—Orleans to End of SiskiyouTel fiber .....	95

## *Table of Figures*

Figure 1—Orleans from Redcap Road .....	1
Figure 2—Vineyard in Orleans.....	8
Figure 3—Orleans Community Computer Center/Panámniiik Library.....	26
Figure 4—Interior View of Panámniik Community Computer Center .....	27
Figure 5—Karuk Language Lesson in Panámniik Community Computer Center .....	27
Figure 6—Are you interested in getting broadband at Home? .....	30
Figure 7—Are you interested in getting broadband at your Business? .....	31
Figure 8—Is Home internet access available? .....	32
Figure 9—Is Business internet access available? .....	33
Figure 10—Do you already have Home internet?.....	34
Figure 11—Do you already have Business internet?.....	34
Figure 12—How important is having Home access to the internet?.....	35
Figure 13—How important is having Business access to the internet?.....	36
Figure 14—How important is having high-speed Home access to the internet? .....	37
Figure 15—How important is having high-speed Business access to the internet? .....	38
Figure 16—What kind of Home internet service do you currently have? .....	39
Figure 17—What kind of Business internet service do you currently have?.....	40
Figure 18—What do you use the Home internet for (or, how would you like to use it)? .....	41
Figure 19—What do you use the Business internet for (or, how would you like to use it)? .....	42
Figure 20—Do you have any of the following issues with your current Home internet service? .....	43
Figure 21—How much is Home internet? .....	44
Figure 22—Do you have any of the following issues with your current Business internet service? .....	45
Figure 23—How much is Business internet? .....	46
Figure 24—Do you have more than one Home telephone line? .....	47
Figure 25—Do you have more than one Business telephone line? .....	47
Figure 26—Which Home telecommunications services are you most interested in? .....	48
Figure 27—Which Business telecommunications services are you most interested in? .....	49
Figure 28—How much would you be willing to pay for these Home services? .....	50
Figure 29—How much would you be willing to pay for these Business services?.....	51
Figure 30—What other changes do you want to see for our community? .....	52
Figure 45—End of SiskiyouTel fiber on Ishi Pishi Road.....	96
Figure 46—Verizon fiber from Hoopa Area to Weitchpec Clinic/Yurok Headquarters .....	96

## **State Route 96 Broadband Project Orleans and Other Area Information**

### **Overview**

#### Purpose of this report

This report contains a variety of data gathered from the communities. It also contains pertinent selections from the RCC report.

The Redwood Coast Connect (RCC) project and report<sup>1</sup> presented a great deal of valuable regional information. With the passage of time since completion of the RCC report, and on gathering additional information, we saw the opportunity to strengthen the RCC findings in light of the potential for obtaining broadband stimulus dollars available under the American Recovery and Reinvestment Act of 2009.

#### Use of the report findings

The information presented in this report will provide the necessary data to inform and produce a stronger demand (revenue) profile for the communities on State Route 96, especially for Orleans, CA. It also contains field observations that will be useful to investors and network designers.

#### Information sources

Data in the report was sourced from a number of contributors and other resources, including:

- Paul Reike, Yurok Tribe Grant Writer. Yurok maps provided by Paul Reike.
- Adrienne Harling, Competitive Intelligence Research Specialist, HSU Office for Economic and Community Development
- Bari Talley, Student Services Coordinator, Community Computer Center/Panamnik Library, Orleans, CA.
- Additional data sources are referenced in the text.
- All other maps and field observations, such as waypoint locates, provided by John Irwin.
- Map sources include Google Map and DeLorme Topo.

Data is often dated (2000 census or earlier) or just not available for some topics of interest:

- Current tribal demographic data
- Minority- and Women-Owned Businesses
- Personal income and earnings by industry sector
- Reliability of power
- Number of certified EMTs
- Number of fire fighters by entity type (i.e., volunteers, Forestry, etc.)
- What is impact of high water to residents? How many potentially impacted?

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<sup>1</sup> <http://redwoodcoastconnect.humboldt.edu/>

*Revised: February 22, 2010*

## Meet Orleans

The community of Orleans is extremely rural and isolated. It is considered a “frontier” with fewer than 7 persons per square mile. From Orleans, the nearest towns with more than 5,000 people are at least two hours away in Yreka—128 miles northeast—and Arcata /Eureka—80 miles southwest, where the nearest hospital is located. For many, the cost of a car and fuel is prohibitive; and public transportation is not an option. Adding to the challenges of distance alone, the winding two-lane highway that connects us to outlying communities is subject to winter closures due to mudslides, rockslides, ice, snow, and flooding, as well as summer closures due to forest fires and smoke. Moreover, Orleans' telecommunications infrastructure is at best under-developed, and power outages are a frequent occurrence. Furthermore, Orleans currently has no cell phone service available, and dial-up internet service is the only option for most Orleans residents. Broadband currently is unavailable.



The mid-Klamath region is complex in both natural and cultural history. The steep rugged slopes that make up the surrounding mountains present a complex geological history and represent one of the richest botanical areas in North America. Prior to European contact, Orleans served as important village site (known as "Panamniik") for the Karuk Tribe. By the middle of the 19th century, the discovery of gold and other minerals brought a great influx of miners to the area. This proved to be the first of several "boom to bust" economies, and by 1930 most of the miners were gone.

Soon after the decline of mining, the area gained recognition as a great sport fishing (salmon and steelhead) destination. After World War II, the timber boom started, lasting well into the 1980s, after which a recession and environmental concerns greatly reduced the timber harvests. By the mid-1990s, changes in federal policy resulted in a near shutdown of all timber harvesting in the area. The emerging economy consists of organic farmers, cottage industries and tourism on public lands.



**Figure 2—Vineyard in Orleans<sup>2</sup>**

Like many rural communities, Orleans is experiencing the difficult process of transition from an economy dependent on natural resource extraction industries to a more diverse economic base. Among the challenges of this economic transition there is a desire to maintain the quality and natural beauty of the rural lifestyle.

<sup>2</sup> Original of this photo is 196" x 38" and is 17.3 Mb  
*Revised: February 22, 2010*



## Demographics:

### Selected social characteristics for Humboldt County

Available data is countywide and does not provide details for the area of eastern Humboldt

County being profiled (see [http://factfinder.census.gov/servlet/ADPTable?\\_bm=y&-geo\\_id=05000US06023&-context=adp&-ds\\_name=ACS\\_2007\\_3YR\\_G00\\_-&-tree\\_id=3307&-lang=en&-caller=geoselect&-format=](http://factfinder.census.gov/servlet/ADPTable?_bm=y&-geo_id=05000US06023&-context=adp&-ds_name=ACS_2007_3YR_G00_-&-tree_id=3307&-lang=en&-caller=geoselect&-format=))

### Census 2000 Demographic Profile Highlights for 95556:

Most specific Census data is a community fact sheet by zip code such as this one for Orleans.

Data from 2005-2007 is not available at the zip code scale for 95556, so this is Census 2000 data:

<b>General Characteristics &gt;&gt;</b>	<b>Number</b>	<b>Percent</b>	<b>U.S.</b>
Total population	569		
Male	279	49.0	49.1%
Female	290	51.0	50.9%
Median age (years)	39.3	(X)	35.3
Under 5 years	39	6.9	6.8%
18 years and over	410	72.1	74.3%
65 years and over	73	12.8	12.4%
One race	534	93.8	97.6%
White	359	63.1	75.1%
Black or African American	1	0.2	12.3%
American Indian and Alaska Native	165	29.0	0.9%
Asian	3	0.5	3.6%
Native Hawaiian and Other Pacific Islander	0	0.0	0.1%
Some other race	6	1.1	5.5%
Two or more races	35	6.2	2.4%
Hispanic or Latino (of any race)	20	3.5	12.5%
Household population	569	100.0	97.2%
Group quarters population	0	0.0	2.8%
Average household size	2.52	(X)	2.59
Average family size	3.08	(X)	3.14
Total housing units	308		
Occupied housing units	226	73.4	91.0%
Owner-occupied housing units	145	64.2	66.2%
Renter-occupied housing units	81	35.8	33.8%
Vacant housing units	82	26.6	9.0%
<b>Social Characteristics &gt;&gt;</b>	<b>Number</b>	<b>Percent</b>	<b>U.S.</b>
Population 25 years and over	364		
High school graduate or higher	313	86.0	80.4%
Bachelor's degree or higher	84	23.1	24.4%
Civilian veterans (civilian population 18 years and over)	48	11.9	12.7%
Disability status (population 5 years and over)	114	21.3	19.3%
Foreign born	8	1.4	11.1%
Male, Now married, except separated (population 15 years and over)	87	38.7	56.7%
Female, Now married, except separated (population 15 years and over)	85	42.1	52.1%
Speak a language other than English at home (population 5 years and over)	25	4.7	17.9%

<b>Economic Characteristics &gt;&gt;</b>	<b>Number</b>	<b>Percent</b>	<b>U.S.</b>
In labor force (population 16 years and over)	250	59.5	63.9%
Mean travel time to work in minutes (workers 16 years and older)	22.8	(X)	25.5
Median household income in 1999 (dollars)	26,439	(X)	41,994
Median family income in 1999 (dollars)	28,750	(X)	50,046
Per capita income in 1999 (dollars)	12,621	(X)	21,587
Families below poverty level	24	15.0	9.2%
Individuals below poverty level	117	20.0	12.4%
<b>Housing Characteristics &gt;&gt;</b>	<b>Number</b>	<b>Percent</b>	<b>U.S.</b>
Single-family owner-occupied homes	73		
Median value (dollars)	57,200	(X)	119,600
Median of selected monthly owner costs	(X)	(X)	
With a mortgage (dollars)	535	(X)	1,088
Not mortgaged (dollars)	267	(X)	295

(X) Not applicable.

[http://factfinder.census.gov/servlet/SAFFacts?\\_event=Search&geo\\_id=&geoContext=&street=&county=95556&cityTown=95556&state=&zip=95556&lang=en&sse=on&pctxt=fph&pgsl=010&show\\_2003\\_tab=&redirect=Y](http://factfinder.census.gov/servlet/SAFFacts?_event=Search&geo_id=&geoContext=&street=&county=95556&cityTown=95556&state=&zip=95556&lang=en&sse=on&pctxt=fph&pgsl=010&show_2003_tab=&redirect=Y)

More detail on social characteristics for zip code 95556

<b>Subject</b>	<b>Number</b>	<b>Percent</b>
<b>SCHOOL ENROLLMENT</b>		
<b>Population 3 years and over enrolled in school</b>	<b>157</b>	<b>100.0</b>
Nursery school, preschool	6	3.8
Kindergarten	0	0.0
Elementary school (grades 1-8)	92	58.6
High school (grades 9-12)	51	32.5
College or graduate school	8	5.1
<b>EDUCATIONAL ATTAINMENT</b>		
<b>Population 25 years and over</b>	<b>364</b>	<b>100.0</b>
Less than 9th grade	9	2.5
9th to 12th grade, no diploma	42	11.5
High school graduate (includes equivalency)	156	42.9
Some college, no degree	64	17.6
Associate degree	9	2.5
Bachelor's degree	59	16.2
Graduate or professional degree	25	6.9
Percent high school graduate or higher	86.0	(X)
Percent bachelor's degree or higher	23.1	(X)
<b>MARITAL STATUS</b>		
<b>Population 15 years and over</b>	<b>427</b>	<b>100.0</b>
Never married	134	31.4
Now married, except separated	172	40.3
Separated	8	1.9
Widowed	35	8.2
Female	29	6.8
Divorced	78	18.3
Female	40	9.4

Subject	Number	Percent
<b>GRANDPARENTS AS CAREGIVERS</b>		
Grandparent living in household with one or more own grandchildren under 18 years	12	100.0
Grandparent responsible for grandchildren	12	100.0
<b>VETERAN STATUS</b>		
Civilian population 18 years and over	405	100.0
Civilian veterans	48	11.9
<b>DISABILITY STATUS OF THE CIVILIAN NONINSTITUTIONALIZED POPULATION</b>		
Population 5 to 20 years	142	100.0
With a disability	7	4.9
Population 21 to 64 years	328	100.0
With a disability	74	22.6
Percent employed	47.3	(X)
No disability	254	77.4
Percent employed	68.5	(X)
Population 65 years and over	66	100.0
With a disability	33	50.0
<b>RESIDENCE IN 1995</b>		
Population 5 years and over	536	100.0
Same house in 1995	301	56.2
Different house in the U.S. in 1995	235	43.8
Same county	138	25.7
Different county	97	18.1
Same state	86	16.0
Different state	11	2.1
Elsewhere in 1995	0	0.0
<b>NATIVITY AND PLACE OF BIRTH</b>		
Total population	585	100.0
Native	577	98.6
Born in United States	577	98.6
State of residence	452	77.3
Different state	125	21.4
Born outside United States	0	0.0
Foreign born	8	1.4
Entered 1990 to March 2000	0	0.0
Naturalized citizen	0	0.0
Not a citizen	8	1.4
<b>REGION OF BIRTH OF FOREIGN BORN</b>		
Total (excluding born at sea)	8	100.0
Europe	5	62.5
Asia	3	37.5
Africa	0	0.0
Oceania	0	0.0
Latin America	0	0.0
Northern America	0	0.0

Subject	Number	Percent
<b>LANGUAGE SPOKEN AT HOME</b>		
<b>Population 5 years and over</b>	<b>536</b>	<b>100.0</b>
English only	511	95.3
Language other than English	25	4.7
Speak English less than 'very well	8	1.5
Spanish	0	0.0
Speak English less than "very well"	0	0.0
Other Indo-European languages	12	2.2
Speak English less than "very well"	0	0.0
Asian and Pacific Island languages	8	1.5
Speak English less than "very well"	8	1.5
<b>ANCESTRY (single or multiple)</b>		
<b>Total population</b>	<b>585</b>	<b>100.0</b>
<i>Total ancestries reported</i>	673	115.0
Arab	0	0.0
Czech <sup>†</sup>	0	0.0
Danish	17	2.9
Dutch	0	0.0
English	60	10.3
French (except Basque) <sup>†</sup>	69	11.8
French Canadian <sup>†</sup>	0	0.0
German	96	16.4
Greek	0	0.0
Hungarian	0	0.0
Irish <sup>†</sup>	58	9.9
Italian	14	2.4
Lithuanian	7	1.2
Norwegian	0	0.0
Polish	0	0.0
Portuguese	0	0.0
Russian	0	0.0
Scotch-Irish	0	0.0
Scottish	0	0.0
Slovak	0	0.0
Subsaharan African	0	0.0
Swedish	10	1.7
Swiss	9	1.5
Ukrainian	0	0.0
United States or American	43	7.4
Welsh	0	0.0
West Indian (excluding Hispanic groups)	0	0.0
Other ancestries	290	49.6

(X) Not applicable.

<sup>†</sup> The data represent a combination of two ancestries shown separately in Summary File 3. Czech includes Czechoslovakian. French includes Alsatian. French Canadian includes Acadian/Cajun. Irish includes Celtic.

[http://factfinder.census.gov/servlet/QTTable?\\_bm=y&-geo\\_id=86000US95556&-qr\\_name=DEC\\_2000\\_SF3\\_U\\_DP2&-ds\\_name=DEC\\_2000\\_SF3\\_U&-lang=en&-sse=on](http://factfinder.census.gov/servlet/QTTable?_bm=y&-geo_id=86000US95556&-qr_name=DEC_2000_SF3_U_DP2&-ds_name=DEC_2000_SF3_U&-lang=en&-sse=on)

## Employment Status and Industry Sectors for 95556

<b>EMPLOYMENT STATUS</b>		%
<b>Population 16 years and over</b>	<b>420</b>	<b>100.0</b>
In labor force	250	59.5
Civilian labor force	250	59.5
Employed	228	54.3
Unemployed	22	5.2
Percent of civilian labor force	8.8	(X)
Armed Forces	0	0.0
Not in labor force	170	40.5
<b>Females 16 years and over</b>	<b>195</b>	<b>100.0</b>
In labor force	102	52.3
Civilian labor force	102	52.3
Employed	102	52.3
<b>Own children under 6 years</b>	<b>49</b>	<b>100.0</b>
All parents in family in labor force	37	75.5
<b>COMMUTING TO WORK</b>		
<b>Workers 16 years and over</b>	<b>228</b>	<b>100.0</b>
Car, truck, or van -- drove alone	154	67.5
Car, truck, or van -- carpooled	57	25.0
Public transportation (including taxicab)	4	1.8
Walked	0	0.0
Other means	0	0.0
Worked at home	13	5.7
Mean travel time to work (minutes)	22.8	(X)
<b>Employed civilian population 16 years and over</b>	<b>228</b>	<b>100.0</b>
<b>OCCUPATION</b>		
Management, professional, and related occupations	49	21.5
Service occupations	45	19.7
Sales and office occupations	36	15.8
Farming, fishing, and forestry occupations	11	4.8
Construction, extraction, and maintenance occupations	52	22.8
Production, transportation, and material moving occupations	35	15.4
<b>INDUSTRY</b>		
Agriculture, forestry, fishing and hunting, and mining	43	18.9
Construction	24	10.5
Manufacturing	0	0.0
Wholesale trade	0	0.0
Retail trade	51	22.4
Transportation and warehousing, and utilities	17	7.5
Information	0	0.0
Finance, insurance, real estate, and rental and leasing	6	2.6
Professional, scientific, management, administrative, and waste management services	15	6.6
Educational, health and social services	43	18.9
Arts, entertainment, recreation, accommodation and food services	12	5.3
Other services (except public administration)	0	0.0
Public administration	17	7.5

<b>CLASS OF WORKER</b>		
Private wage and salary workers	92	40.4
Government workers	101	44.3
Self-employed workers in own not incorporated business	35	15.4
Unpaid family workers	0	0.0
<b>INCOME IN 1999</b>		
<b>Households</b>	<b>228</b>	<b>100.0</b>
Less than \$10,000	43	18.9
\$10,000 to \$14,999	22	9.6
\$15,000 to \$24,999	30	13.2
\$25,000 to \$34,999	43	18.9
\$35,000 to \$49,999	39	17.1
\$50,000 to \$74,999	28	12.3
\$75,000 to \$99,999	15	6.6
\$100,000 to \$149,999	8	3.5
\$150,000 to \$199,999	0	0.0
\$200,000 or more	0	0.0
Median household income (dollars)	26,439	(X)
With earnings	178	78.1
Mean earnings (dollars)	29,557	(X)
With Social Security income	63	27.6
Mean Social Security income (dollars)	8,468	(X)
With Supplemental Security Income	23	10.1
Mean Supplemental Security Income (dollars)	10,178	(X)
With public assistance income	23	10.1
Mean public assistance income (dollars)	3,100	(X)
With retirement income	51	22.4
Mean retirement income (dollars)	14,873	(X)
<b>Families</b>	<b>160</b>	<b>100.0</b>
Less than \$10,000	9	5.6
\$10,000 to \$14,999	11	6.9
\$15,000 to \$24,999	33	20.6
\$25,000 to \$34,999	35	21.9
\$35,000 to \$49,999	39	24.4
\$50,000 to \$74,999	10	6.3
\$75,000 to \$99,999	15	9.4
\$100,000 to \$149,999	8	5.0
\$150,000 to \$199,999	0	0.0
\$200,000 or more	0	0.0
Median family income (dollars)	28,750	(X)
Per capita income (dollars)	12,621	(X)
<b>Median earnings (dollars):</b>		
Male full-time, year-round workers	40,000	(X)
Female full-time, year-round workers	22,250	(X)
<b>POVERTY STATUS IN 1999 (below poverty level)</b>		
<b>Families</b>	<b>24</b>	<b>(X)</b>
Percent below poverty level	(X)	15.0
With related children under 18 years	24	(X)
Percent below poverty level	(X)	26.4
With related children under 5 years	10	(X)
Percent below poverty level	(X)	28.6

<b>Families with female householder, no husband present</b>	<b>19</b>	<b>(X)</b>
Percent below poverty level	(X)	45.2
With related children under 18 years	19	(X)
Percent below poverty level	(X)	65.5
With related children under 5 years	10	(X)
Percent below poverty level	(X)	71.4
<b>Individuals</b>	<b>117</b>	<b>(X)</b>
Percent below poverty level	(X)	20.0
18 years and over	78	(X)
Percent below poverty level	(X)	19.3
65 years and over	20	(X)
Percent below poverty level	(X)	30.3
Related children under 18 years	39	(X)
Percent below poverty level	(X)	21.7
Related children 5 to 17 years	27	(X)
Percent below poverty level	(X)	20.6
Unrelated individuals 15 years and over	54	(X)
Percent below poverty level	(X)	49.1

(X) Not applicable.

[http://factfinder.census.gov/servlet/QTTable?geo\\_id=86000US95556&ds\\_name=DEC\\_2000\\_SF3\\_U&qr\\_name=DEC\\_2000\\_SF3\\_U\\_DP3&lang=en&sse=on](http://factfinder.census.gov/servlet/QTTable?geo_id=86000US95556&ds_name=DEC_2000_SF3_U&qr_name=DEC_2000_SF3_U_DP3&lang=en&sse=on)

### Retired persons for 95556

Total number of beneficiaries:	130
Number of retired workers:	90
Number of disabled workers:	20
Number of widowers:	10
Number of spouses:	0
Number of children:	10
<i>Total monthly benefits in thousands of dollars:</i>	
• All beneficiaries:	\$111
• Retired workers:	\$80
• Widowers:	\$9
Number of OASDI Beneficiaries aged 65 or older:	90

Source: US Social Security Administration Office of Retirement and Disability Policy, OASDI Beneficiaries by State and Zip Code, 2007: [http://www.ssa.gov/policy/docs/statcomps/oasdi\\_zip/2007/ca.html](http://www.ssa.gov/policy/docs/statcomps/oasdi_zip/2007/ca.html)

## Population statistics by census block

- The Round One NOFA document defines underserved and unserved areas based on census-block level broadband availability data ([http://broadbandusa.sc.egov.usda.gov/files/BroadbandMappingNOFA\(FederalRegisterVersion\).pdf](http://broadbandusa.sc.egov.usda.gov/files/BroadbandMappingNOFA(FederalRegisterVersion).pdf))
- Census block map [http://ftp2.census.gov/geo/maps/blk2000/st06\\_California/County/06023\\_Humboldt/CBC06023\\_009.pdf](http://ftp2.census.gov/geo/maps/blk2000/st06_California/County/06023_Humboldt/CBC06023_009.pdf)



- Census Tract 101.02, Block Group 3
- There are blocks 3000-3196 in Block Group 3
- Of those blocks, the following are adjacent to Highway 96 in Humboldt County:
  - 3000-3002, 3010, 3017-3029, 3032, 3040-3067, 3093-3095, 3146, 3161-3165, 3181-3182
- The following blocks are adjacent to or very near Red Cap Road
  - 3058, 3060, 3064, 3067, 3069, 3070, 3071, 3073, 3086-3092
- As demographic information for individual census blocks is needed, it can be found this way:
  - Go to the American Fact Finder website: [http://factfinder.census.gov/home/saff/main.html?\\_lang=en](http://factfinder.census.gov/home/saff/main.html?_lang=en)
  - On the left tab menu, click on “data sets”
  - Make sure that Census 2000 Summary File 1 is checked (the first option) and click on “detailed tables” from the menu for that specific option
  - From the drop down menu for “select a geographic type”, select “block”



- Select California for the state
- Select Humboldt for the County
- Select “census tract 101.02” for the census tract
- Select “block group 3” for the block group
- Once all of these options have been selected, the drop down menu for specific blocks will appear and you can select the ones you want. Once highlighted, click the “add” button and your selections should appear in the box below.
- Click “Next”, and add the information tables you would like
- Click “Show Result” to see a table with the census information you requested for the blocks you requested.

## Health care

- Number of physicians, physician assistants, nurse practitioners, nurses, certified nursing assistants
  - According to Dr. Michael Willet of the Orleans Medical Clinic:
    - Orleans medical professionals include:
      - 1 doctor
      - 2 nurses (RN)
      - 2-3 retired nurses (RN)
      - 1 nurse practitioner
      - 1 paramedic
      - 6 first responders (through the volunteer fire department, though there may be more inactive responders in the community)
    - Number of patients in the no-broadband area: 600-800 (1500 patients are registered at the clinic, but they come from a wider region including areas with broadband service)
    - The most common chronic conditions of Orleans patients include:
      - Chronic Obstructive Pulmonary Disease (~100 patients)
      - Hypertension (~100 patients)
      - Hepatitis C (~100 patients)
      - Heart Disease (~50 patients)
      - Diabetes (~24 patients)
  - From a search of “Other Healthcare Professionals” at <http://www.medicare.gov/Physician/Search/PhysicianResults.asp> the following practitioners were associated with zip code 95556
    - Margaret Lawson, NP, United Indian Health Service, Inc. (Weitchpec)
  - According to the Karuk Tribe website ([www.karuk.us/staff/staffforleans/php](http://www.karuk.us/staff/staffforleans/php)) the following healthcare professionals are on staff at the Orleans Medical Clinic:
    - Dr. Michael Willet, physician
    - Ed Kremer, Registered Nurse
    - Allissa Johnson, Registered Nurse
    - Mace Delorme, Substance Abuse Counselor
- Number of clinics/federally qualified clinics (including Hoopa and Willow Creek)
  - Karuk Tribal Health Clinic, Orleans, 39051 Highway 96, Orleans, CA 95556
  - United Indian Health Services, Weitchpec Health Clinic, Libby Nix Community Center, Weitchpec, CA 95546
  - K’Ima:w Medical Center (Hoopa Tribe), 1200 Airport Road, Hoopa, CA 95546
  - Six Rivers Medical Clinic (associated with Mad River Community Hospital), 850 State Highway 96, Willow Creek, CA 95573
  - Willow Creek Community Health Center (associated with Open Door Community Health Centers), 38883 Highway 299, Willow Creek, CA 95573

## Public Safety

- Number of fire department locations by entity type (volunteer, USDA, etc.)
  - Yurok Volunteer Fire, 3017 Highway 169, Hoopa, CA
  - Orleans Volunteer Fire Department
  - Hoopa Fire Department, Hoopa, CA
    - In 1991, the Hoopa Tribe compacted the entire Fire Presuppression and Suppression program from the BIA. There are nearly 200 fire starts a season that we respond to. Under Mutual Aid agreements the Fire Management Department were able to work with other agencies to meet their objectives.
  - Karuk Tribe Fire Program, 99300 State Highway 96, Somes Bar, CA
  - Salmon River Volunteer Fire and Rescue, 15600 Salmon River Road, Forks of Salmon, CA
  - Willow Creek Volunteer Fire Department, 51 Willow Road, Willow Creek, CA
- Location of/miles to nearest public health department
  - Nearest Public Health department is in Willow Creek: County of Humboldt Health and Human Services Department Willow Creek, 77 Walnut Way, Willow Creek, CA 95573
  - Miles from Orleans: 37.5 miles (according to Google maps)
- Ambulance service
  - Orleans Volunteer Fire Department
  - Hoopa-Willow Creek Ambulance
  - Salmon River Volunteer Fire and Rescue

## Transportation

- Availability of public transportation and frequency
  - Nearest public transportation is in Willow Creek, 4 trips daily to Arcata (6:30am, 9:40am, 4:30pm, 6:35pm), 3 trips from coastal locations to Willow Creek, arriving at 9:25am, 4:25pm, and 6:30pm
- Number of vehicles passing through Orleans on SR 96
  - Annual Average Daily Traffic (AADT – total volume for the year divided by 365 days) at milepost 38.5 (Orleans, North): **970**
  - For more detail showing counts along more mileposts, see **Attachment A: Karuk\_96\_Traffic\_0909**
  - For descriptions of the column headings on Attachment A, see: <http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/2008all.htm>
- Transportation for seniors and disabled persons? If so, who and how often?
  - In a brochure from September 2007 by the Area 1 Agency on Aging of Humboldt and Del Norte Counties listing transportation services for seniors and disabled persons in Humboldt County, there were not any services for the Orleans/Weitchpec area listed.
  - In the same brochure, “K-T Net” was listed as servicing between Hoopa and Willow Creek, coordinated to meet Humboldt Transit Authority which services between Willow Creek and Arcata (listed above).
- Slides, snow and other SR 96 road blockages – frequency of interruptions (time of year...), length of time before clearing (average)
  - Spoke with Talitha Stimson, CalTrans Major Damage Coordinator for district 1, on September 23, 2009:
    - Talitha has records for all closures on Highway 96, but this data is not condensed into statistics or easy-to-access facts
    - Her overall impression from her experience is that closures vary from year to year. A particularly busy year was the winter of 2005-2006, where there were 16 locations on Highway 96 that had slipouts. The least busy years, in contrast, may have 0-3 slipout locations

- Closure lengths depend on the severity of the slipout, but it is not worse on Highway 96 than anywhere else in District 1 due to the local maintenance stations that have relatively small areas of responsibility. The worst closure length for a particular slipout location is usually not more than several days (for example, in 2005-2006 it was several days at the Big Bar slide near Orleans). In many cases, temporary repairs are made to prevent traffic delays.
- Same as above but for local roads (other than 96). Who has responsibility?
  - The Humboldt County Road Department in Hoopa is responsible for 135.4 miles of road in eastern Humboldt County, including all of the county roads off of Highway 96 within Humboldt County borders.
  - The frequency of road blockages is highly variable and highly dependent upon the weather. In flood years, the entire service area for the Hoopa department is affected, and this is when response times can become very slow.
  - Orleans can become isolated when there are slides on Highway 96 that prevent county maintenance equipment access to damaged or blocked county roads
  - Ishi Pishi Road and roads off of Ishi Pishi (Bark Shanty and its side roads) require the most maintenance and often have slow response times due to snow build-up preventing use of the roads
  - Snow or damage from winter storm events (high water) can occasionally cause blockages for weeks (e.g. December of 2005 and 2006)
  - Source: man from Humboldt County Roads Maintenance in Hoopa

## **Government**

- County government offices (specify)
  - Bookmobile (comes to Orleans on the first Wednesday of every month from 10:30am-3:15pm)
  - Hoopa Branch Library
  - Hoopa Station (law enforcement to northeastern part of county in cooperation with Hoopa Valley Tribal Police Department and Highway Patrol)
  - Willow Creek Branch Library
  - Humboldt County Road Maintenance, Shumaker Road in Hoopa, CA
- State government offices (specify)
  - Cal Trans Maintenance Station (156 W Perch Creek Rd, Orleans)
- Federal government offices (specify)
  - Orleans Ranger Station (Forest Service)
  - Somes Bar Work Station (Forest Service)
- Miles to drive to attend a county board of supervisors meeting, planning commission meeting, etc.
  - Streaming is available through website <http://co.humboldt.ca.us/board/>
  - Meetings are in Eureka (825 fifth street, room 111, Eureka, CA 95501), 84.9 miles from Orleans

## **Education and workforce development**

- Estimate of home schooled children
  - 8 (estimated by Adrienne Harling, Orleans resident and mother of one homeschooled child)
- Distance to nearest higher education: community college and university/state college
  - College of the Redwoods – Hoopa Campus (26.3 miles from Orleans)
  - Humboldt State University (40.9 miles)
  - College of the Redwoods, Eureka Campus (54.1 miles from Orleans)
- Location of nearest workforce development site and programs offered
  - Job Market – Eureka location (409 K Street, Eureka, CA 95501)
  - Job Market – Hoopa location (103 Willow Creek, Suite A, Hoopa, CA 95546)
  - Assistance offered:

- Assistance with employment needs
- Computer access for job searching
- Internet, fax machine, typewriter and telephone access
- Resume/cover letter assistance
- Resources for community service agencies

### Infrastructure—Airports

- Hoopa Airport (Hoopa Valley Tribal Council)
  - No runway end identifier lights
  - FAA Identifier: 021
  - Public
  - 1 runway
  - Single engine aircraft
- Happy Camp Airport (US Forest Service)
  - 1 runway
  - FAA Identifier: 36S
  - Public
  - No runway end identifier lights
- Arcata/Eureka Airport (Humboldt County)
  - Lights dusk to dawn
  - Public
  - FAA Identifier: ACV
  - 2 runways
  - Single engine, multi engine, jet, military

Source: [www.airnav.com](http://www.airnav.com)

### Information helpful to determining potential demand for broadband services.

#### Residences/Households

	<i>Estimated Residences (RCC Report)</i>	<i>Actual Residences</i>
Orleans	270	326 <sup>3</sup>
Weitchpec	Not in RCC report	62 <sup>4</sup>
Weitchpec to Johnsons	Not in RCC report	233 <sup>5</sup>

**Table 1—Residences/Households**

<sup>3</sup> Based on APN county numbers, in combination with the fire evacuation assessment—including Bluff Creek.

<sup>4</sup> Estimated by counting housing units on maps.

<sup>5</sup> Estimated by counting housing units on maps.

Potential Anchor Tenants (all sizes)

	<i>Orleans</i>	<i>Weitchpec</i>	<i>Weitchpec to Johnsons</i>	<i>SR 96 Total</i>
Schools	1	1	1	3
Head Start	1	0	1	2
Community Computer Resource Centers	1	1	1	3
College extension centers	0	0	0	0
Libraries <sup>6</sup>	2	0	0	2
Healthcare	2	1	0	3
Fire service (volunteer)	1	2	1	4
Law enforcement	0	1	1	2
Orleans Community Services District	1	N/A	N/A	1
Mid Klamath Watershed Council (MKWC) – Fire Safe Council	1	N/A	N/A	1
Tribal government offices	3	4	5	12
Churches	2	1	1	5
County government	0	0	0	0
City government	0	0	0	0
State government	1	0	0	1
Federal government	2	1	0	3
Local loops (Often associated with serving governmental offices) <i>Orleans:</i> <sup>7</sup>	1	0	0	1
Businesses (all categories) (see tables)	51	4	1	56
Radio stations	0	0	0	0
TV stations	0 <sup>8</sup>	0	0	0
Subscriber TV (cable)	0	0	0	0

**Table 2—Potential Anchor Tenants All sizes**

<sup>6</sup> Orleans -- 1) Private library with donated books, which is open the same time as the computer center (noon-5, m-th) and operates on the honor system. 2) Small Natural Resource Library at Klamath Watershed Council (MKWC). Humboldt County Bookmobile comes every other Wednesday.

<sup>7</sup> Orleans -- Connection from the school to the computer center but at risk due to e-rate rules. Possible plans to link the tribal buildings. FS stands alone.

<sup>8</sup> Planning in early stages for a radio station.

## Orleans Businesses

	<b>Name</b>	<b>Type of Business</b>	<b>Location</b>	<b>Owner/Contact</b>	<b>Contact #</b>
1	Avon	Cosmetics	1430 Red Cap Road, Orleans	Jackie Blotz	627-3487
2	Biggs Cabins	Vacation Rental	89 Placer Drive, Orleans	Lydia Biggs	627-3901
3	Bluff Creek Resort	Vacation Rental	27475 Hwy 96, Orleans	Phil & Carol Smith	
4	Cabot Vineyard	Winery	209 Ferris Ranch Road, Orleans	Kimberly Cabot	627-3170
5	Claudia's Herbs	Farming	3195 Ishi Pishi Rd, Orleans	Claudia Holtzinger	627-3712
6	Coates Vineyard	Winery	3909 Red Cap Rd, Orleans	Norman Coates	627-3369
7	Crimson-Sage Nursery	Herbs	711 Ishi Pishi Rd, Orleans	Tina Glaessner	627-3065
8	Cutting Edge Helicopters	Helicopters	222 Big Rock Road, Orleans	Tom Horn	627-3484
9	Desktop Publishing/Illustrations	Publishing/Illustrations	1460 Red Cap Road	Bari Talley	627-3996
10	DETOX Acupuncture Clinic	Healing	459 Asip Road off Hwy 96	Cristina America	627-3134
11	Downs Ranch	Cattle	191 Downs Ranch Road, Orleans	Phil & Sue Sanders	627-3373
12	Esperanza Nursery & Hot Sauces	Food	33 Ferris Ranch Road, Orleans	Liz Hamilton	627-9309
13	Flowerchild Farms	Nursery	747 Ishi Pishi Road, Orleans	Teri Chanturai	627-3512
14	Fruitwood Farms	Orchard	91 Ferris Ranch Road, Orleans	Kirk Terrill	627-3358
15	Graber Forestry	Forestry	1108 Red Cap Road, Orleans	Gene Graber	627-3372
16	Humboldt Land Company	Real Estate	1222 Slate Creek Road, Orleans	Rob Gale	No phone
17	Ideal Arabian Horses	Horse Breeders	1030 Red Cap Rd, Orleans	Richard & Rose Bowen	627-3561
18	Kdh Enterprises	Trucking/Water Tender	4 Gold Dredge Road, Orleans	Kevin Horn	627-3801
19	Karuk Indigenous Basketweavers	Traditional Karuk Basketry	791 Ishi Pishi Road, Orleans	LaVerne Glaze	627-3112
20	Klamath Conservation	Non-profit organization	747 Ishi Pishi Road, Orleans	Carlos Carroll	627-3512
21	Klamath River Cuisine	Catering	37497 Hwy 96, Orleans	Nancy Doman	627-3621
22	Klamath Riverkeeper	Environmental	38150 State Highway 96, Orleans	Erica Terence	627-3280
23	Klamath Salmon Media	Environmental	38150 State Highway 96, Orleans	Shawn Borque	627-3076
24	Lambert Lumber	Lumber	323 Dredge Road (Hwy 96), Orleans	Hank Lambert	627-3257

	<b>Name</b>	<b>Type of Business</b>	<b>Location</b>	<b>Owner/Contact</b>	<b>Contact #</b>
25	Lambert Artist	Art, paintings, etc.	323 Dredge Road (Hwy 96), Orleans	Judy Lambert	627-3257
26	Larry Mace Equipment	Equipment	1450 Red Cap Rd, Orleans	Larry Mace	627-3245
27	Marble Mt Bedding Boutique	Fabric	1433 Red Cap Road, Orleans	Kathryn Willett	627-3082
28	Matt Harding Landscaping	Landscaping	Milepost 3.3, Red Cap Road, Orleans	Matt Harding	627-3911
29	McLaughlin & Sons	Gas Station	38228 Hwy 96, Orleans	Clifford & Martha	627-3437
30	Mid Klamath Watershed Council	Environmental	38150 Hwy 96, Orleans	Luna Latimer	627-3202
31	Mountain Home Farms	Farm	39291 Hwy 96, Orleans	Sarah Post	627-3021
32	Mountain View Trailer Park	Residential	233 Gold Dredge Road, Orleans	Gene Piola	627-3395
33	Noah Robinson Equipment	Construction	23 E. Pearch Creek Road, Orleans	Noah Robinson	627-3520
34	Orleans Market	Grocery	38112 Hwy 96, Orleans		627-3326
35	Orleans Mining Company	Restaurant & Hotel	37768 Hwy 96, Orleans	Dwight & Bonnie	627-3213
36	Pierce Family Farms 1	Farms	2483 Red Cap Road, Orleans	Patrick Pierce	627-3320
37	Pierce Family Farms 2	Farms	4118 Ishi Pishi Road, Orleans	Patrick Pierce	627-3320
38	Pines Trailer Park	RV Park	38030 Hwy 96, Orleans	Shelly & Jim Slusser	627-3425
39	Resource Utilization Company (RUC)	Hardware Store	100 Big Rock Road, Orleans	Tom Horn	627-3484
40	River Artisans	Retail Art	38112 Hwy 96, Orleans	Amanita Mollier	627-3234
41	Riverside RV Park	Vacation Rental	37695 Hwy 96, Orleans	Karen and Mark O'Rourke	627-3239
42	Riverview Nursery	Nursery	37753 Hwy 96, Orleans	Jeff Reynolds	
43	Rolling River Nursery	Nursery	40310 Hwy 96, Orleans	Mark Robbi & Corrina Cohen	627-0012
44	Rosenbach Trucking	Trucking	1316 Red Cap Rd, Orleans	Dennis Rosenbach	627-3491
45	RUC Rental Property	Vacation Rental	37447 Hwy 96, Orleans	Tom Horn	627-3484
46	Sandy Bar Ranch	Vacation Rental	797 Ishi Pishi Rd, Orleans	Blythe Reis	627-3379
47	See What I Saw	Lumber	100 Big Rock Road, or McGains Mine Road, Orleans	J.D. Greiner	627-3484 (msg)
48	Shivshaneen Consulting	Tribal Consultant	1521 Red Cap Road	Terry Supahan	627-3526
49	Transportation Consulting, Barry Morehead	Transportation Consultant	1260 Red Cap Road, Orleans	Barry F. Morehead	627-1144

	Name	Type of Business	Location	Owner/Contact	Contact #
50	T & T Construction	Construction	100 Big Rock Road, Orleans	Tom Horn	627-3484
51	Wild by Nature	Education	38129 Hwy 96, Orleans	Kathryn Wild	627-3741

**Table 3—Orleans Businesses**

Additional Orleans Businesses

See ***Attachment B: Additional Orleans Businesses*** for a list of businesses that came up in a database search for businesses in the 95556 zip code (and one manually added myself) that were not listed in the interim report. These should be reviewed for current accuracy.



Orleans other entities

<b>Name</b>	<b>Type of Entity</b>	<b>Location</b>	<b>Owner/Contact</b>	<b>Contact #</b>
Assembly of God Church	Church	0 Ferris Ranch Road, Orleans	N/A	627-3215
Cal Trans	State	West Peach Creek Road, Orleans		627-3323
Community Computer Center @ Orleans	Education/Workforce Development	459 Asip Road off Hwy 96	Bari Talley	627-3081
Karuk Dept. Natural Resources	Government	39055 Hwy 96, Orleans	Earl Crosby	627-3440
Karuk Medical Clinic	Government	39055 Hwy 96, Orleans	Michael Willet, M.D.	627-3452
Karuk Outreach Program	Government	37960 Hwy 96, Orleans		627-3440
Karuk TANF Program	Government	37960 Hwy 96, Orleans	Pamela Risling	627-3680
Karuk Tribe Senior Nutritional Health	Government	459 Asip Road off Hwy 96	Babbie Peterson	627-3452
Orleans Community Services Dist.	Government	37737 Hwy 96, Orleans	Jeff Reynolds	627-3454
Orleans Elementary School	School	38016 Hwy 96, Orleans	Sandi Moon	627-3242
Orleans Head Start	School	38016 Hwy 96, Orleans	Martha Tilden	627-3281
Orleans Post Office	Government	38150 State Hwy 96	Charla King	627-3466
U.S.F.S Orleans Ranger District	Government	210 Ishi Pishi Rd, Orleans	Roberta Coragliotti	627-3333
Orleans Volunteer Fire Dept	Public Service	38150 Highway 96, Orleans	Jim Slusser	627-3344
Orleans/Somes Bar Firesafe Council	Public Service	38150 Highway 96, Orleans	Will Harling	627-3202
Seventh Day Adventist Church	Church	250 Ishi Pishi Rd, Orleans	N/A	627-3204
William Delaney RPF	Forestry	15 Lower Camp Creek Rd, Orleans	William Delaney	627-3210

**Table 4—Other Orleans Entities**

### Weitchpec to Johnsons businesses

Name	Type of Entity	Location	Owner/Contact	Contact #
Peace River Massage Therapy	Massage Therapy	Weitchpec School Road, Weitchpec	Jill Pizzuto	625-1046
Singing Goat Farm	Livestock & Farm Craft	Weitchpec School Road, Weitchpec	Irene Treesong	625-1619
Spey-gee Point Guide Service & Cabins	Guide Service & Cabins	Weitchpec	Thomas Wilson	625-4193
Weitchpec Store	Grocery	22000 Hwy 96, Weitchpec	Bill Pearson	625-4173

**Table 5—Weitchpec Businesses**

### Weitchpec Johnsons other entities

Name	Type of Entity	Location	Owner/Contact	Contact #
	Church	Weitchpec		

**Table 5—Weitchpec Other Entities**

### Orleans Community Computer Center/Panámníik Library



**Figure 3—Orleans Community Computer Center/Panámníik Library**

The Community Computer Center @ Orleans has 1055 applications on file. We have 11 computer workstations, with community access hours Monday through Thursday, noon to 5 p.m. They also make the computer center available during off hours to students and volunteers.



**Figure 4—Interior View of Panámniik Community Computer Center**

260 participants have used the service between July 18, 2008, (when they switched to a server system) and now.

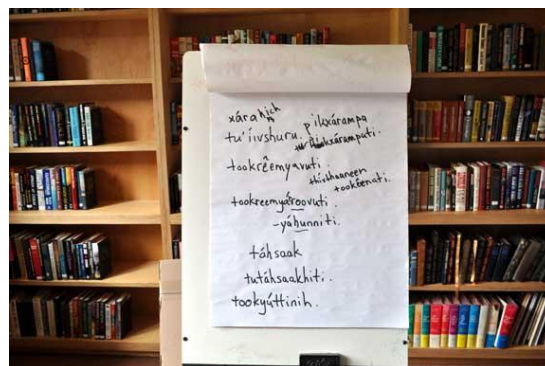
They have received 10 new applications since July 9, 2009.

On a typical day there are 18 participants who use the computer center for 35 total hours and an average of 2.5 hours per member.

In a typical week they have 38 total different participants in a 4-day week using the center 146 hours at an average of 1.7 hours per usage.

During the school year, they also average about 60 students per week for 1 hour each in the mornings; in addition to open-access afternoon hours.

So, roughly, they get about 175 hours of use from 75 different people per month.



**Figure 5—Karuk Language Lesson in Panámniik Community Computer Center**

Last quarter they logged 138 volunteer hours at the center. Average volunteer hours since 2007 are 157 per quarter or about 50 hours per month. They operated solely by volunteers from summer 1999 to November 2007 when a Student Services Coordinator was hired. It was not open with regular hours when the Student Services Coordinator first started. The after-school and youth participants have increased greatly since the addition of the Student Services Coordinator.

Other information valuable for profiling a community or area

	<i>Orleans</i>	<i>Weitchpec</i>	<i>Weitchpec to Johnsons</i>	<i>SR 96 Total</i>
Students				
Grades K-8 <i>Orleans:</i> • 75% qualified for free & reduced lunches	64 <sup>9</sup>	30	35	
Grades 9-12	0	0	0	
Homeschooled	unknown	unknown	unknown	
Household income <sup>10</sup>	\$35,000	\$20,592	\$20,592	
Age <sup>11</sup>				
5 and under	39	4	4	
6 to 18	47	39	18	
18 to 64	410	91	56	
65 and older	73	16	12	
Tribal members <sup>12</sup> (% of local population)	29%			
Distance to nearest hospital	75 miles	72	86	
Distance to nearest library	25 miles	12	32	
Distance to nearest retail shopping center (malls, Costco, etc.)	75 miles	76	89	
Distance to nearest major building supply outlet (Home Depot, lumber yard, hardware store, etc.)	75 miles	76	89	
Distance to nearest high school				
Orleans to Hoopa High	25 Miles <sup>13</sup>			
Orleans to Happy Camp(Karuk aboriginal territory)	50 miles			
Distance to government services (employment services, DMV, etc.)	75 miles			
Households without telephone service <i>Orleans area:</i> <i>Slate Creek= 5</i> <i>Lance's place=2</i> <i>Klamath River Lodge=1</i> <i>Camp Three Property=1</i> <i>Red Cap Creek=6</i>	15			
Households with two telephone lines <sup>14</sup>	20-30% <sup>15</sup>	N/A	N/A	
Satellite Internet <sup>16</sup>	5% <sup>17</sup>	N/A	N/A	

**Table 6—Other information valuable for profiling a community or area**

<sup>9</sup> Orleans: 75% qualified for free & reduced lunches

<sup>10</sup> Based on 2000 census

<sup>11</sup> Based on 2000 census

<sup>12</sup> Based on 2000 census

<sup>13</sup> adds at least 2 hours to a student's day

<sup>14</sup> N/A means that we have yet to determine this information. Likelihood is high that there are some occurrences in these categories.

<sup>15</sup> Estimated from anecdotal evidence and from results of non-random telephone survey.

<sup>16</sup> N/A means that we have yet to determine this information. Likelihood is high that there are some occurrences in these categories.

<sup>17</sup> Estimated from anecdotal evidence and from results of non-random telephone survey.

Humboldt County Median Income 2000 Census \$31,226 Karuk Tribal Household Query			
Percent of Median	Households	Income	% of Population
0% to 30% Median	61 *	0 to \$ 9,368.	60%
31% to 50% Median	9 *	\$9,368. to \$15,613.	9%
51% to 80% Median	13 *	\$15,614. to \$24,880.	13%
81% to 100% Median	7 *	\$24,981. to \$31,226.	7%
101% to 120% Median	2	\$31,227. to \$37,441.	2%
Above 120% Median	9	\$37,442. and up	9%
Total	101  90* L-M	* Low to Moderate Income	100%

**Table 7—Karuk Tribal Household Query**

**School Computer and Internet Access Statistics – Humboldt County**

District	School	Category	2005	2006	2007
California	Humboldt County	Classrooms with Internet access per 100 students	6.46	6.38	8.19
California	Humboldt County	Classrooms with Internet access	1,243	1,226	1,440
California	Humboldt County	Computers per 100 students	26.11	28.24	29.80
California	Humboldt County	Computers used for instructionally-related purposes	5,024	5,427	5,240
California	Humboldt County	Enrollment	19,244	19,217	17,581
Klamath-Trinity Unified	Orleans Elementary	Computers used for instructionally-related purposes	29	11	11
Klamath-Trinity Unified	Orleans Elementary	Enrollment	51	54	68
Klamath-Trinity Unified	Orleans Elementary	Classrooms with Internet access per 100 students	5.88	5.56	4.41
Klamath-Trinity Unified	Orleans Elementary	Classrooms with Internet access	3	3	3
Klamath-Trinity Unified	Orleans Elementary	Computers per 100 students	56.86	20.37	16.18

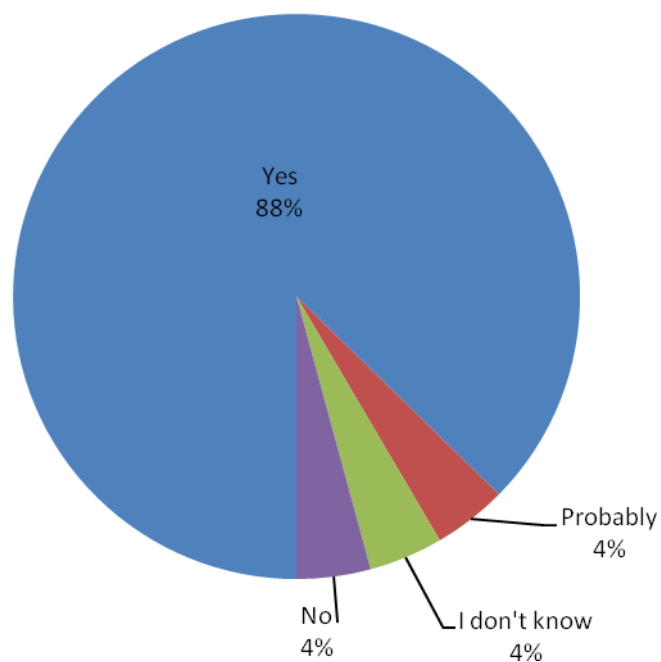
Source: RAND California (See [Statistics Summary](#) for originating data source.)  
Wed Sep 16 12:19:45 2009

Conducted in the fourth quarter of 2009

**1a. Are you interested in getting broadband at your Home?**

Yes	62
Probably	3
I don't know	3
No	<u>3</u>
Total responses:	71

**Table 8—Are you interested in getting broadband at Home?**  
**Are you interested in getting broadband at your Home?**



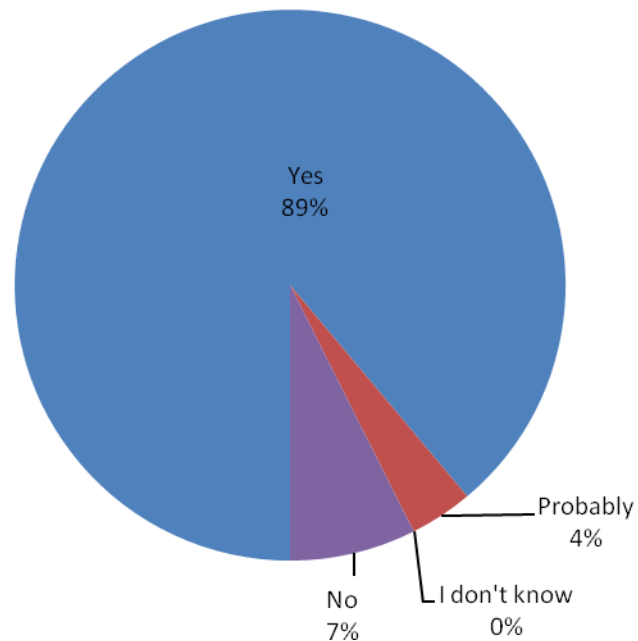
**Figure 6—Are you interested in getting broadband at Home?**

**1b. Are you interested in getting broadband at your Business?**

Yes	24
Probably	1
I don't know	0
No	<u>2</u>
Total responses:	27

**Table 9—Are you interested in getting broadband at your Business?**

**Are you interested in getting broadband to your Business?**



**Figure 7—Are you interested in getting broadband at your Business?**

**2a. Is Home internet access available?**

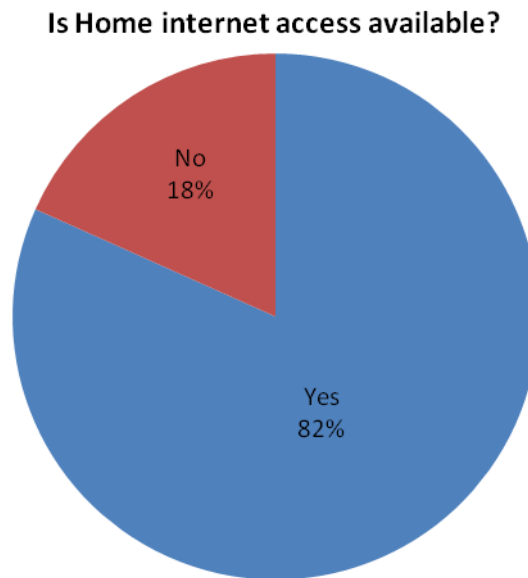
*In other words, could you get internet access if you wanted it?*

Yes	58
No	<u>13</u>
Total responses:	71

Other comments:

- sort of
- dial up only
- satellite

**Table 10—Is Home internet access available?**



**Figure 8—Is Home internet access available?**



**2b. Is Business internet access available?**

*In other words, could you get internet access if you wanted it?*

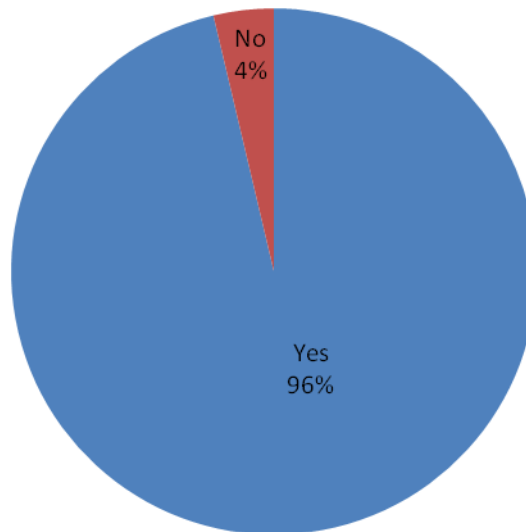
Yes	26
No	<u>1</u>
Total responses:	27

Other comments:

- sort of
- satellite

**Table 11—Is Business internet access available?**

**Is Business internet access available?**



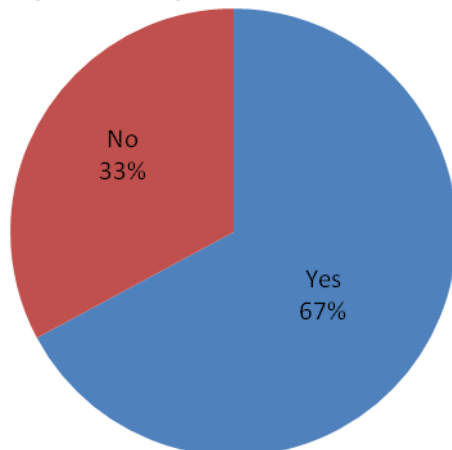
**Figure 9—Is Business internet access available?**

**3a. Do you already have Home internet?**

Yes	45
No	<u>22</u>
Total responses:	67

**Table 12—Do you already have Home internet?**

**Do you already have Home internet?**



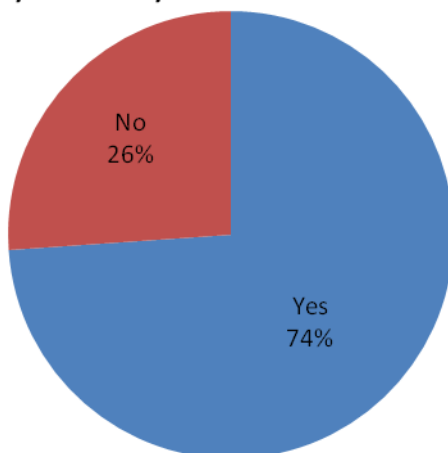
**Figure 10—Do you already have Home internet?**

**3b. Do you already have Business internet?**

Yes	17
No	<u>6</u>
Total responses:	23

**Table 13—Do you already have Business internet?**

**Do you already have Business Internet?**



**Figure 11—Do you already have Business internet?**

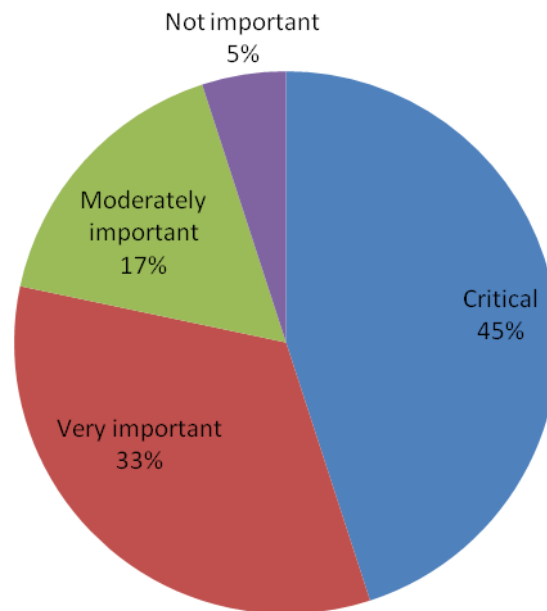
**4a. How important is having Home access to the internet?**

Critical	27
Very important	20
Moderately important	10
Not important	<u>3</u>

*Total responses:* 60

**Table 14—How important is having Home access to the internet?**

**How important is having Home internet access?**

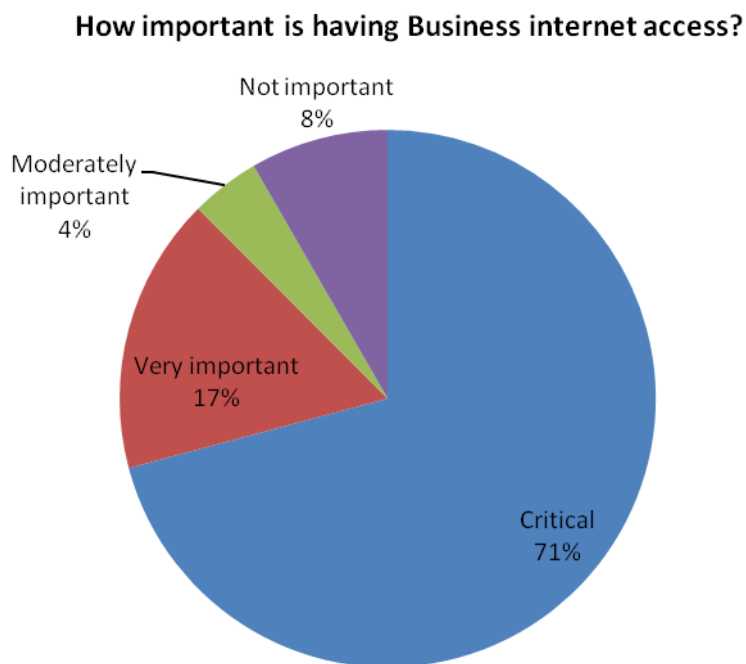


**Figure 12—How important is having Home access to the internet?**

**4b. How important is having Business access to the internet?**

Critical	17
Very important	4
Moderately important	1
Not important	<u>2</u>
<i>Total responses:</i>	<i>24</i>

**Table 15—How important is having Business access to the internet?**



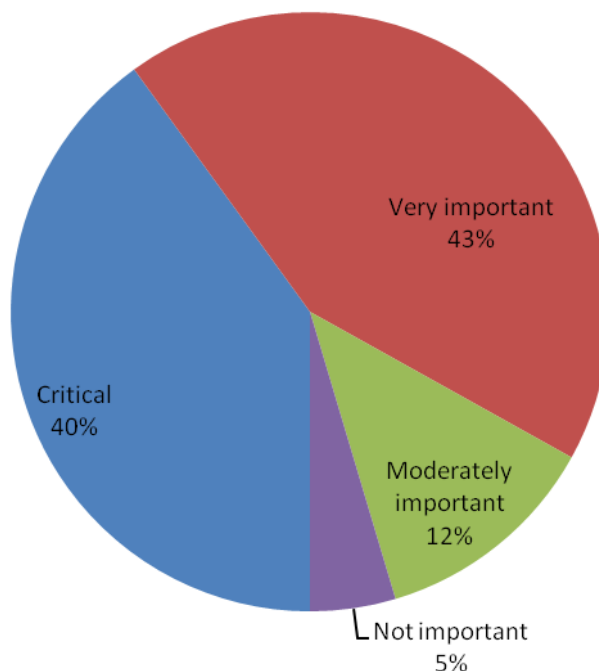
**Figure 13—How important is having Business access to the internet?**

**5a. How important is having high-speed Home access to the internet?**

Critical	26
Very important	28
Moderately important	8
Not important	<u>3</u>
Total responses:	65

**Table 16—How important is having high-speed Home access to the internet?**

How important is having high-speed Home internet access?



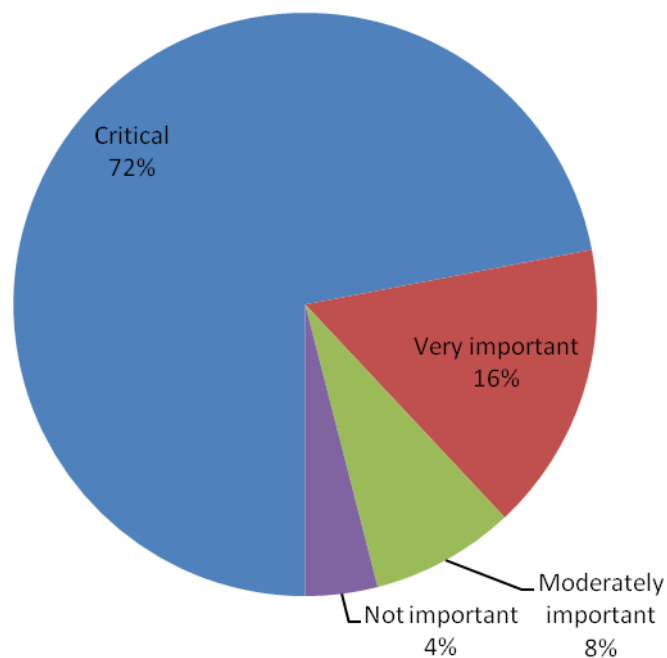
**Figure 14—How important is having high-speed Home access to the internet?**

**5b. How important is having high-speed Business access to the internet?**

Critical	18
Very important	4
Moderately important	2
Not important	<u>1</u>
Total responses:	25

**Table 17—How important is having high-speed Business access to the internet?**

How important is having high-speed Business internet access?



**Figure 15—How important is having high-speed Business access to the internet?**

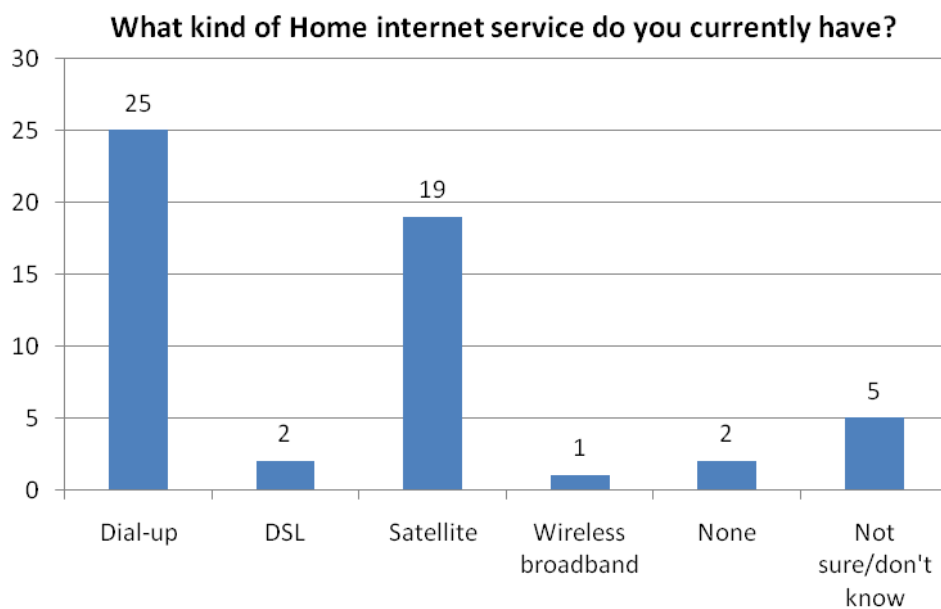
**6a. What kind of Home internet service do you currently have?**

Dial-up	25
DSL	2
Satellite	19
Wireless broadband	1
None	2
Not sure/don't know	5
Total responses:	54

Other Comments:

- hybrid satellite/lan line
- None (2)
- wireless broadband
- skype

**Table 18—What kind of Home internet service do you currently have?**

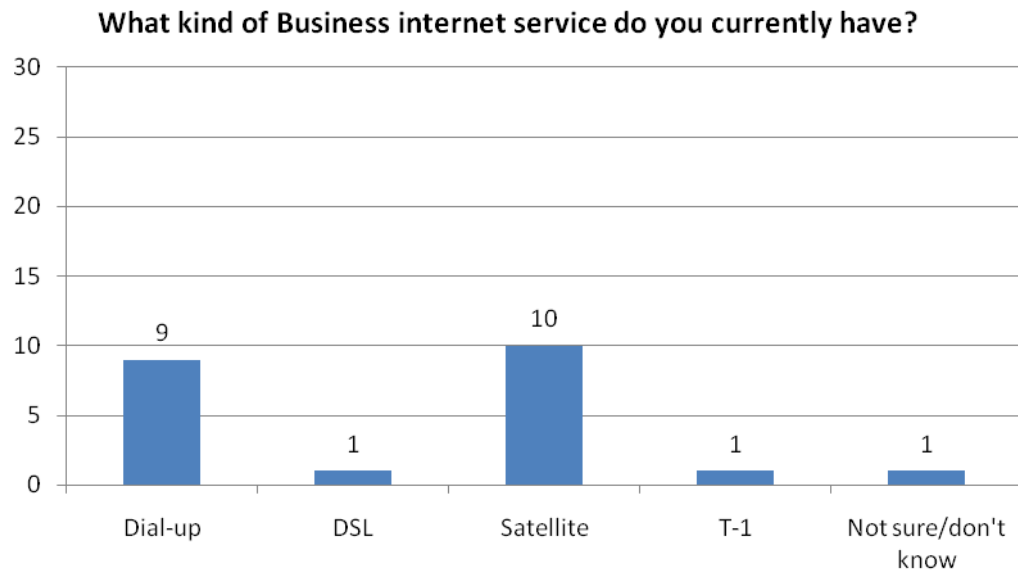


**Figure 16—What kind of Home internet service do you currently have?**

**6b. What kind of Business internet service do you currently have?**

Dial-up	9
DSL	1
Satellite	10
T-1	1
Not sure/don't know	1
Total responses: 22	

**Table 19—What kind of Business internet service do you currently have?**



**Figure 17—What kind of Business internet service do you currently have?**



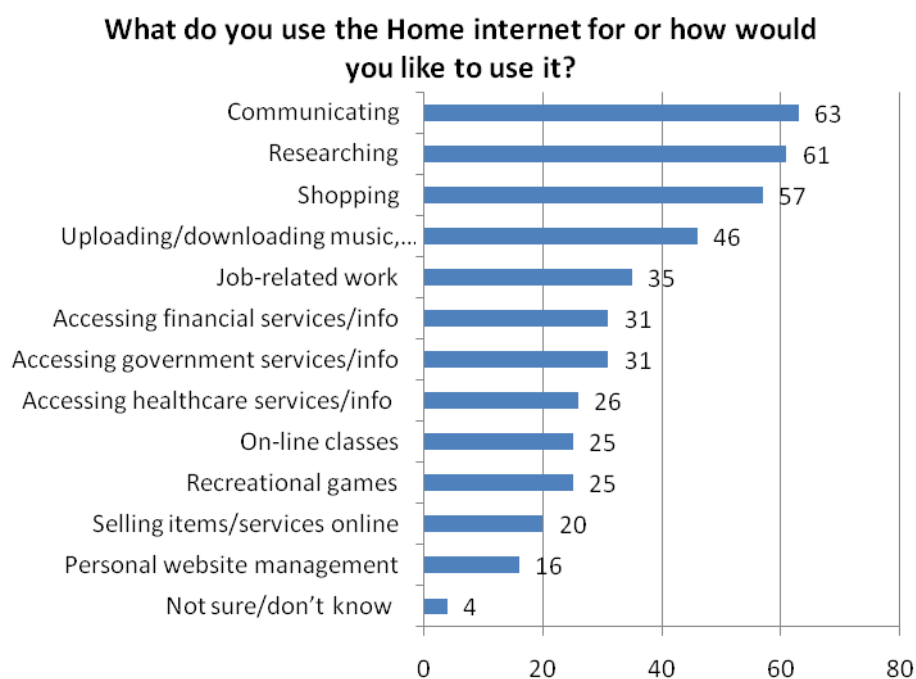
**7a. What do you use the Home internet for (or, how would you like to use it)?**  
check all that apply

Communicating	63
Researching	61
Shopping	57
Uploading/downloading music, webcasts, podcasts, video	46
Job-related work	35
Accessing government services/info	31
Accessing financial services/info	31
Accessing healthcare services/info	26
Recreational games	25
On-line classes	25
Selling items/services online	20
Personal website management	16
Not sure/don't know	4

Other Comments:

- I would take classes if I had faster internet.
- Not available.

**Table 20—What do you use the Home internet for (or, how would you like to use it)?**

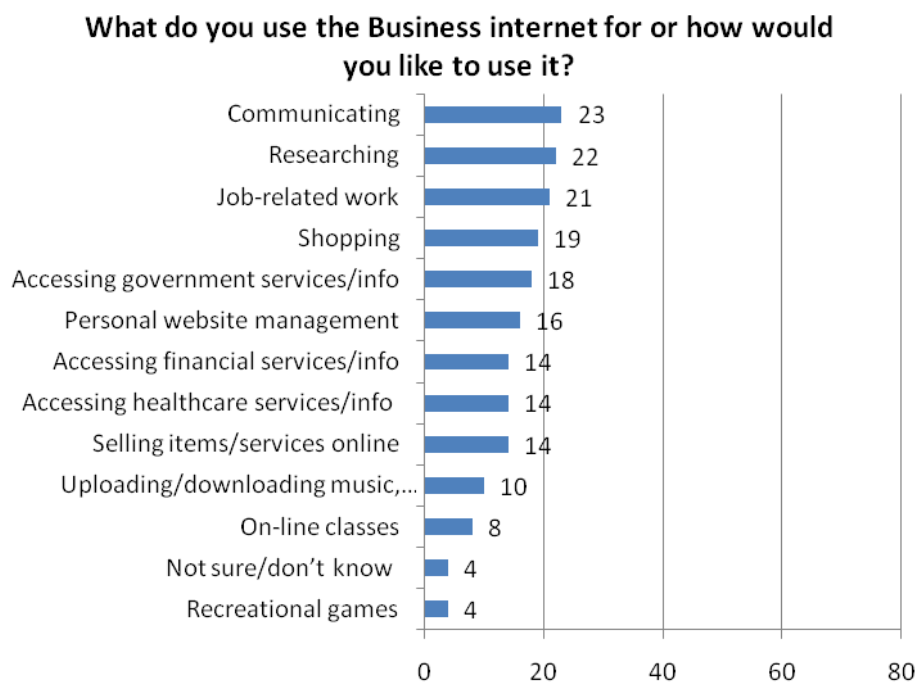


**Figure 18—What do you use the Home internet for (or, how would you like to use it)?**

**7b. What do you use the Business internet for (or, how would you like to use it)?**  
*check all that apply*

Communicating	23
Researching	22
Job-related work	21
Shopping	19
Accessing government services/info	18
Personal website management	16
Selling items/services online	14
Accessing healthcare services/info	14
Accessing financial services/info	14
Uploading/downloading music, webcasts, podcasts, video	10
On-line classes	8
Recreational games	4
Not sure/don't know	4

**Table 21—What do you use the Business internet for (or, how would you like to use it)?**



**Figure 19—What do you use the Business internet for (or, how would you like to use it)?**

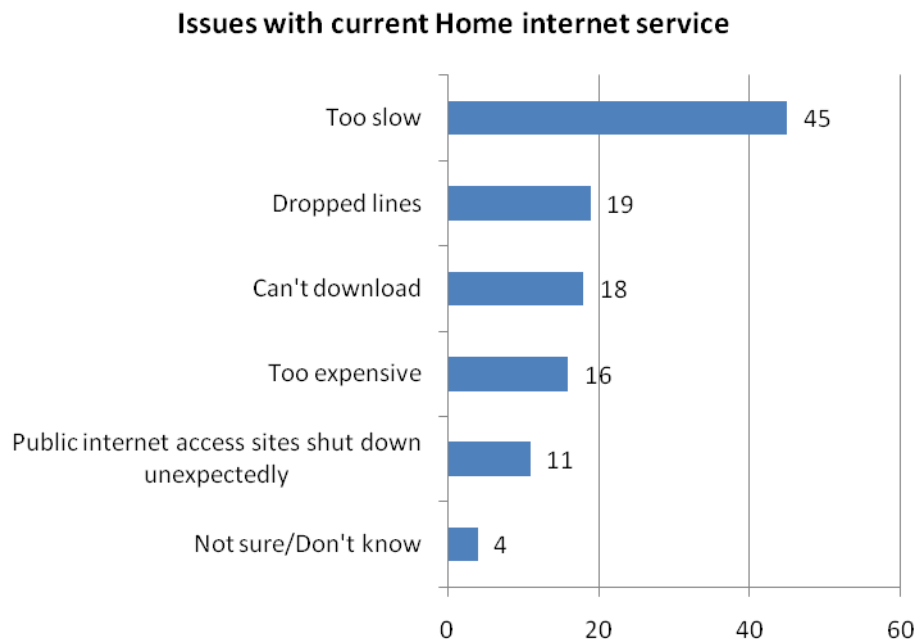
**8a. Do you have any of the following issues with your current Home internet service?**  
check all that apply:

Too slow	45
Dropped lines	19
Can't download	18
Too expensive	16
Public internet access sites shut down unexpectedly	11
Not sure/Don't know	4

Other Comments:

- intermittent service
- dropped calls; garbled voices
- can't get it at home
- small bandwidths
- I don't have it hooked up
- cannot stream w/o paying a lot of band time.

**Table 22—Do you have any of the following issues with your current Home internet service?**



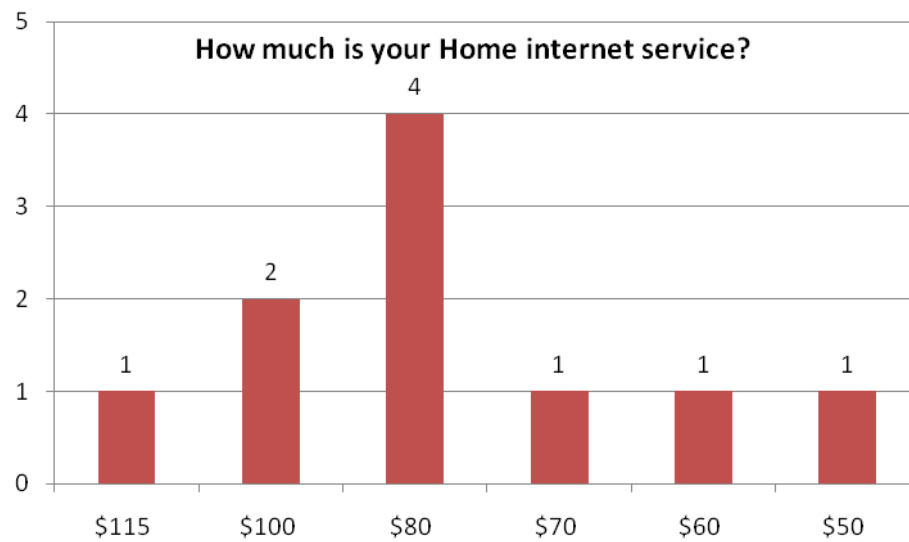
**Figure 20—Do you have any of the following issues with your current Home internet service?**

**8a(1) How much is Home internet?**

\$115	1
\$100	2
\$80	4
\$70	1
\$60	1
\$50	<u>1</u>

*Total responses:* 10

**Table 23—How much is Home internet?**



**Figure 21—How much is Home internet?**

**8b. Do you have any of the following issues with your current Business internet service?**

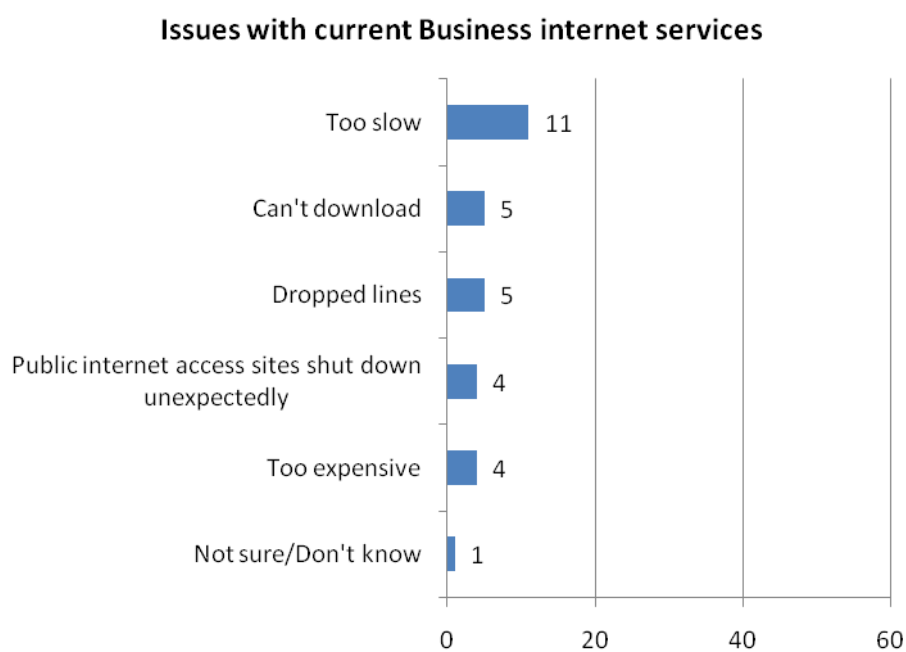
*check all that apply:*

Too slow	11
Dropped lines	5
Can't download	5
Too expensive	4
Public internet access sites shut down unexpectedly	4
Not sure/Don't know	1

Other Comments:

- intermittent service (2)
- weather interference

**Table 24—Do you have any of the following issues with your current Business internet service?**



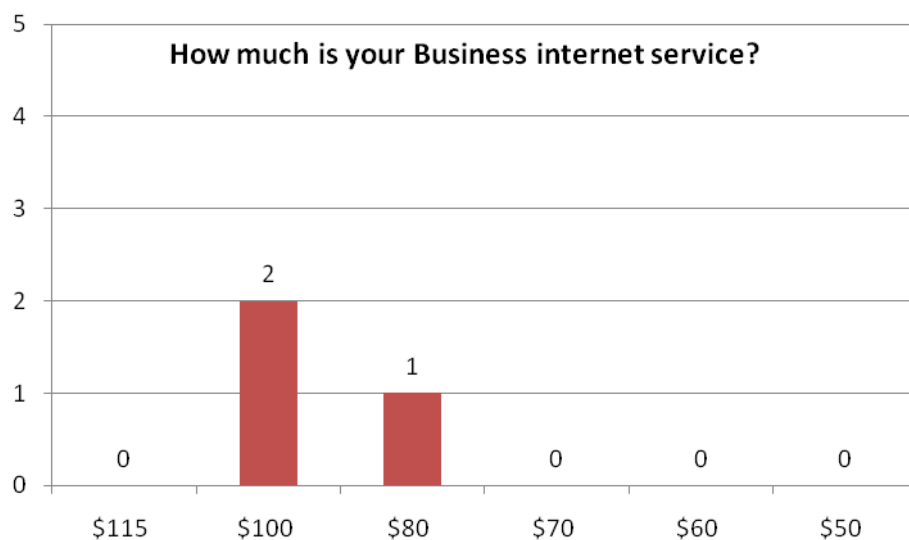
**Figure 22—Do you have any of the following issues with your current Business internet service?**

**8b(1) How much is Business internet?**

\$115	0
\$100	2
\$80	1
\$70	0
\$60	0
\$50	<u>0</u>

*Total responses:* 3

**Table 25—How much is Business internet?**



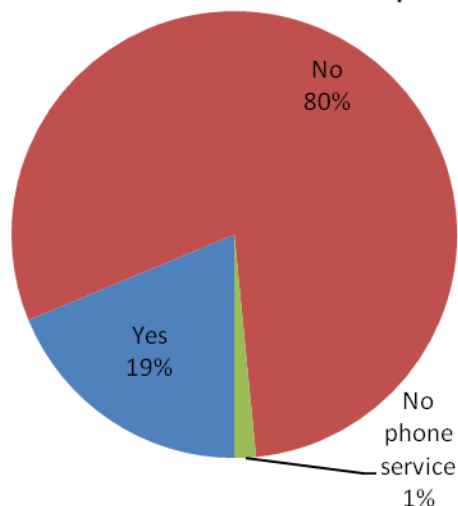
**Figure 23—How much is Business internet?**

**9a. Do you have more than one Home telephone line?**

Yes	12
No	51
No phone service	1
<i>Total responses:</i>	<i>64</i>

**Table 26—Do you have more than one Home telephone line?**

**Do you have more than 1 Home telephone line?**



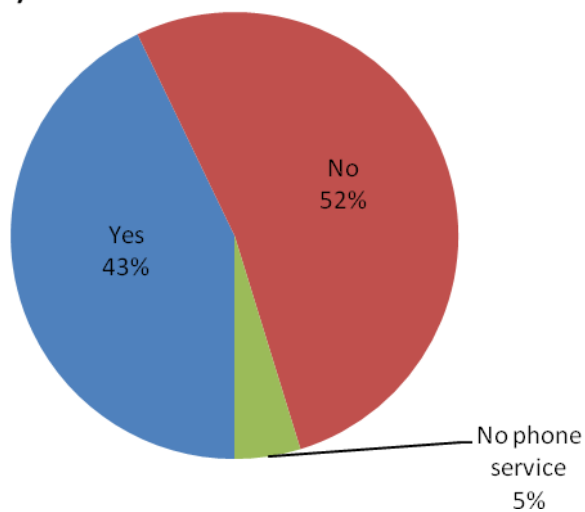
**Figure 24—Do you have more than one Home telephone line?**

**9b. Do you have more than one Business telephone line?**

Yes	9
No	11
No phone service	1
<i>Total responses:</i>	<i>21</i>

**Table 27—Do you have more than one Business telephone line?**

**Do you have more than 1 Business line?**

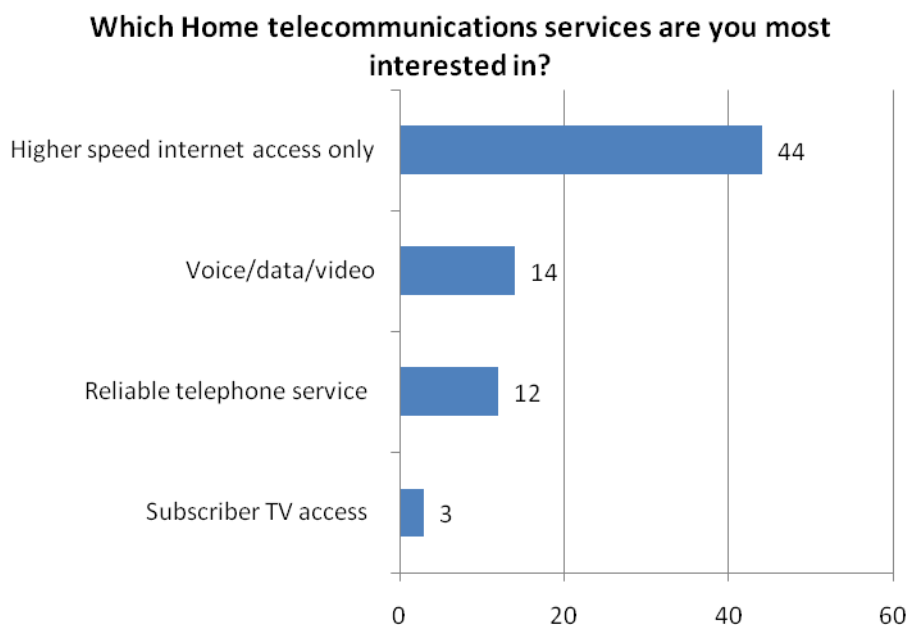


**Figure 25—Do you have more than one Business telephone line?**

**10a. Which Home telecommunications services are you most interested in?**  
*check one*

Higher speed internet access only	44
Voice/data/video	14
Reliable telephone service	12
Subscriber TV access	3

**Table 28—Which Home telecommunications services are you most interested in?**



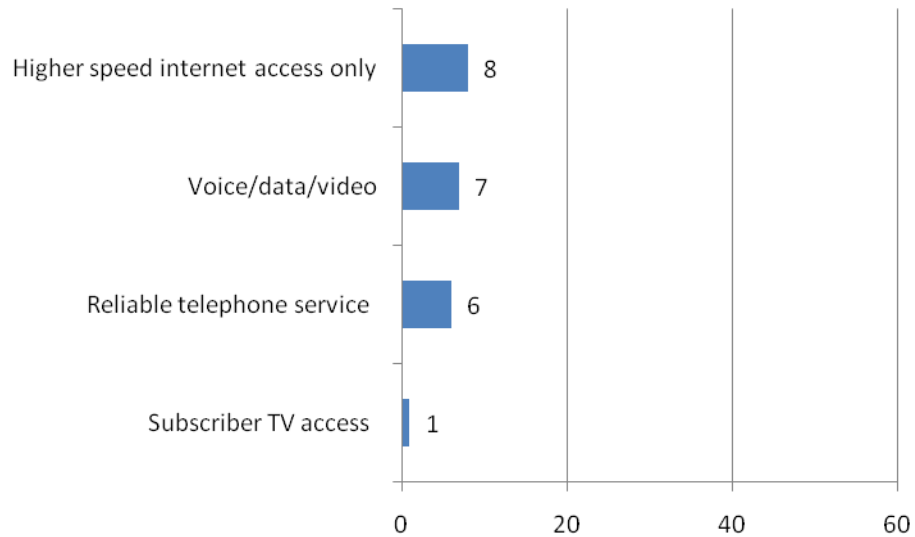
**Figure 26—Which Home telecommunications services are you most interested in?**



**10b. Which Business telecommunications services are you most interested in?**  
*check one*

Higher speed internet access only	8
Voice/data/video	7
Reliable telephone service	6
Subscriber TV access	1

**Table 29—Which Business telecommunications services are you most interested in**  
**Which Business telecommunications services are you most interested in?**



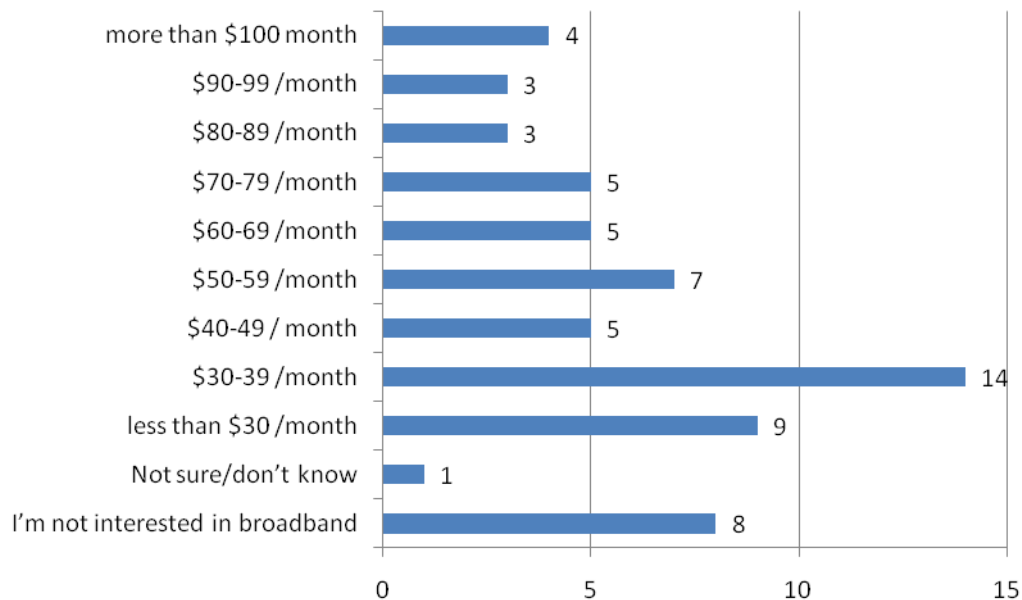
**Figure 27—Which Business telecommunications services are you most interested in?**

**11a. How much would you be willing to pay for these Home services?**  
*pick the most you'd be willing to pay*

less than \$30 /month	9
\$30-39 /month	14
\$40-49 / month	5
\$50-59 /month	7
\$60-69 /month	5
\$70-79 /month	5
\$80-89 /month	3
\$90-99 /month	3
more than \$100 month	4
I'm not interested in broadband	8
Not sure/don't know	1
<i>Total responses:</i>	<b>64</b>
Number willing to pay \$50 or more	27
Percent of responses willing to pay \$50 or more	42%

**Table 30—How much would you be willing to pay for these Home services?**

**How much would you be willing to pay for these Home services?**



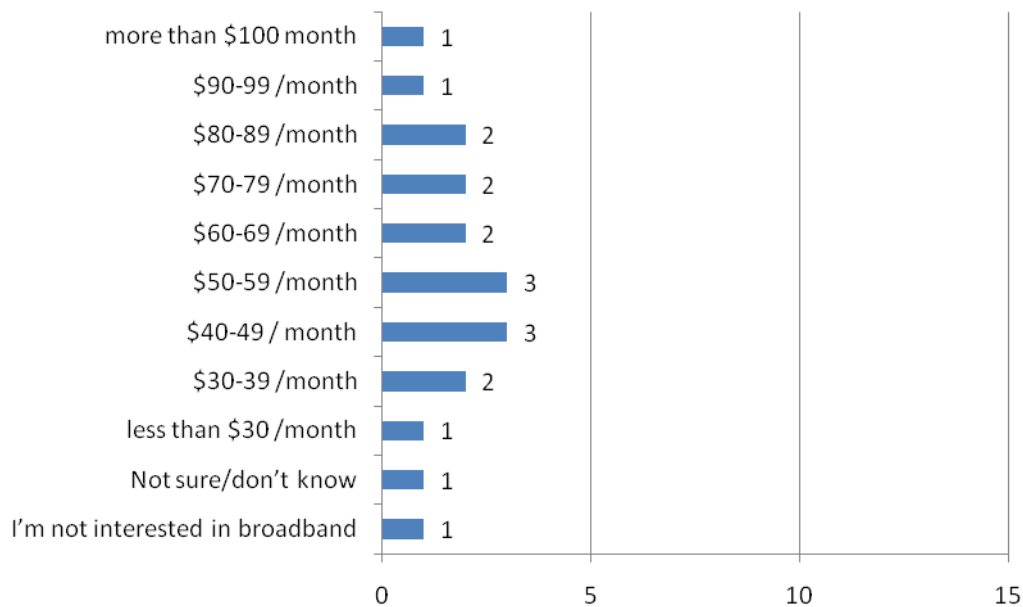
**Figure 28—How much would you be willing to pay for these Home services?**

**11b. How much would you be willing to pay for these Business services?**  
*pick the most you'd be willing to pay*

less than \$30 /month	1
\$30-39 /month	2
\$40-49 / month	3
\$50-59 /month	3
\$60-69 /month	2
\$70-79 /month	2
\$80-89 /month	2
\$90-99 /month	1
more than \$100 month	1
I'm not interested in broadband	1
Not sure/don't know	1
<i>Total responses:</i>	19
Number willing to pay \$50 or more	11
Percent of responses willing to pay \$50 or more	58%

**Table 31—How much would you be willing to pay for these Business services?**

**How much would you be willing to pay for these Business services?**

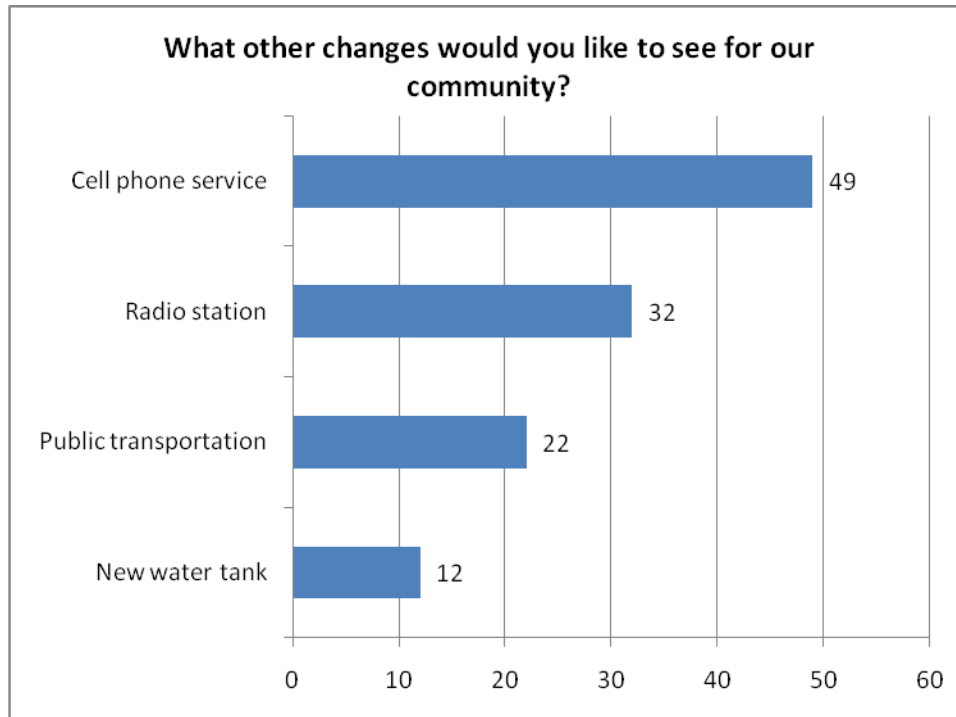


**Figure 29—How much would you be willing to pay for these Business services?**

**12. What other changes do you want to see for our community?**

New water tank	12
Public transportation	22
Radio station	32
Cell phone service	49

**Table 32—What other changes do you want to see for our community?**



**Other Comments:**

- I think we have poor telecommunication with the outside world.
- A youth center with games, art/craft/music, a once a month dance
- Small permanent public library
- Awesomeness
- ★Yeah! to ALL!
- decent restaurant
- meetings and get-togethers for discussions on world events that will be affecting us all.
- law enforcement
- drug intervention
- establish and pursue bilingual goals.
- college level classes offered @ Computer Center
- More service learning opportunities for kids
- improved infrastructure – water, electrical & phone delivery systems
- increased community support for OVFD & Replacement for rescue vehicle
- community center
- food bank farm!!

**Figure 30—What other changes do you want to see for our community?**

**Survey respondents:**

<b>Home</b>	<b>Business</b>
Michael W. Willett PO Box 273 530-627-3082 <a href="mailto:mkwillett@gmail.com">mkwillett@gmail.com</a>	Orleans Clinic Medical PO Box 249 530-627-3452 <a href="mailto:mwillett@karuk.us">mwillett@karuk.us</a>
Rosalie Carlson PO Box 235	
Hilary Melcarek PO Box 73 530-784-4559 <a href="mailto:melcarek@gmail.com">melcarek@gmail.com</a>	
Irene M. Miranda PO Box 224 627-3412 <a href="mailto:imiranda@karuk.us">imiranda@karuk.us</a>	
Sarah Kirste 1020 Red Cap Road 530-627-3217 <a href="mailto:skirste17@gmail.com">skirste17@gmail.com</a>	
Bob Hemus PO Box 432 627-3371	
William Delaney 145 Camp Creek Road 530-627-3319 <a href="mailto:wfd1995@aol.com">wfd1995@aol.com</a>	William Delaney 145 Camp Creek Road 530-627-3319 <a href="mailto:wfd1995@aol.com">wfd1995@aol.com</a>
Amanita Mollier PO Box 20 627-3234 <a href="mailto:am@verizon.net">am@verizon.net</a> <a href="mailto:amanita@silkpainter.com">amanita@silkpainter.com</a>	Amanita Mollier PO Box 20 627-3234 <a href="mailto:am@verizon.net">am@verizon.net</a> <a href="mailto:amanita@silkpainter.com">amanita@silkpainter.com</a>
Irene Treesong HC 65 Site, 1 Box 11 Hoopa (Weitchpec) 625-1619 <a href="mailto:itreesong@yahoo.com">itreesong@yahoo.com</a>	
Stan Pfister PO Box 352 627-3347 <a href="mailto:shpfister@hotmail.com">shpfister@hotmail.com</a>	
Diana Davison PO Box 793 530-627-3019 <a href="mailto:dadadavison@juno.com">dadadavison@juno.com</a>	
Roberto C. Beltran PO Box 458 Orleans CA 530-627-3246 <a href="mailto:rbeltran@fs.ferling">rbeltran@fs.ferling</a>	
Tina Glaessner PO Box 83 530-627-3065 <a href="mailto:tgoat@hughes.net">tgoat@hughes.net</a> <a href="http://www.crimson-sage.com">www.crimson-sage.com</a>	Tina Glaessner PO Box 83 530-627-3065 <a href="mailto:tgoat@hughes.net">tgoat@hughes.net</a> <a href="http://www.crimson-sage.com">www.crimson-sage.com</a>

<b>Home</b>	<b>Business</b>
Noah Robinson Pearch Creek Road <a href="mailto:nrobinson36@yahoo.com">nrobinson36@yahoo.com</a>	
Wren Farris PO Box 435	
Nyomi Rivera PO Box 421 530-469-3282 <a href="mailto:nyomirivera@yahoo.com">nyomirivera@yahoo.com</a>	
Sue Terence 6304 Butler Mountain Road <a href="mailto:terence@starband.net">terence@starband.net</a>	
Ken Ramsey PO Box 452 <a href="mailto:klamithken@yahoo.com">klamithken@yahoo.com</a>	
Blythe Reis PO Box 347 627-3379 <a href="mailto:mail@sandybar.com">mail@sandybar.com</a> <a href="http://www.sandybar.com">www.sandybar.com</a>	Sandy Bar Ranch hotel PO Box 347 627-3379 <a href="mailto:mail@sandybar.com">mail@sandybar.com</a> <a href="http://www.sandybar.com">www.sandybar.com</a>
Jalena Tulleo PO Box 39 627-3138 <a href="mailto:joeyrobes@hotmail.com">joeyrobes@hotmail.com</a>	
Cammille PO Box 18 627-3143 <a href="mailto:cammillelayton@gmail.com">cammillelayton@gmail.com</a>	
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Valerie Walsh PO Box 204 Somes Bar 95568 627-3044 <a href="mailto:hillhippie@yahoo.com">hillhippie@yahoo.com</a>	Mattole Valley Charter School PO Box 204 Somes Bar 95568 627-3044 <a href="mailto:hillhippie@yahoo.com">hillhippie@yahoo.com</a> <a href="http://www.mattolevalley.com">www.mattolevalley.com</a>
Bari Talley PO Box 175 627-3996 <a href="mailto:talleyhome@earthlink.net">talleyhome@earthlink.net</a>	Computer Center PO Box 426 627-3081 <a href="mailto:btalley@karuk.us">btalley@karuk.us</a>
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Cathy Campbell POB 171 627-3502 <a href="mailto:cthycompbll@aol.com">cthycompbll@aol.com</a>	
Liz Carlyle PO Box 40 627-3527 <a href="mailto:lizcarlyle@yahoo.com">lizcarlyle@yahoo.com</a>	
Mike Jameson Ishi Pishi Road 469-3277	
Renée or Deanna 530-627-3211 (Renée) 530-627-3014 (Deanna)	



## **Tribal Vision Statements**

### Karuk Tribe vision statement <sup>18</sup>

*We envision a future greatly strengthened by our culture and the prosperity, health, and healing of our people and ancestral lands. We will continue to revitalize our traditions, language and arts, and the well being of our Tribe, and Karuk dominion of our homelands.*

*Every year at the center of our world are held “World Renewal Ceremonies” that fix the world to make it a better place. We will continue to embrace our own world view and the modern era without compromising our cultural legacy. We are rising to take our rightful place as a sovereign nation attending to the needs of our own people and make the world around us a better place.*

### Yurok Tribe vision statement <sup>19</sup>

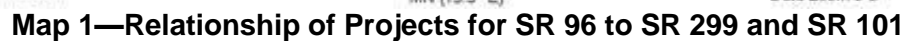
*The mission of the Yurok Tribe is to exercise the aboriginal and sovereign rights of the Yurok People to continue forever our Tribal traditions of self-governance, cultural and spiritual preservation, stewardship of Yurok lands, waters and other natural endowments, balanced social and economic development, peace and reciprocity, and respect for the dignity and individual rights of all persons living within the jurisdiction of the Yurok Tribe, while honoring our Creator, our ancestors and our descendants.*

---

<sup>18</sup> Found in the community action plan /strategic plan on the [www.Karuk.us](http://www.Karuk.us) website.

<sup>19</sup> <http://www.yuroktribe.org/>  
Revised: February 22, 2010

### Potential Routes for 96, 299 & 101





## Orleans Area Aerial Photos and Maps



**Map 2—Orleans Aerial Photo**



**Map 3—Orleans Topographical Map**





**Map 4—Orleans Aerial Photo Showing Detail to the West of Town**



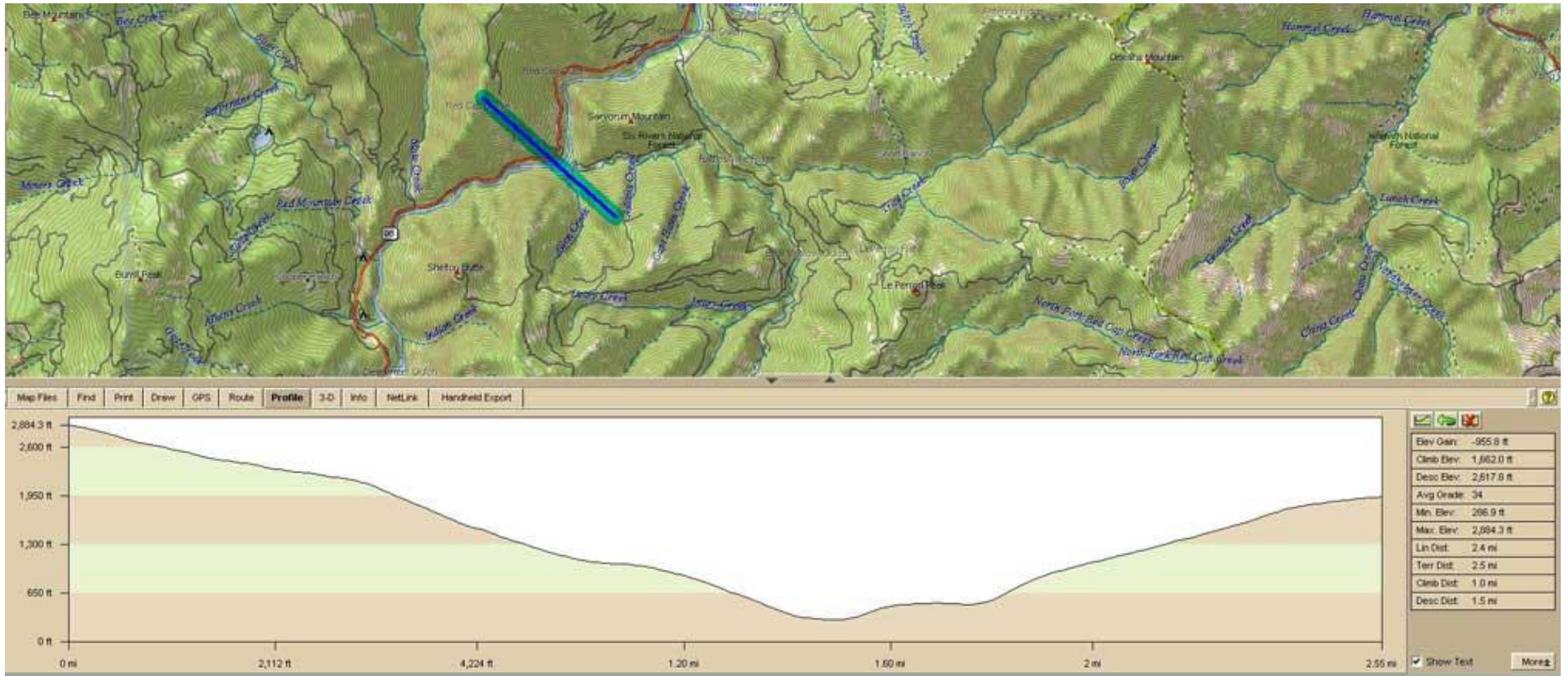
**Map 5—Orleans Aerial Photo Showing Detail East of Town**





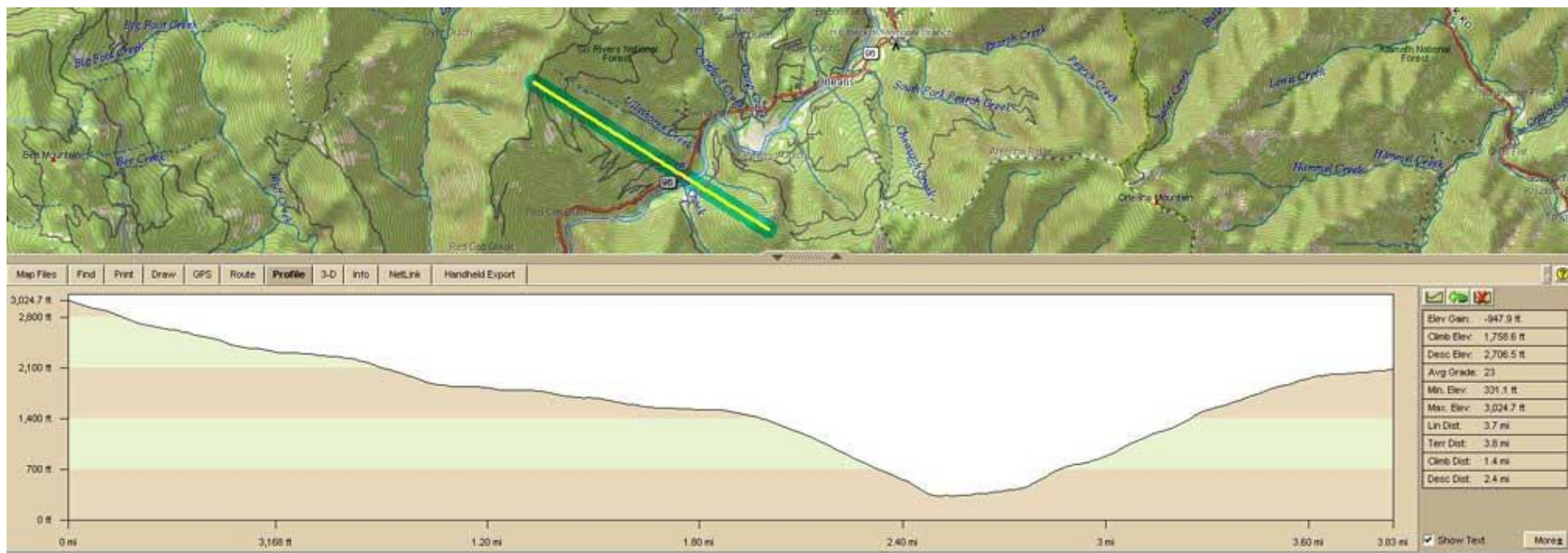
**Map 6—Orleans Detail Showing Housing Directly South Across River**  
Orleans Terrain Profiles

The following section shows cross-section of Orleans area terrain. These cross-sectional views can be helpful for understanding placement of antennas for distribution of wireless broadband.

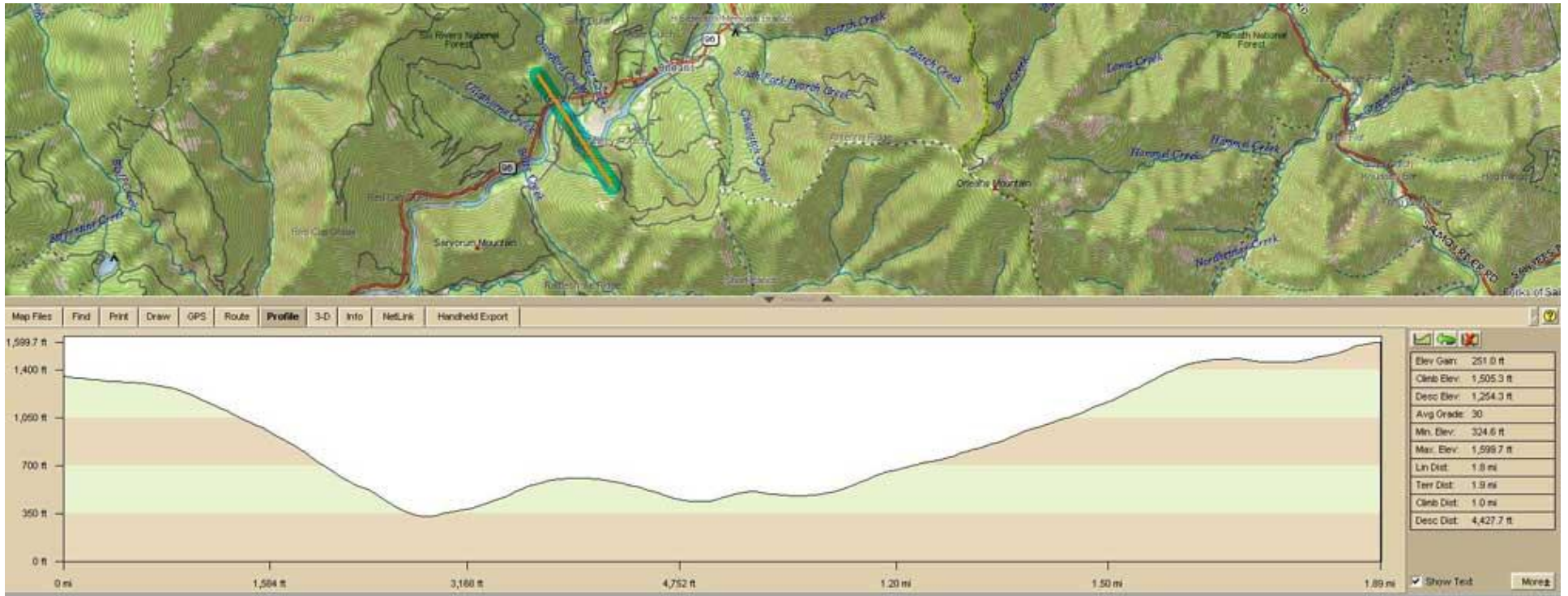


**Map 7—Profile 1**



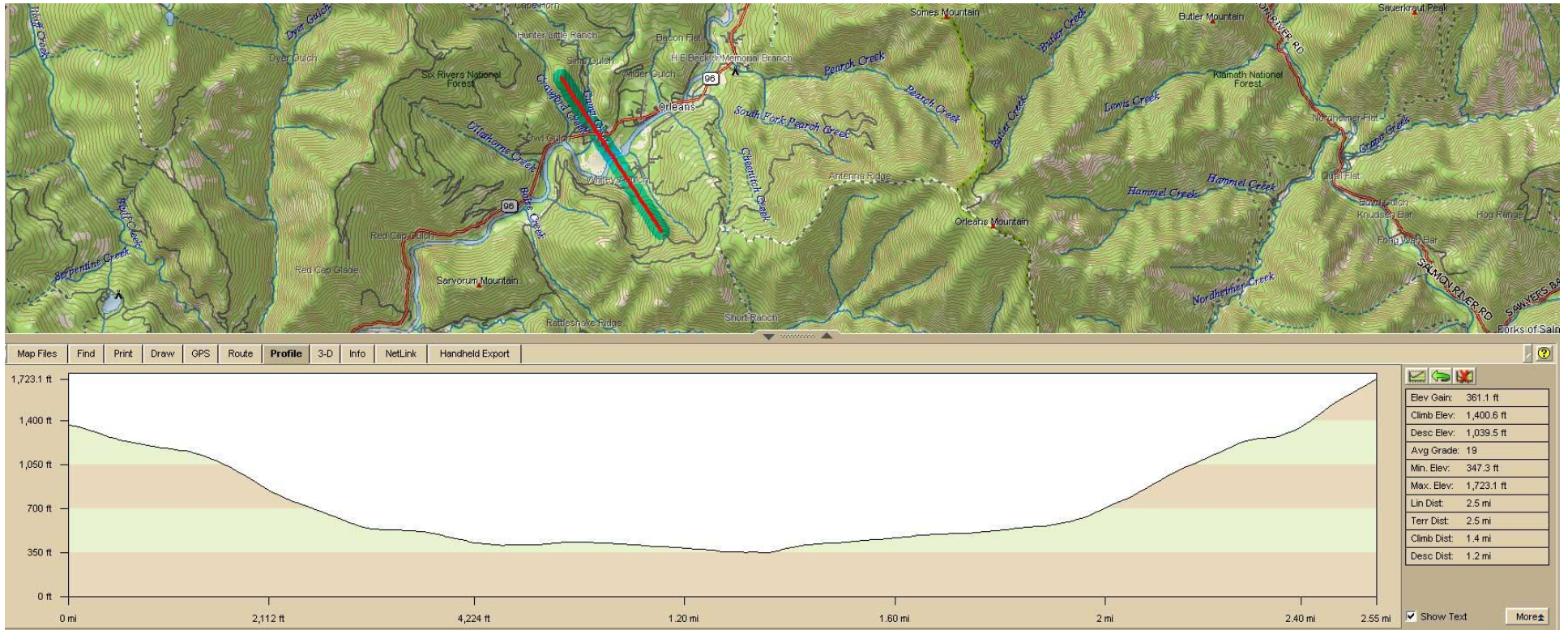


Map 8—Profile 2



Map 9—Profile 3

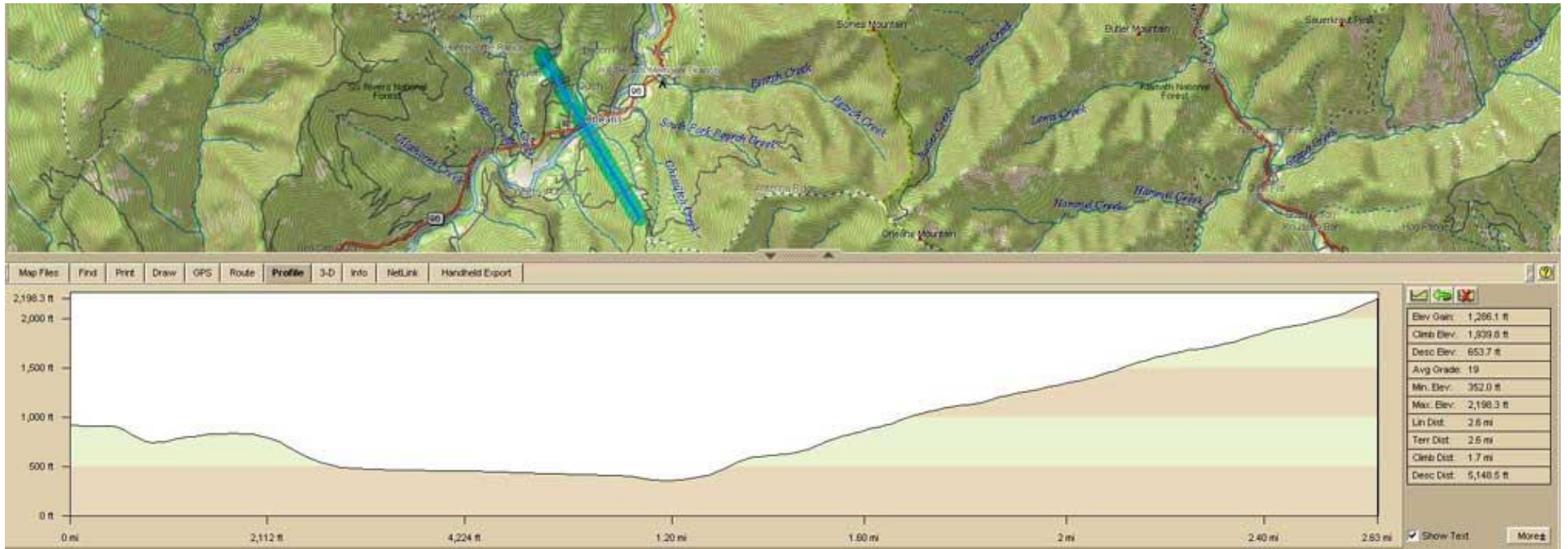




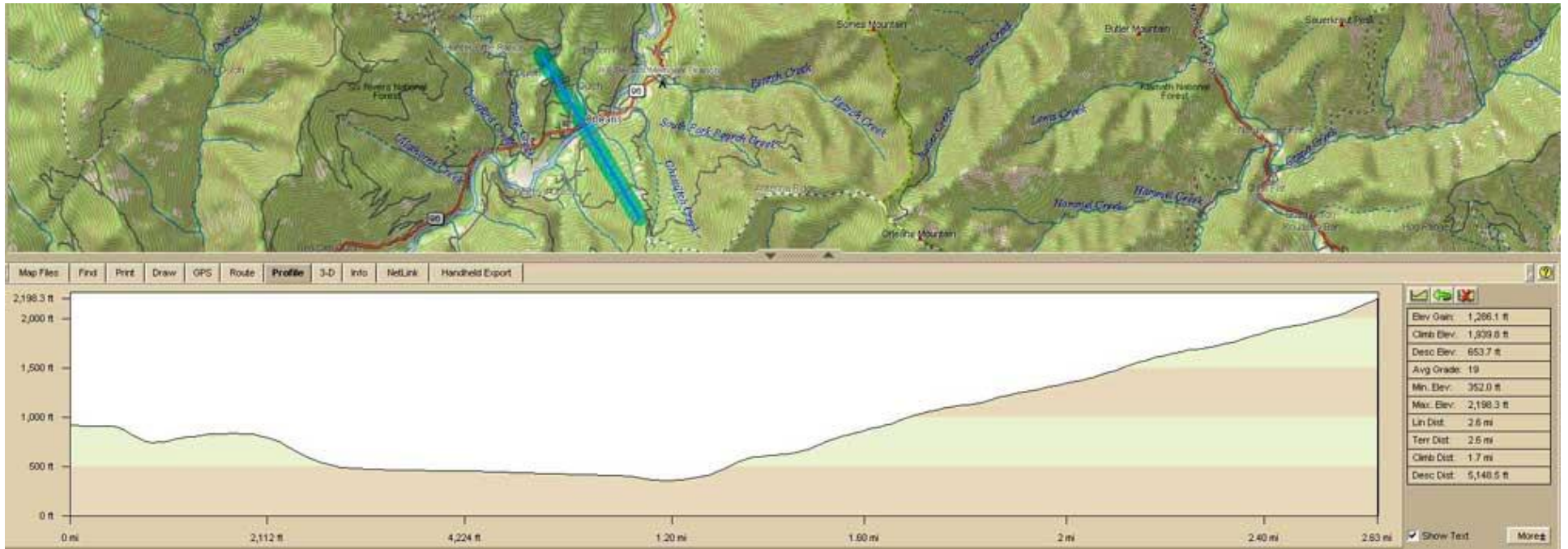
Map 10—Profile 4



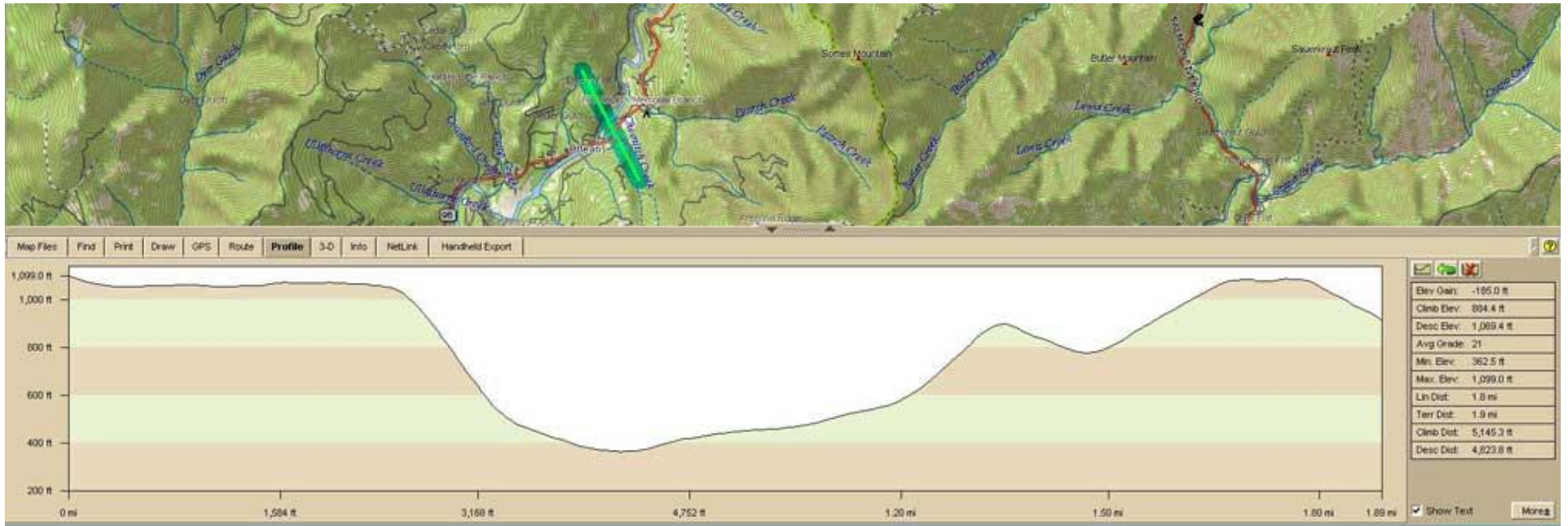




Map 12—Profile 6

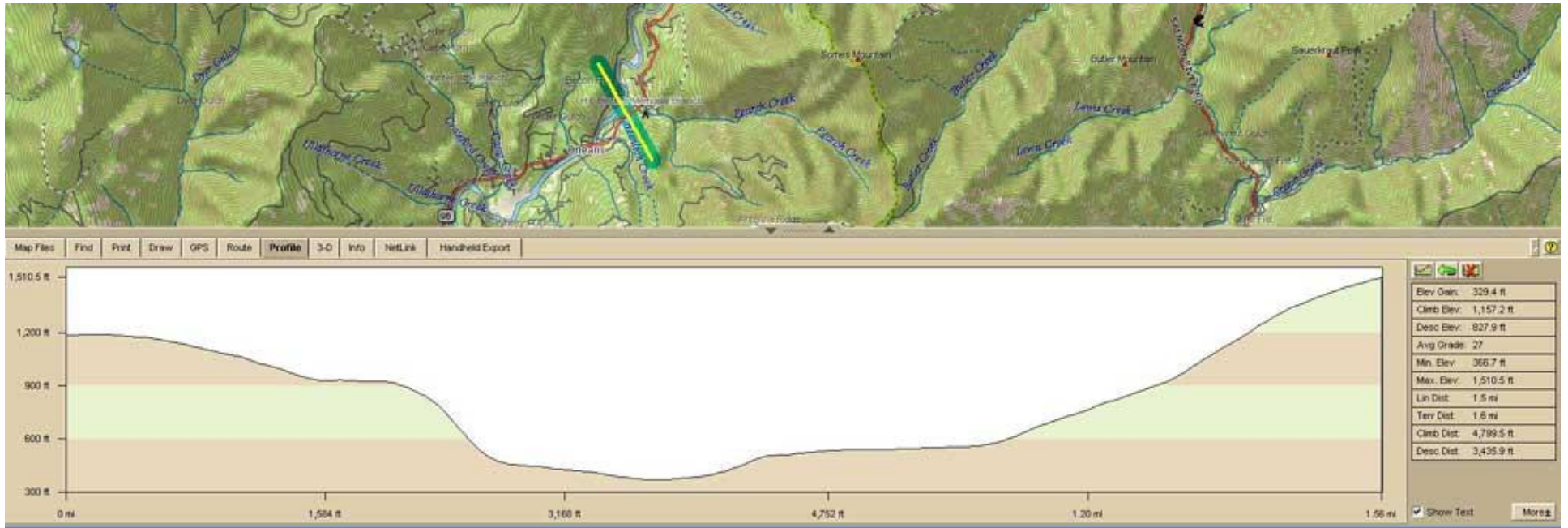


Map 13—Profile 7

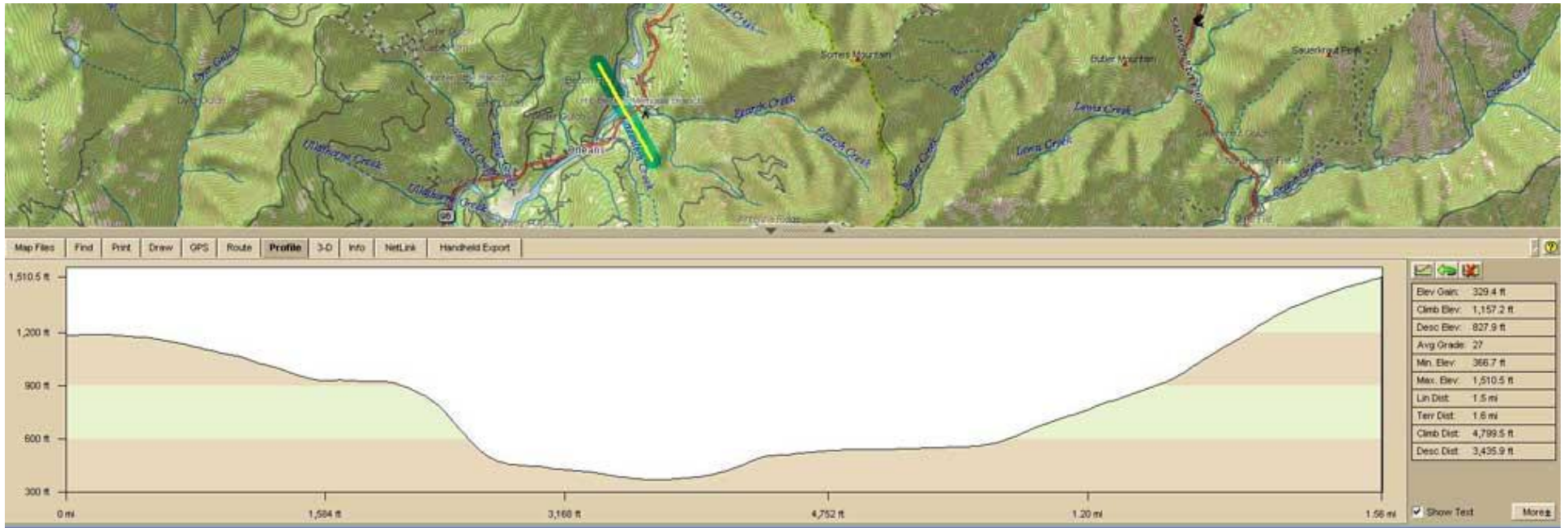


Map 14—Profile 8

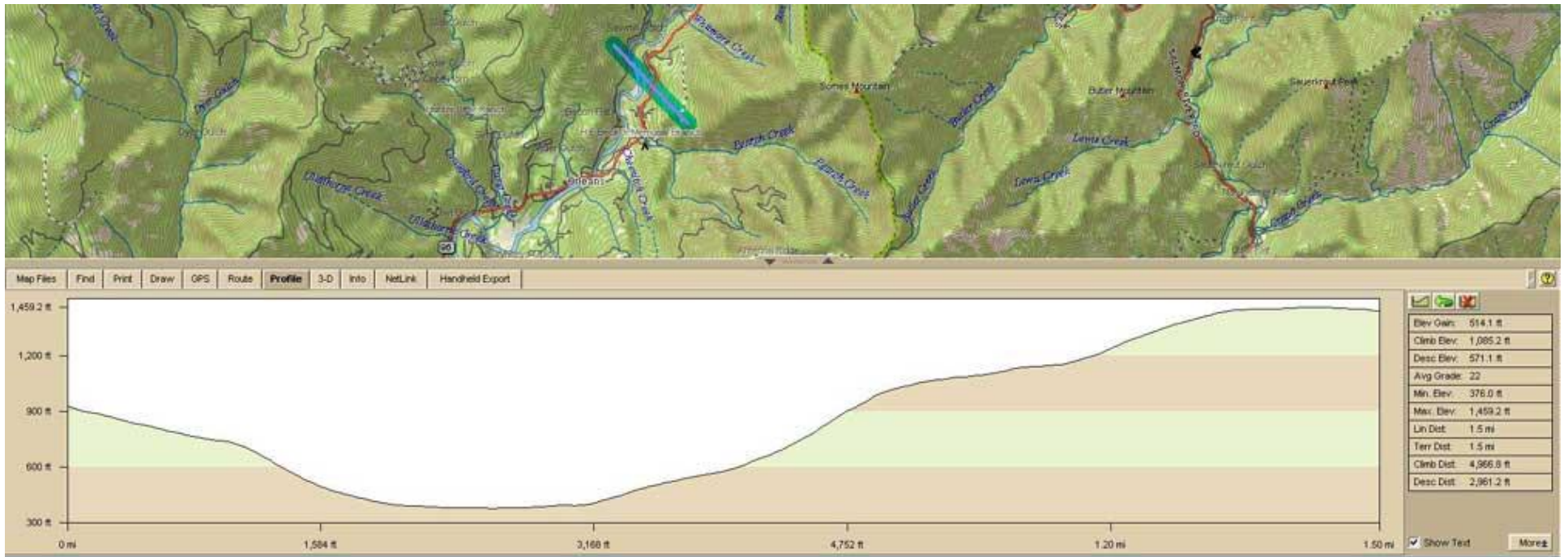




Map 15—Profile 9

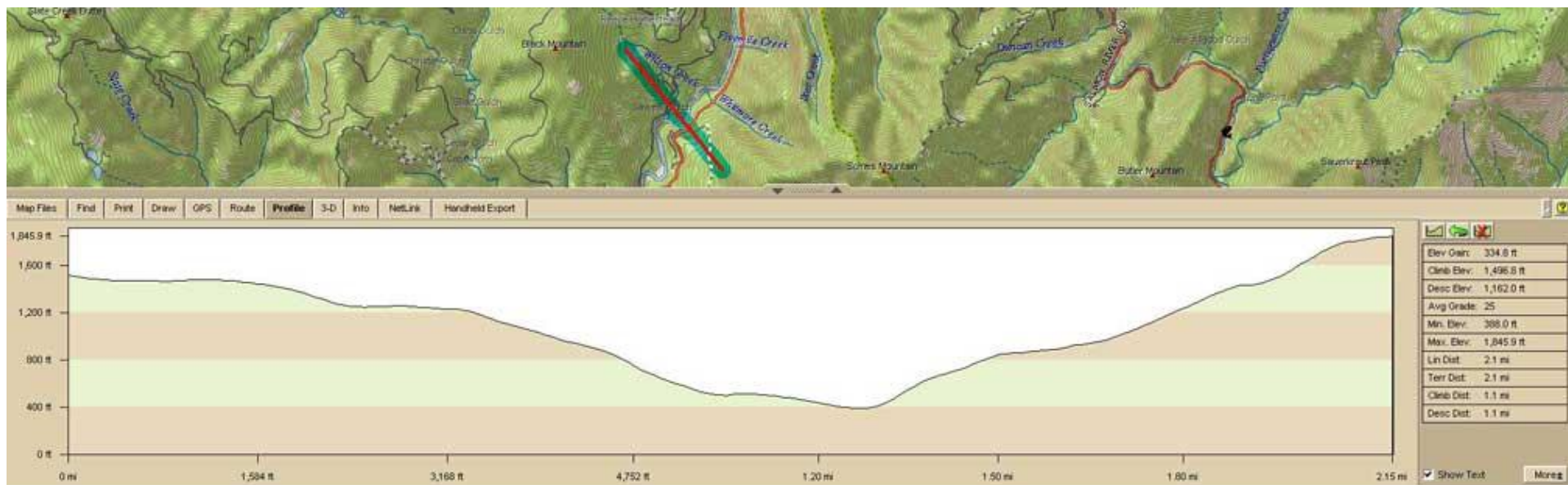


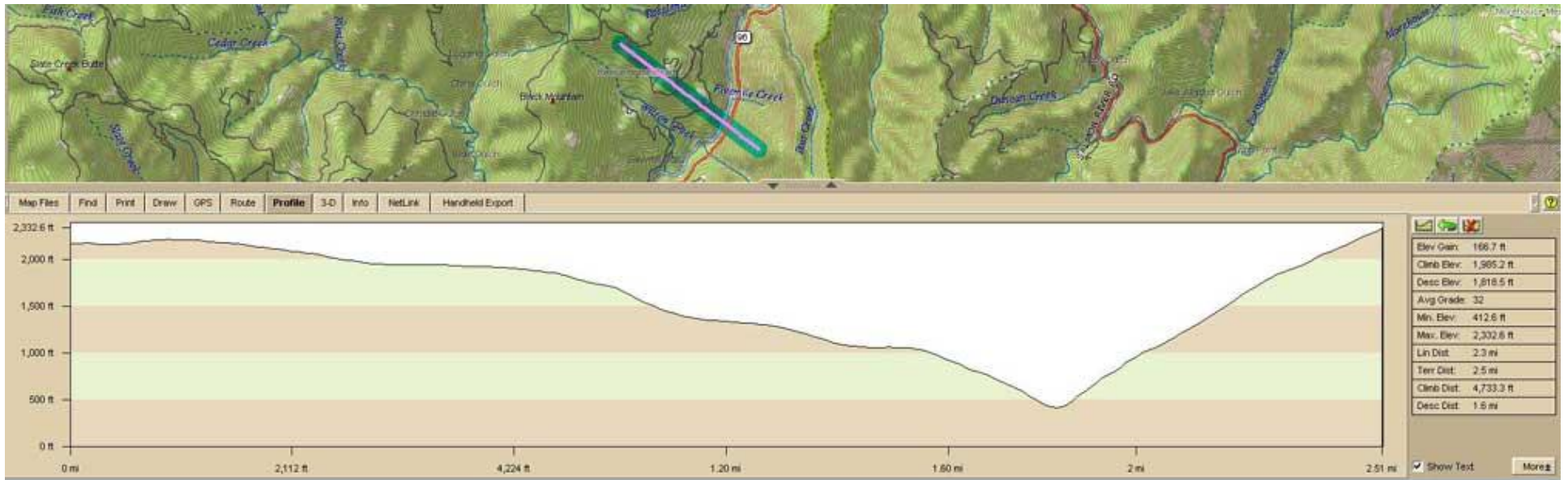
Map 16—Profile 10



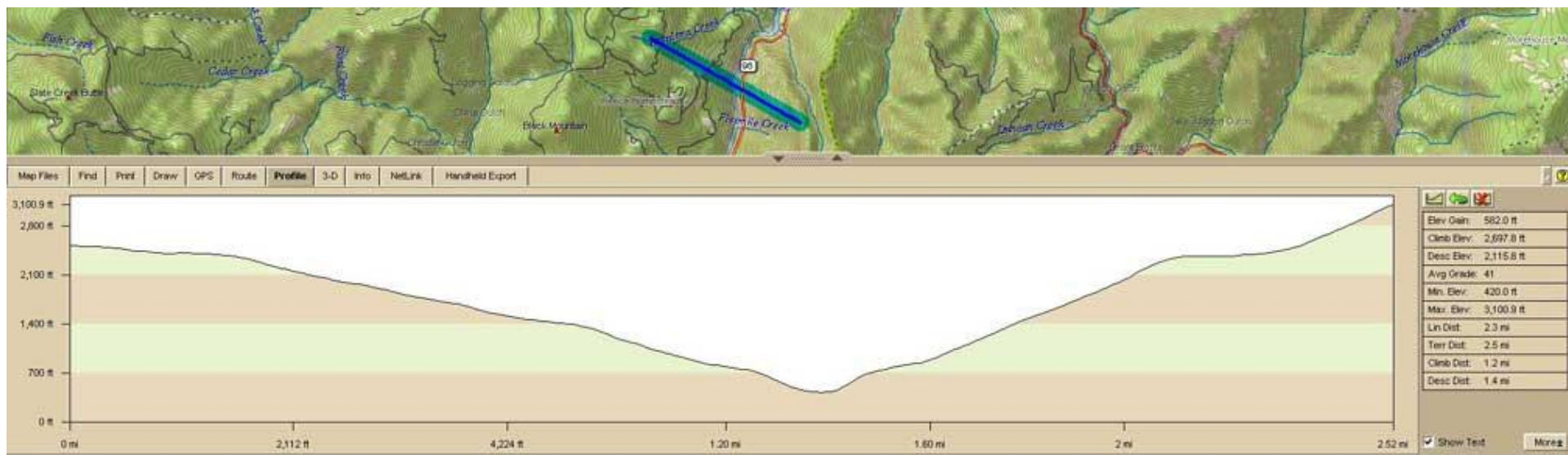
Map 17—Profile 11





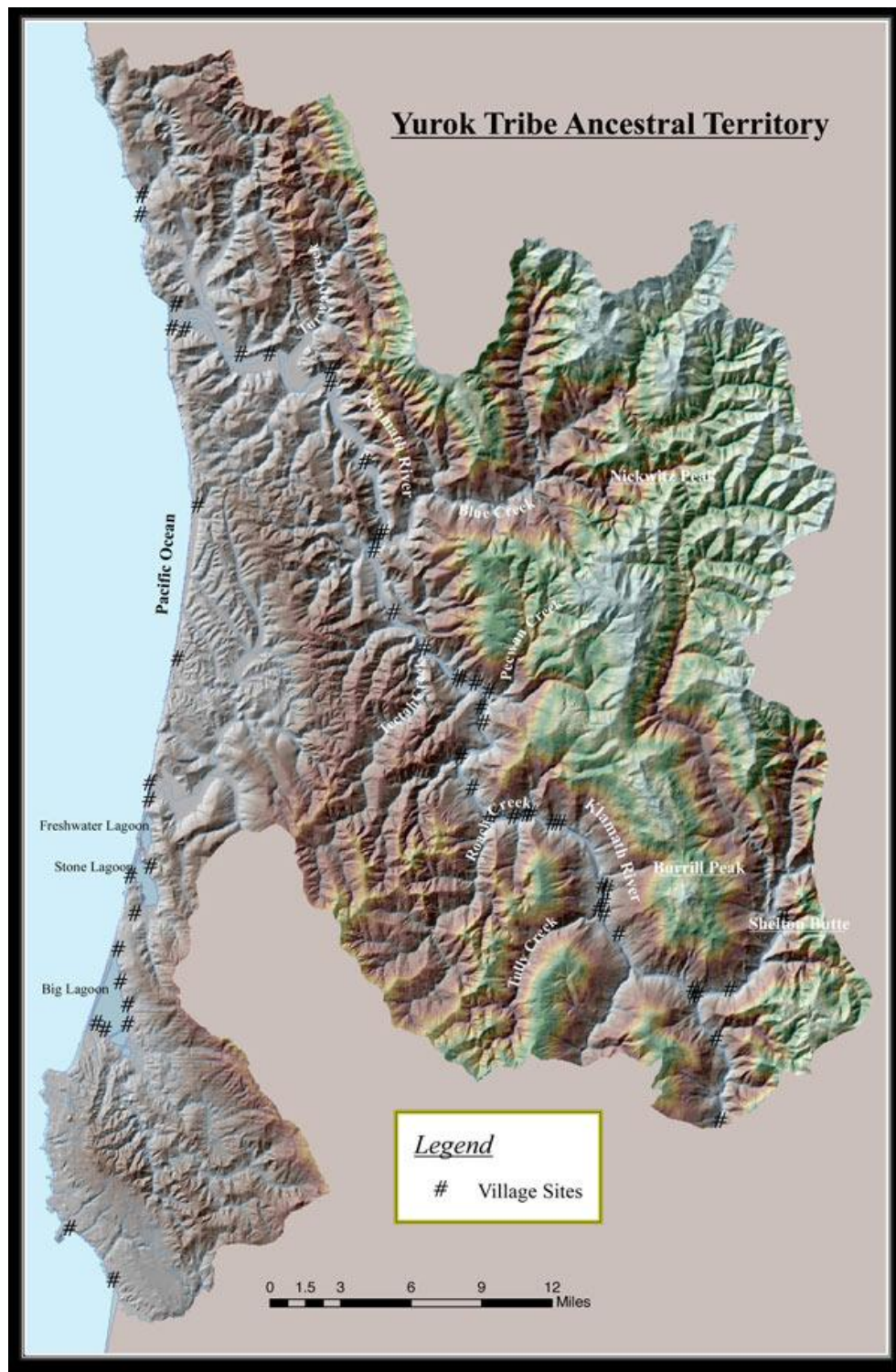


Map 19—Profile 13



Map 20—Profile 14

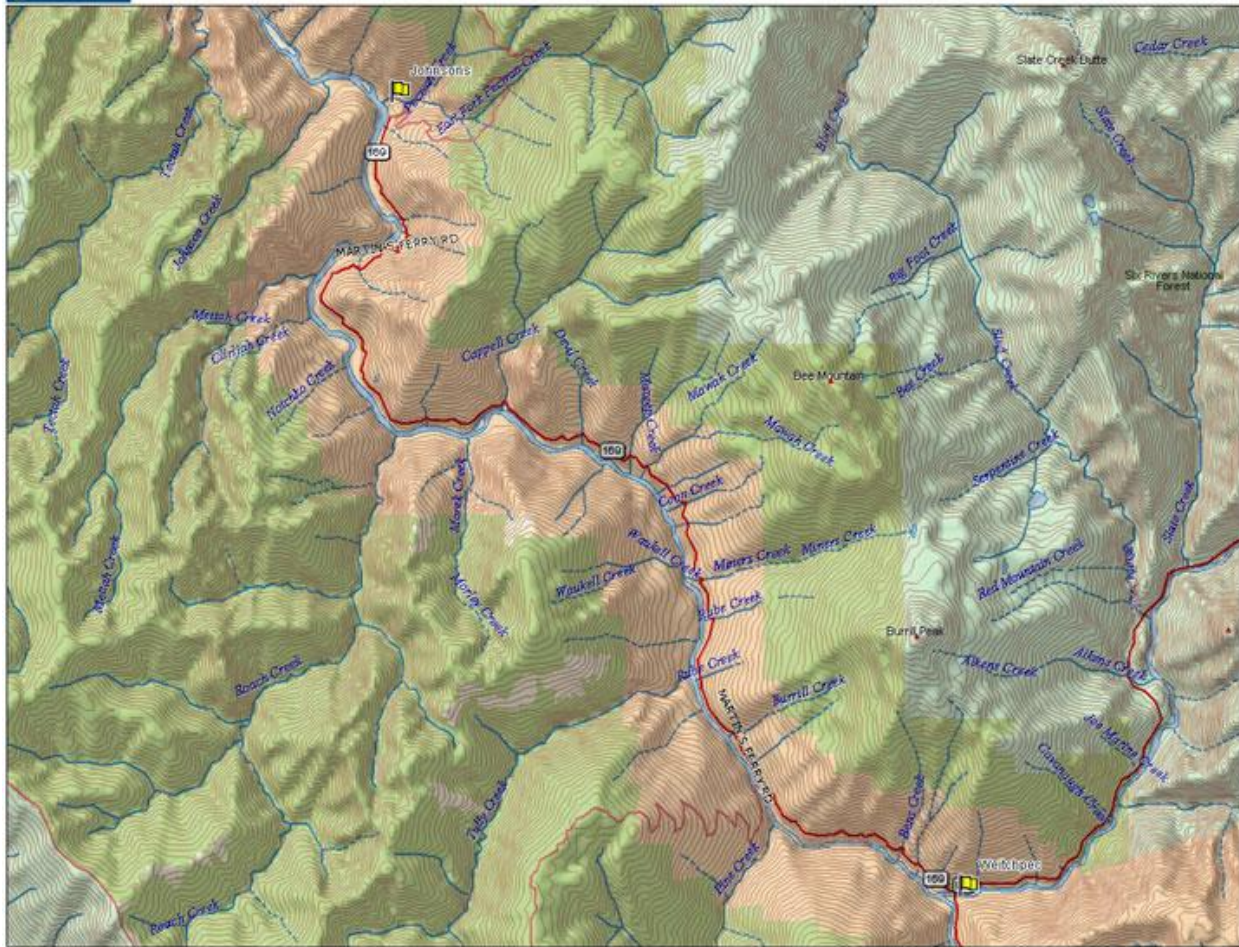




**Map 21—Yurok Ancestral Territory**







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www.delorme.com



**Map 23—Weitchpec to Johnsons**



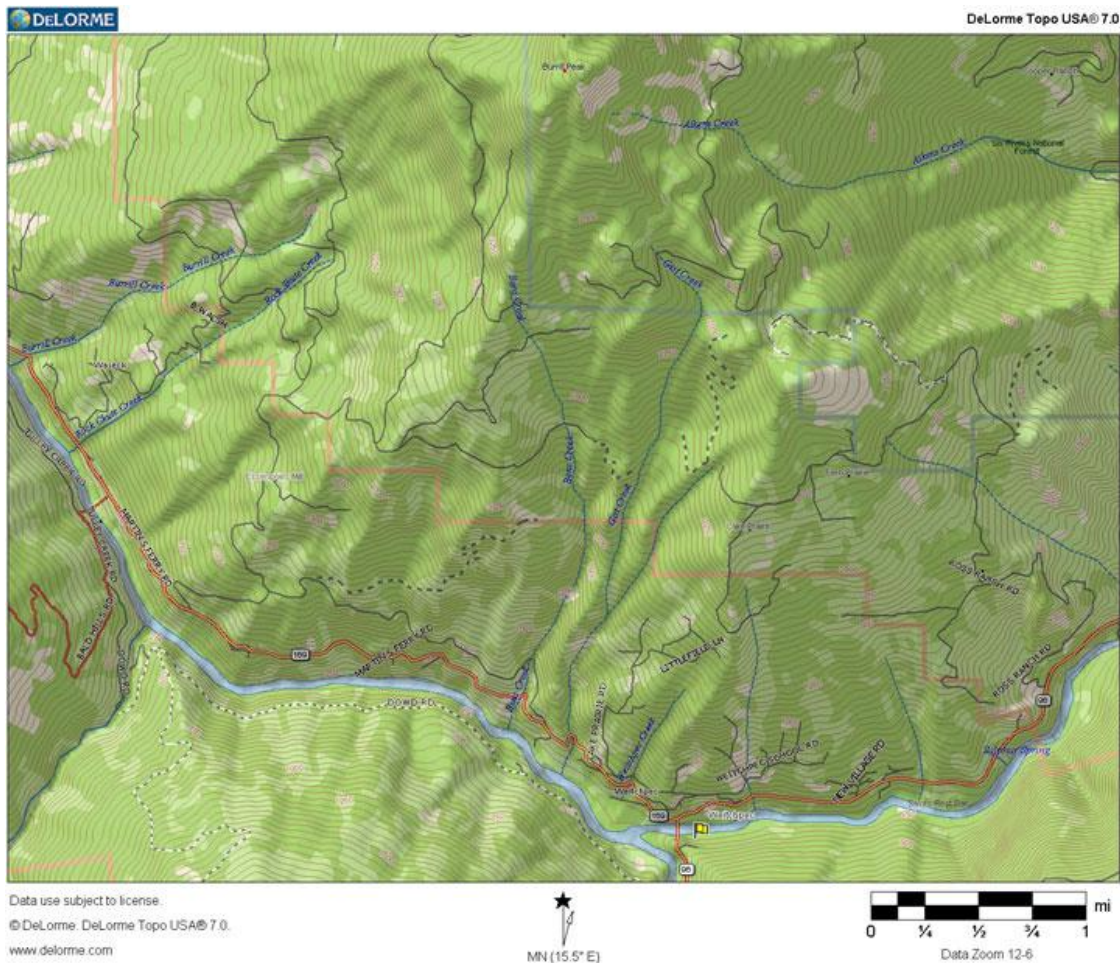


**Map 24—Weitchpec to Johnsons Aerial Photo**





**Map 25—Weitchpec Aerial Photo**

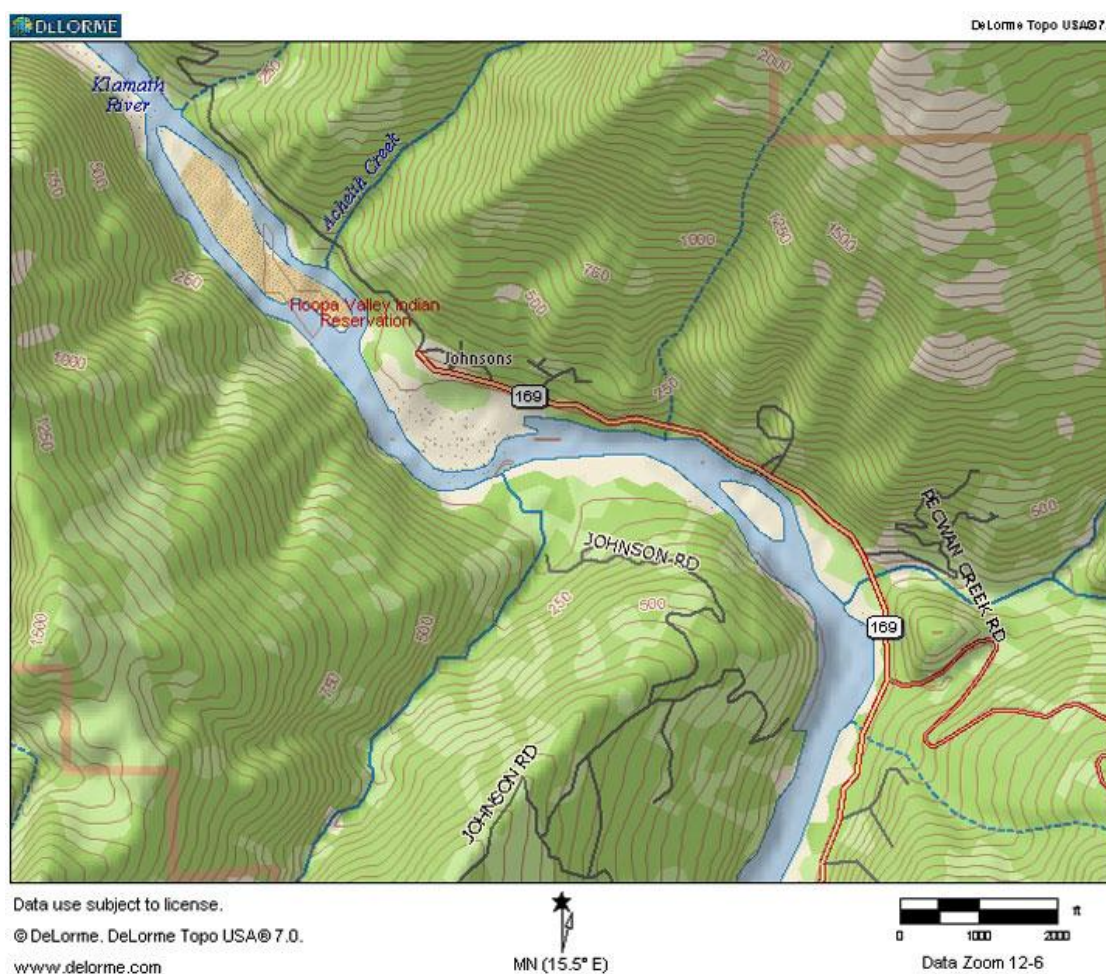


**Map 26—Weitchpec Detail Topological Map**

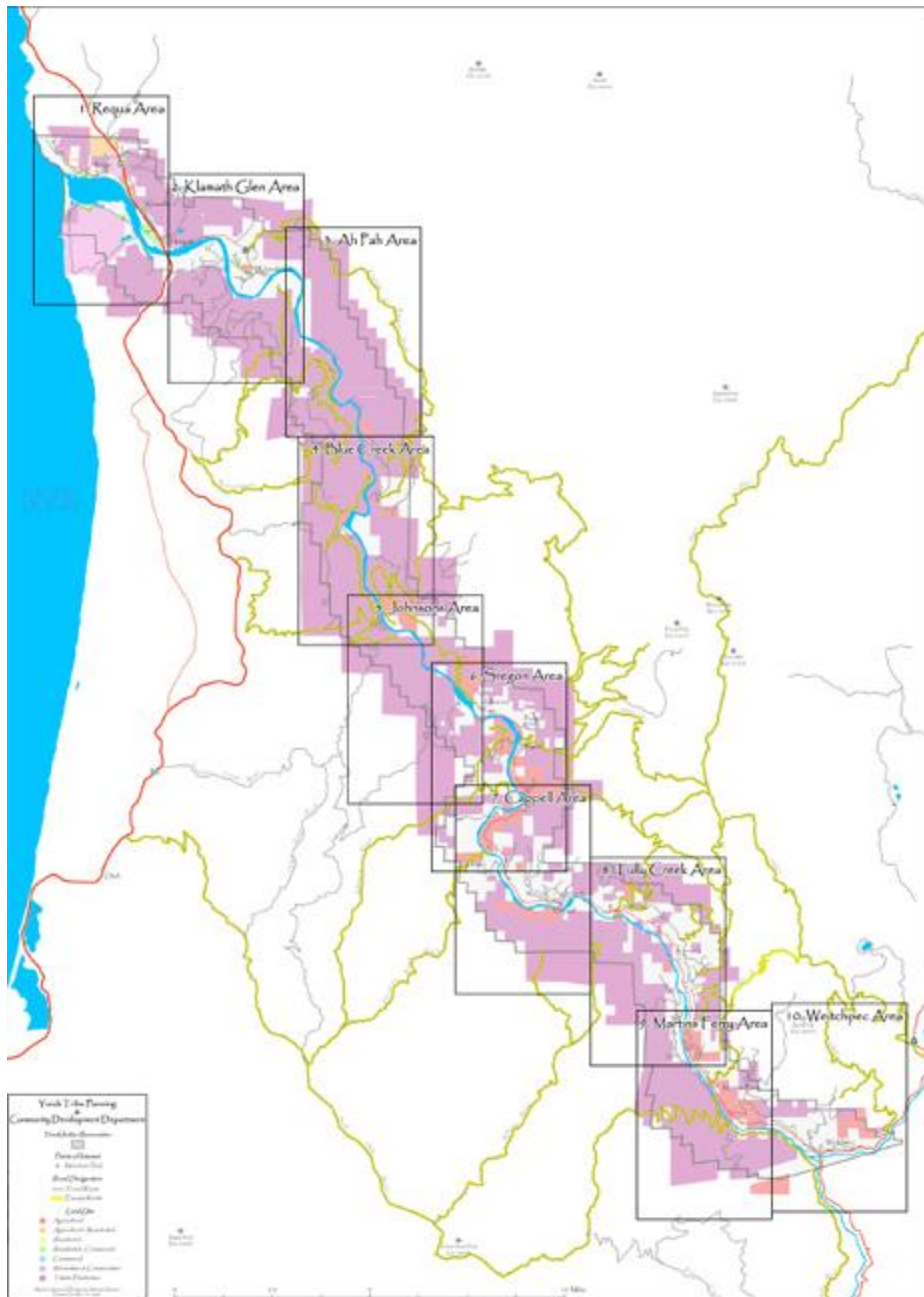




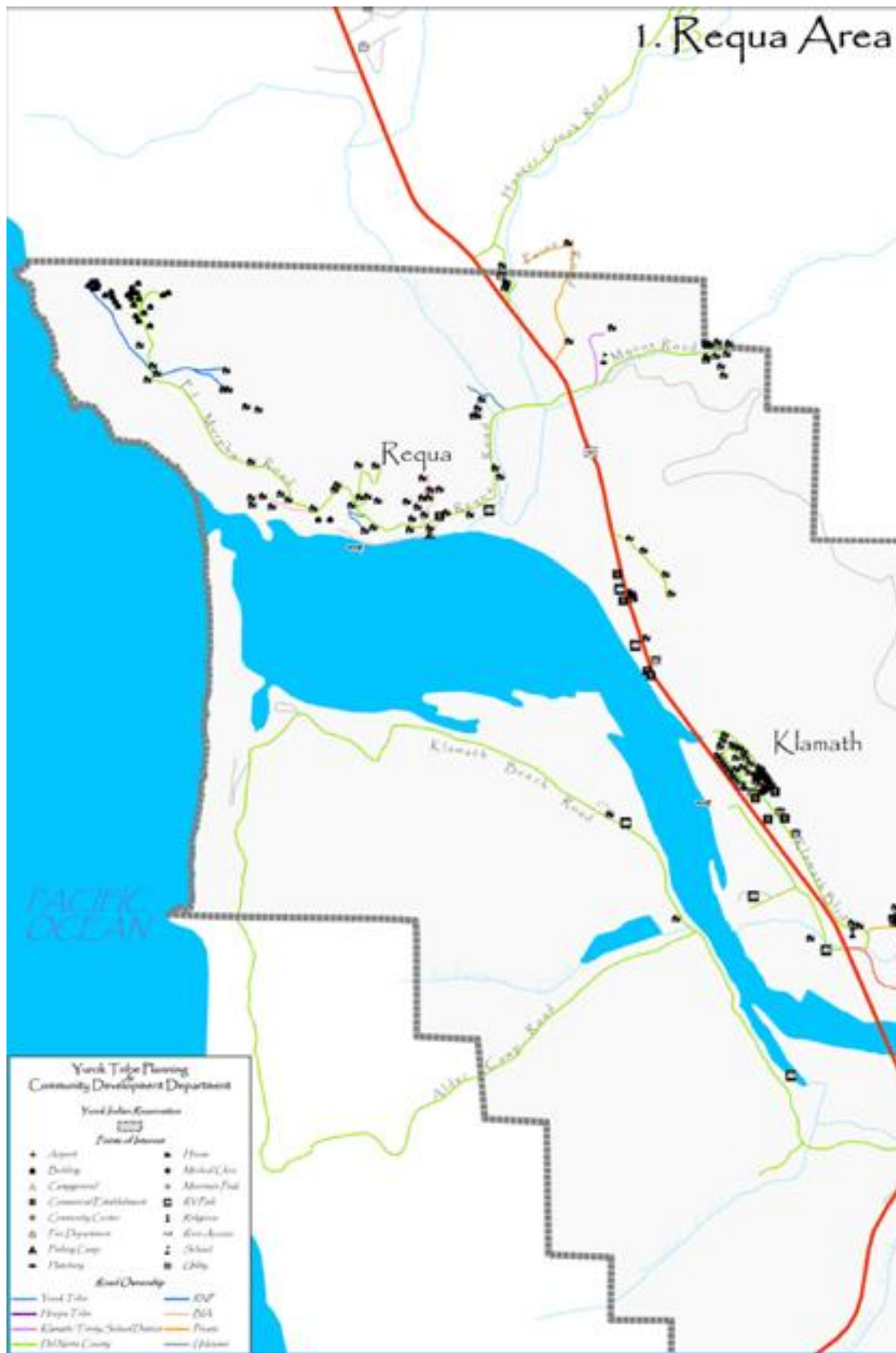
**Map 27—Johnsons Aerial Photo**

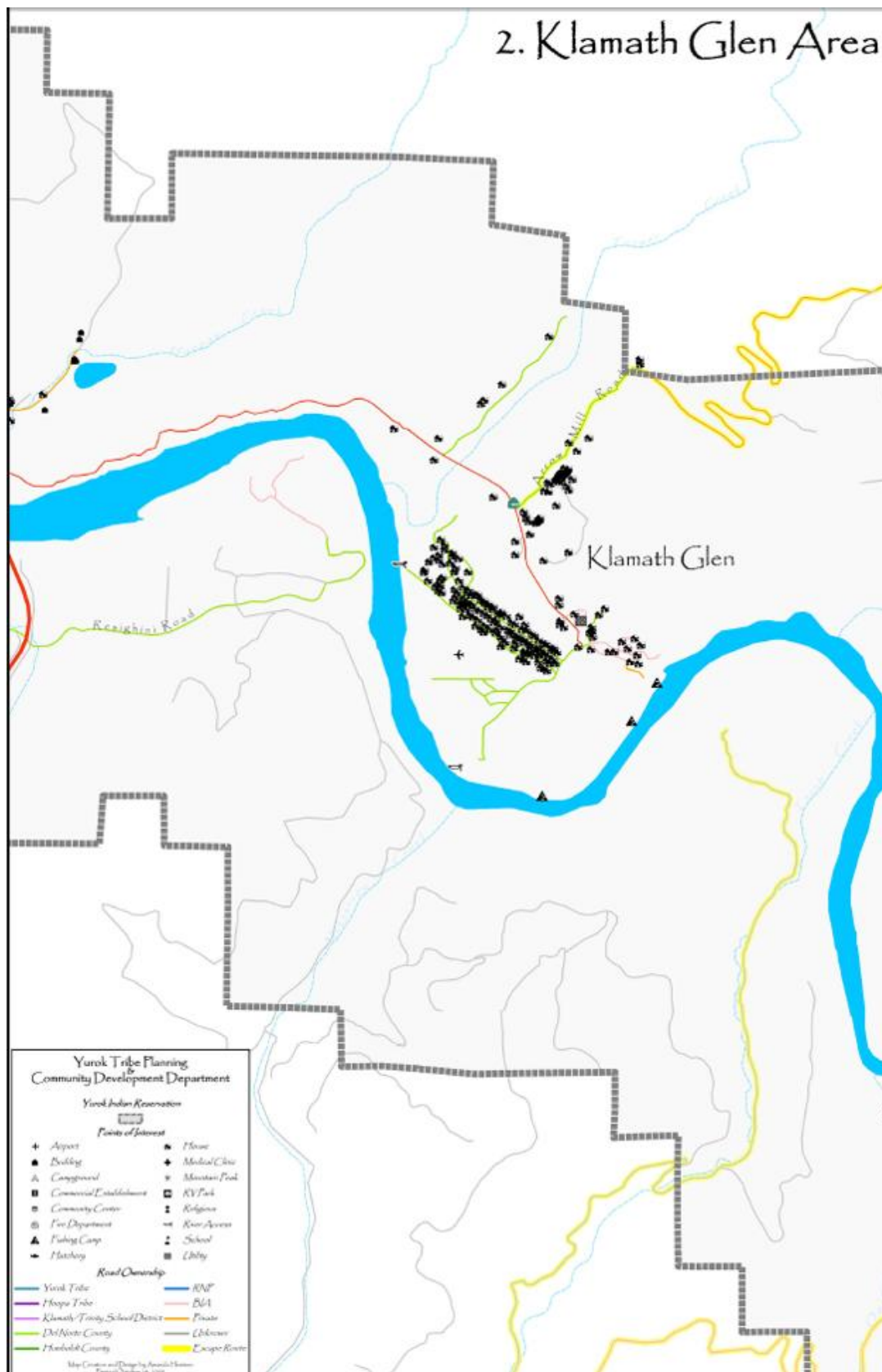


**Map 28—Johnsons Topological Map**

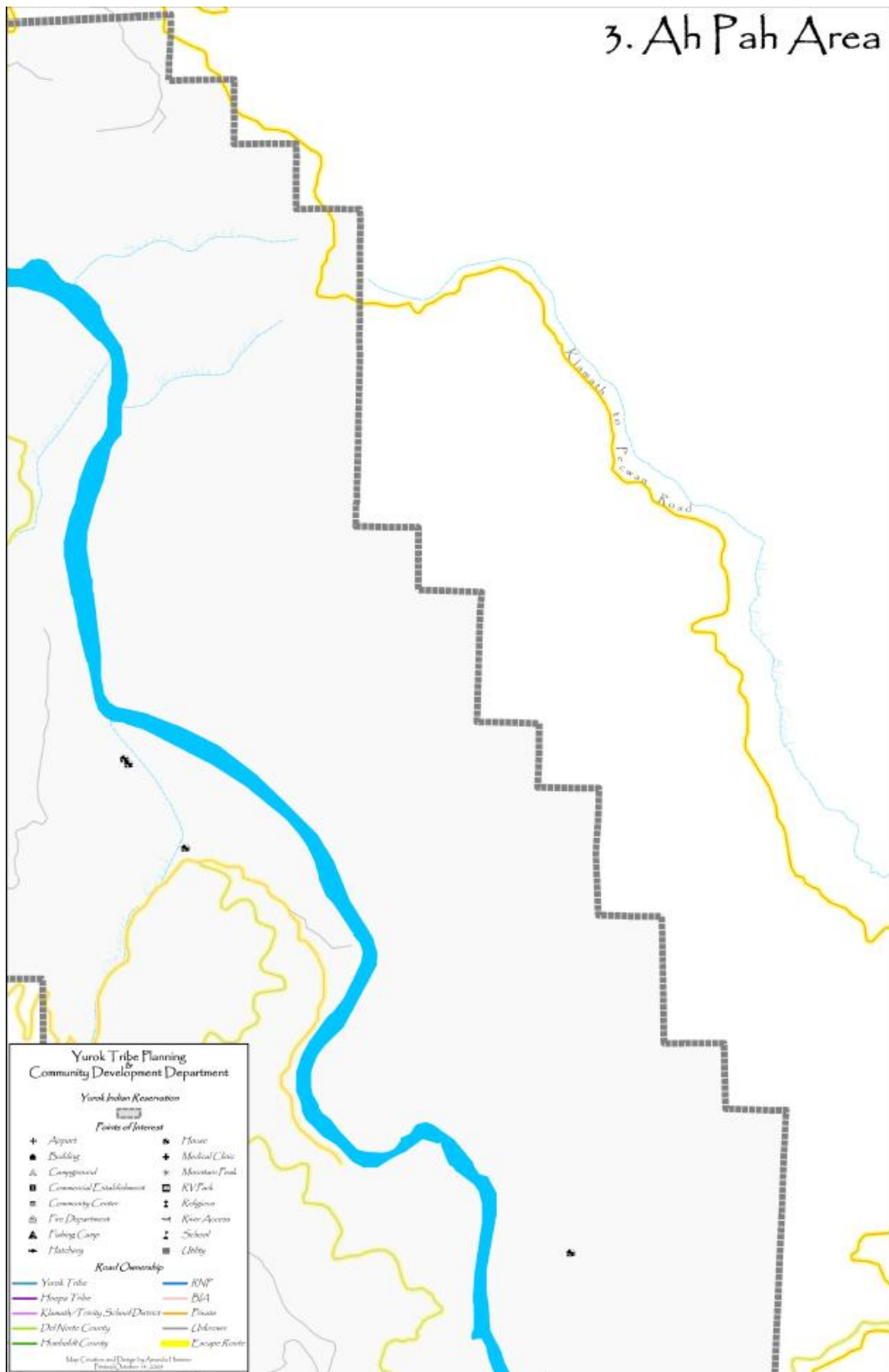




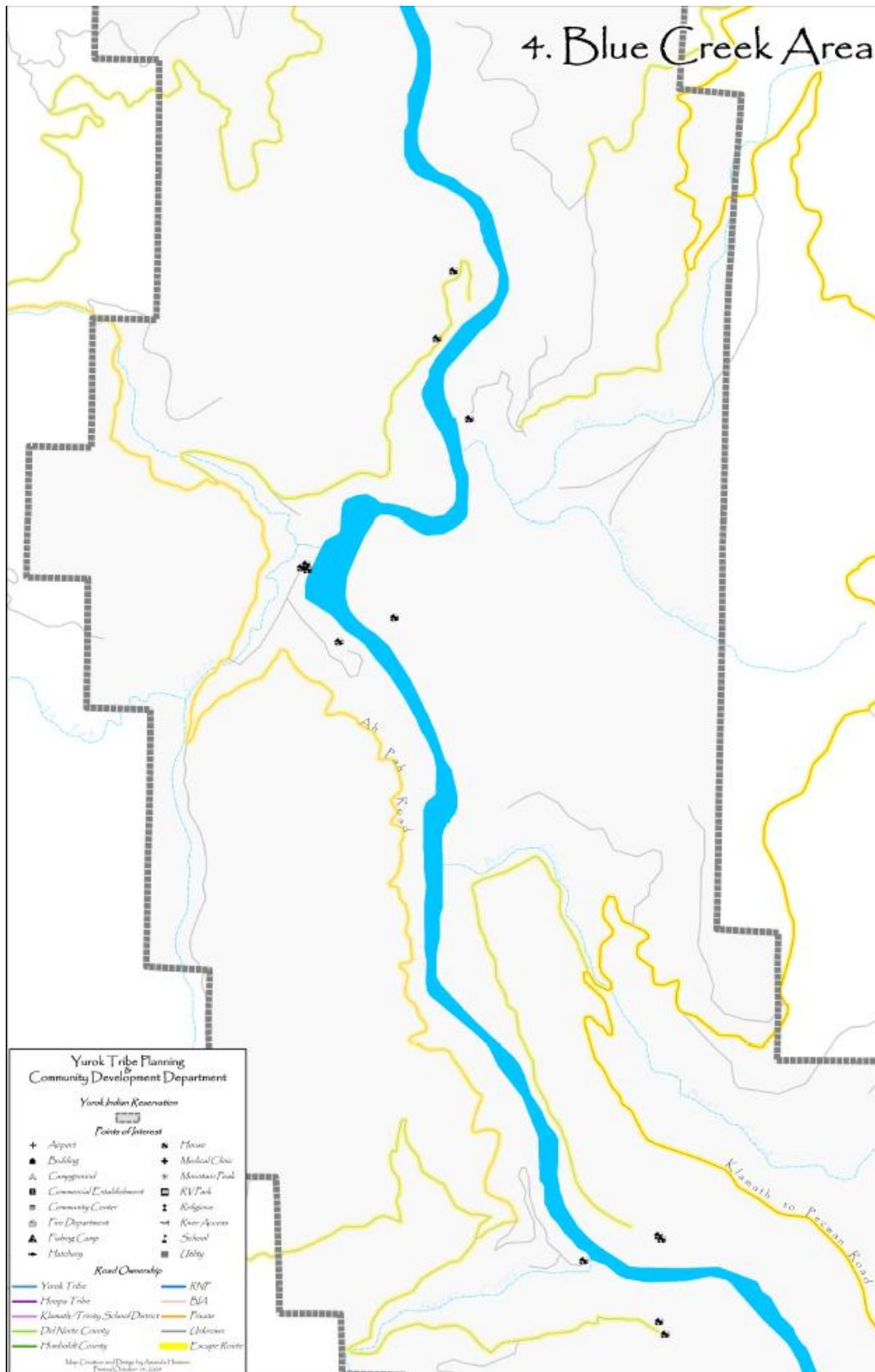




**Map 31—Klamath Gen Area**

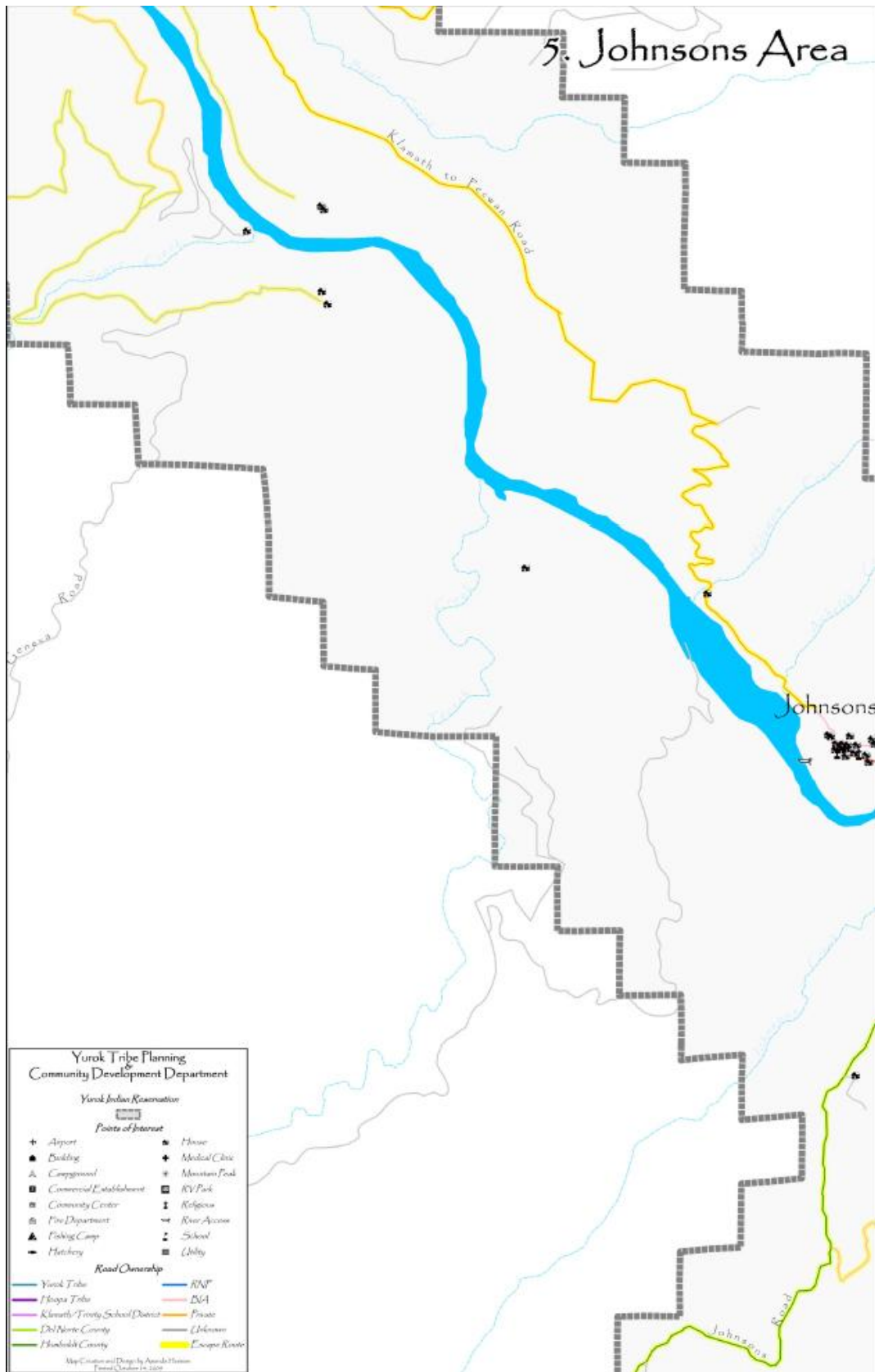


Map 32—Ah Pa Area

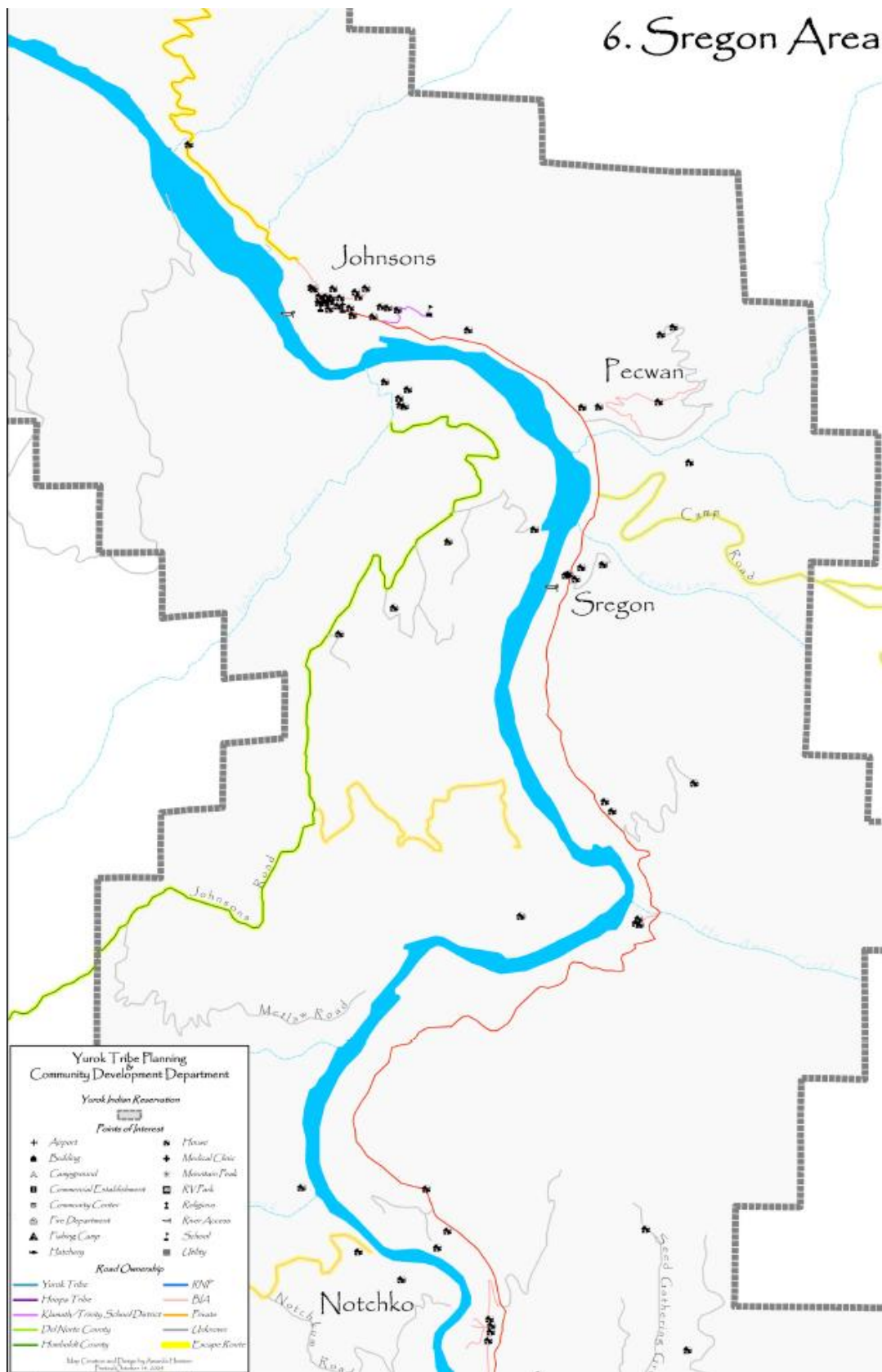


Map 33—Blue Creek Area



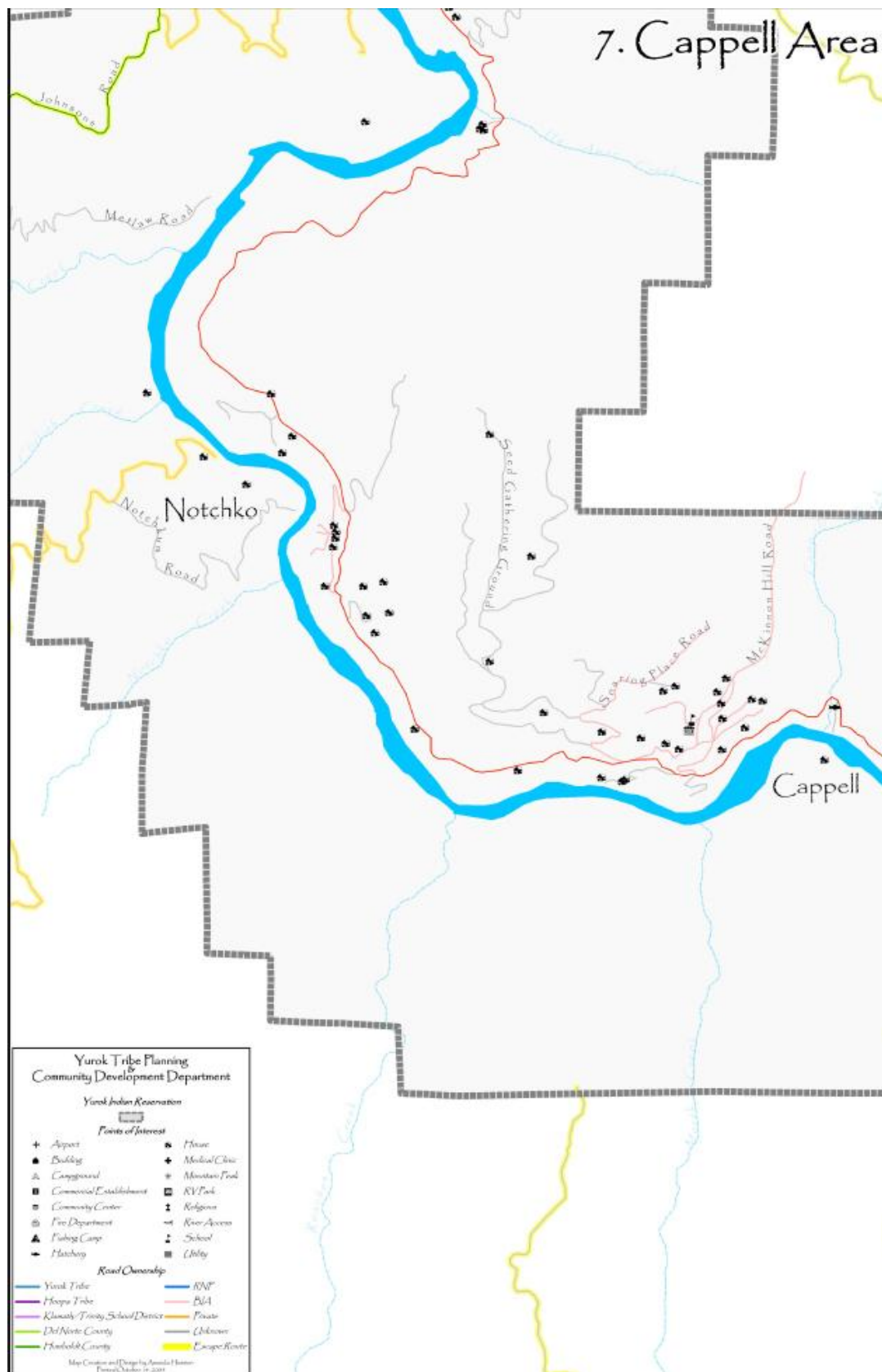


**Map 34—Johnsons Area**

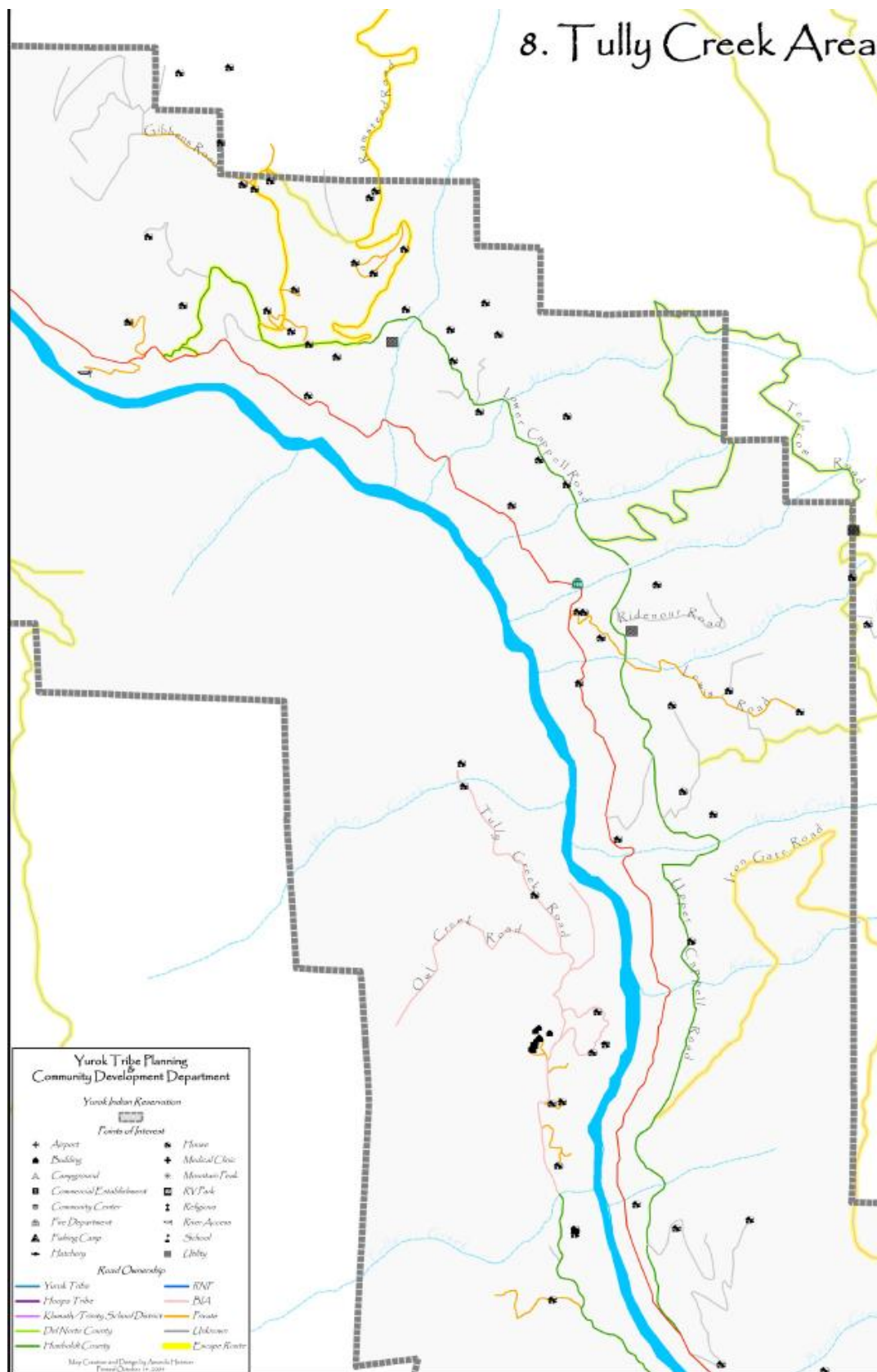


Map 35—Sregon Area

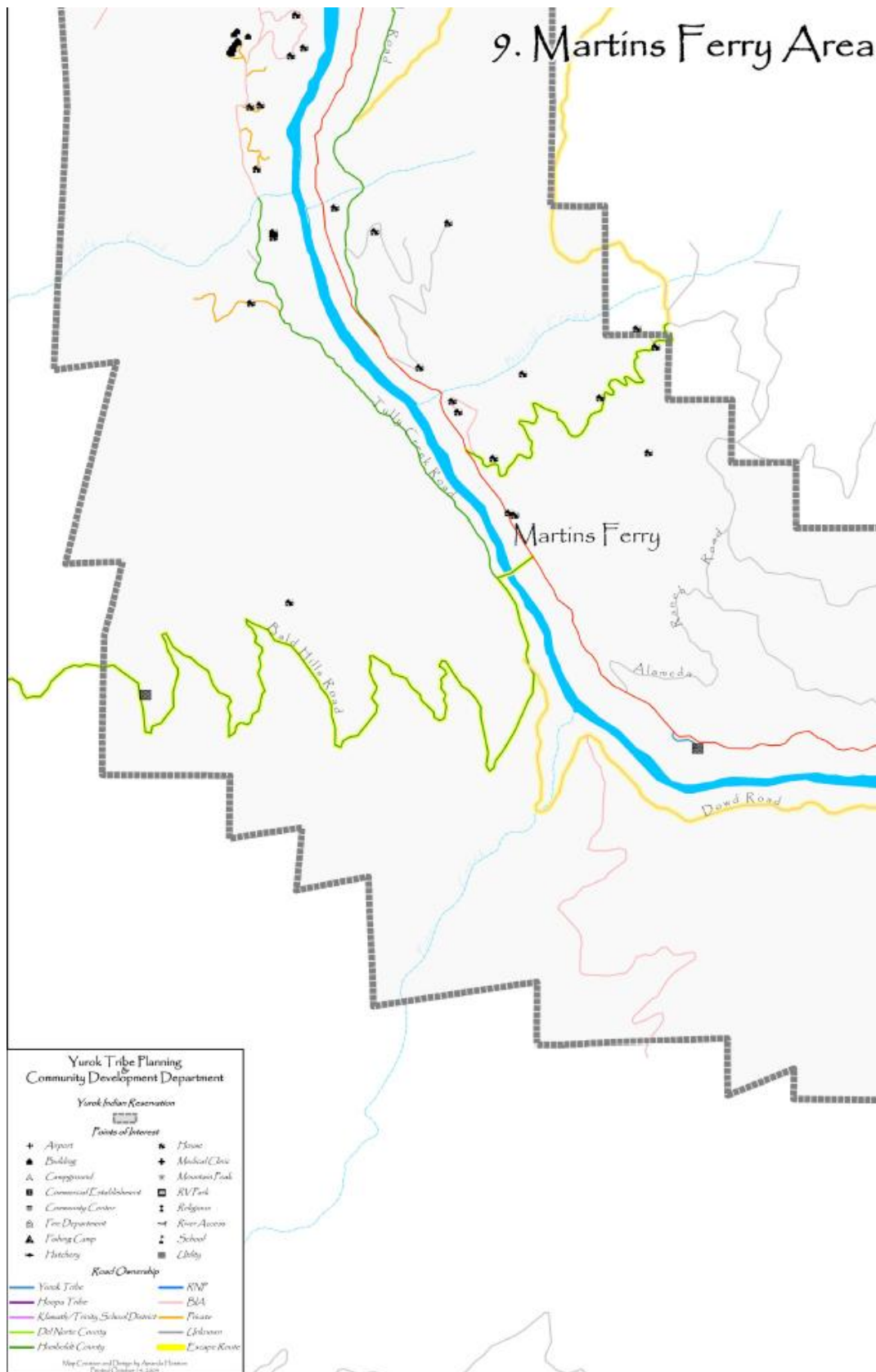


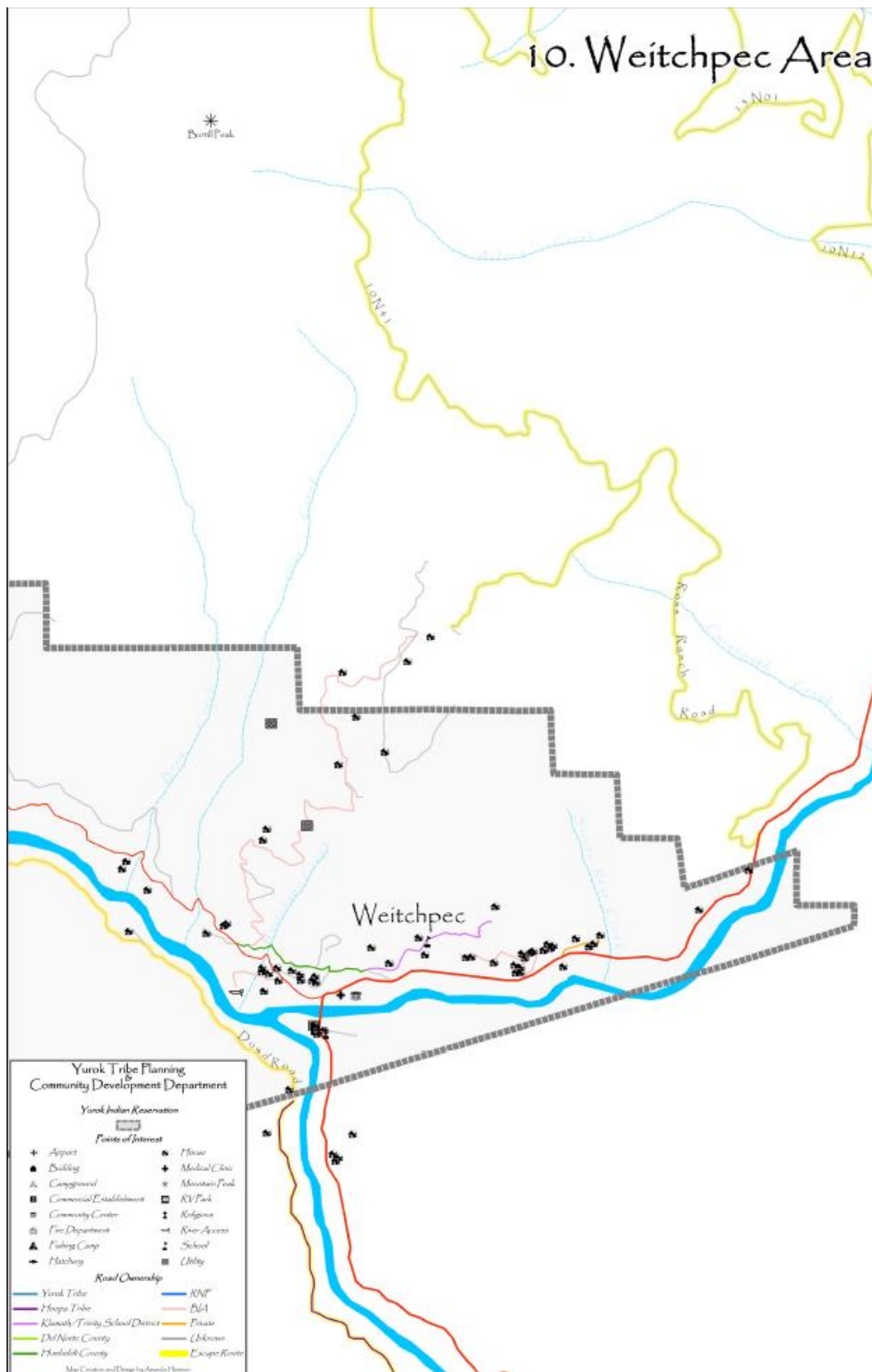


**Map 36—Cappell Area**



Map 37—Tully Creek Area





Map 39—Weitchpec Area

## Infrastructure Considerations

### Route investment

<b>SR 96 Fiber Segments</b>	<b>miles<sup>20</sup></b>	<b>Est. middle- mile investment \$40/foot</b>	<b>Est. middle- mile investment \$30/foot</b>	<b>Est. middle- mile investment \$20/foot</b>
Orleans to Weitchpec (from End of SiskiyouTel fiber on Ishi Pishi Road)	18			
• End of SiskiyouTel fiber on Ishi Pishi Road to Orleans	3.2			
Weitchpec to Hoopa (Verizon fiber)	10			
Hoopa to Willow Creek	14			
Total estimated build miles – use Verizon	32	\$6.8 MM	\$5.1 MM	\$3.4 MM
With 80% grant, 20% match =		\$1.4 MM	\$1.02 MM	\$.7 MM
With ARRA 80% + CASF 10%, match =		\$.68 MM	\$.51MM	\$.34 MM
Total estimated miles – overbuild Verizon	42	\$8.9 MM	\$6.7 MM	\$4.9 MM
With 80% grant, 20% match =		\$1.8 MM	\$1.3 MM	\$.98 MM
With ARRA 80% + CASF 10%, match =		\$.89 MM	\$.67 MM	\$.49 MM

**Table 33—SR 96 Fiber Segments**

<b>SR 169 Segment</b>	<b>miles</b>
Weitchpec to Johnsons	20
Weitchpec to end of power poles	14

**Table 34—SR 196 Segments**

<sup>20</sup> Mileage is rounded  
Revised: February 22, 2010

## Estimated revenues

Calculations are based on the combined number of households and businesses. Additional calculations are necessary to examine the break-out between households and anchor institutions.

	30% Take Rate				40% Take Rate				50% Take Rate				60% Take Rate			
	\$30	\$40	\$50	\$60	\$30	\$40	\$50	\$60	\$30	\$40	\$50	\$60	\$30	\$40	\$50	\$60
Monthly rate																
Orleans	2,700	3,600	4,500	5,400	3,600	4,800	6,000	7,200	4,500	6,000	7,500	9,000	5,400	7,200	9,000	10,800
Weitchpec	558	744	930	1,116	744	992	1,240	1,488	930	1,240	1,550	1,860	1,116	1,488	1,860	2,232
Weitchpec to Johnsons	2,097	2,796	3,495	4,194	2,796	3,728	4,660	5,592	3,495	4,660	5,825	6,990	4,194	5,592	6,990	8,388
<b>Total Monthly Estimated Revenue:</b>	<b>5,385</b>	<b>7,180</b>	<b>8,975</b>	<b>10,770</b>	<b>7,170</b>	<b>9,560</b>	<b>11,950</b>	<b>14,340</b>	<b>8,955</b>	<b>11,940</b>	<b>14,925</b>	<b>17,910</b>	<b>10,740</b>	<b>14,320</b>	<b>17,900</b>	<b>21,480</b>
<b>Total Annual Estimated Revenue:</b>	<b>64,620</b>	<b>86,160</b>	<b>107,700</b>	<b>129,240</b>	<b>86,040</b>	<b>114,720</b>	<b>143,400</b>	<b>172,080</b>	<b>107,460</b>	<b>143,280</b>	<b>179,100</b>	<b>214,920</b>	<b>128,880</b>	<b>171,840</b>	<b>214,800</b>	<b>257,760</b>

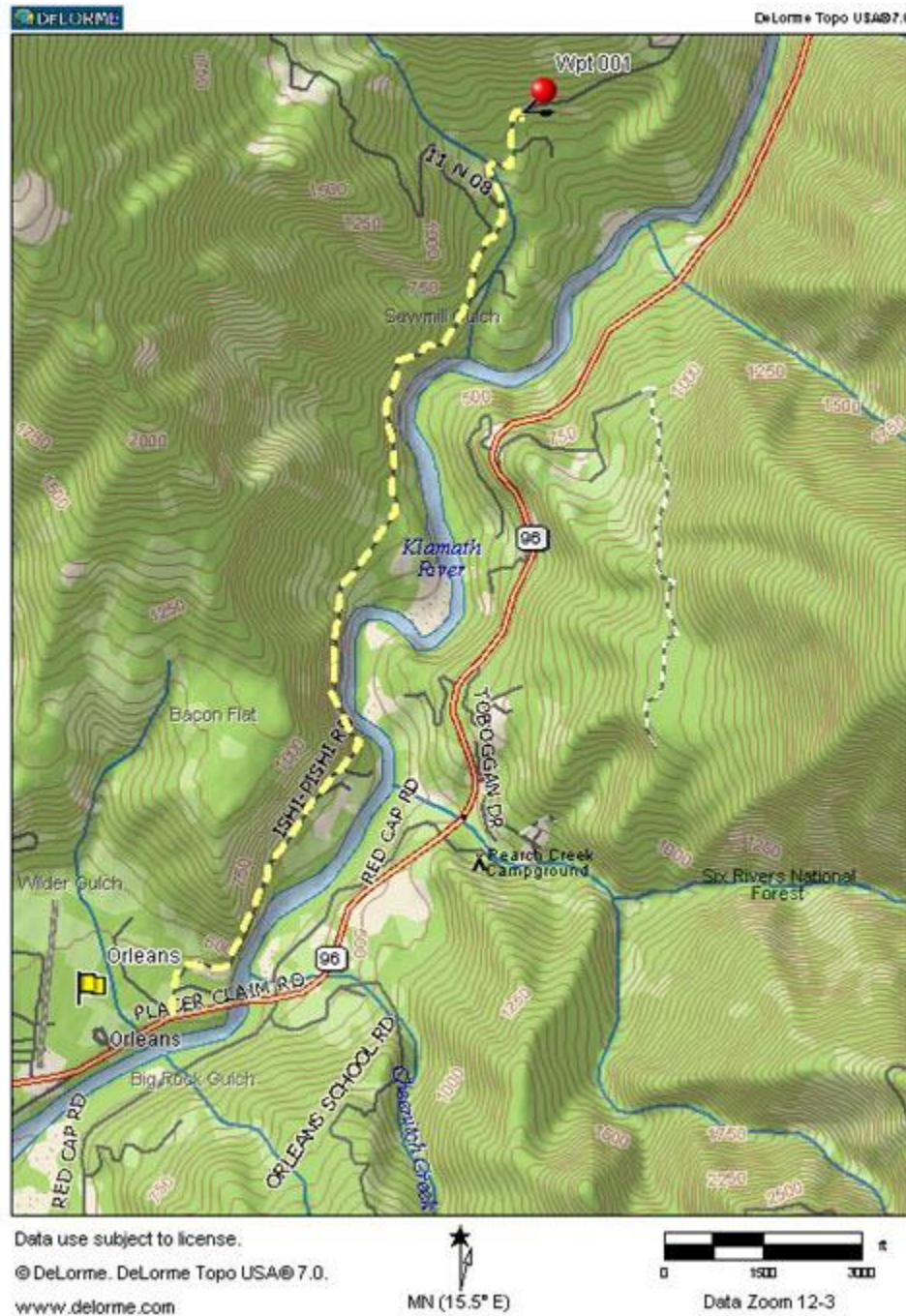
<b>Households/Businesses:</b>	
Orleans	300
Weitchpec	62
Weitchpec to Johnsons	233

*NOTE: The additional revenue dollars from Hoopa need to be added to the table to get the full contribution for the SR 96 project.*

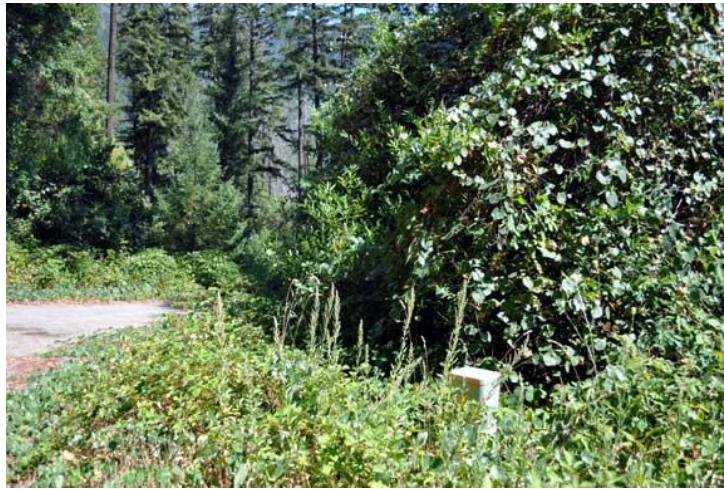


Notes from field observations:

- 3.2 miles to Intersection with SR 96 in Orleans from last SiskiyouTel fiber locate on Ishi-Pishi Road. The GPS locate for the last observable fiber point is N41 18" 23.1"/W123 30" 39.5" (NAD83).



**Map 40—Orleans to End of SiskiyouTel fiber**



**Figure 31—End of SiskiyouTel fiber on Ishi Pishi Road**

- Power transmission and distribution infrastructure (poles) exist along entire route from Orleans to Willow Creek
- Short telephone poles are also in many places along the route.
- There is Verizon fiber between Hoopa and Weitchpec. Runs from the telephone terminal box near the Klamath Trinity School District Bus garage located off of Loop Road, Hoopa. This line runs from there to Highway 96 and goes north to Weitchpec. Apparently it services the tribal clinic in Weitchpec.



**Figure 32—Verizon fiber from Hoopa Area to Weitchpec Clinic/Yurok Headquarters**

- Housing is clustered into population centers at Orleans, Weitchpec and Hoopa. Hoopa has the most number of residences and buildings followed by Orleans.
- Many live in more rural settings outside of community boundaries along the SR 96 and SR 169.

## Options

### *Middle-mile*

#### Highly desired

- Build fiber on state route 96 to provide internet access for Hoopa, Weitchpec and Orleans.
- Connect local distribution options to the middle-mile using fiber to the premise and/or wireless broadband. Fiber is most desired option.

#### Not as highly desired

- Build a microwave middle mile infrastructure. Modern microwave can be very robust (100 mbps to 2 gbps) but can still be subject to weather conditions. Note: there is no funding provided for purchase of necessary spectrum. It appears that there could be an option to do a capital lease and gain financing that way.
- Connect local distribution options to the middle-mile using fiber to the premise and/or wireless broadband. Fiber is most desired option.

#### Even less desirable but may be a practical alternative to peruse

- Interconnect with SiskiyouTel (if they will be open to the possibility) on Ishi Pishi Road and build fiber to Orleans.
- Connect local distribution options to the middle-mile using fiber to the premise and/or wireless broadband. Fiber is most desired option.

### *Local Distribution*

- Develop local distribution using fiber, wireless broadband or a combination. We currently use a 3 mbps/1 mbps standard. You cannot tell the difference between fiber and wireless at that rate. Wireless can be scalable up to some very high capacity (75 mbps, depending on the technology). Fiber is infinitely scalable.

### *Applicant/Owner*

This category deserves and requires additional analysis.

One approach is the potential for the CSD to play a role in Orleans as applicant/owner or as applicant with a partnership with an owner/operator. Another possibility is for the CSD to be the applicant, initial owner and introduce a buy-out option for the operator to become the owner/operator (note: there are restrictions for sales of plant under the NOFA in round one). There is a huge amount of work to be done here. To our knowledge no one in the state has as yet taken a step using a CSD approach. Orleans' residents did testify in support of passage of the statute.

### Orleans Issues:

- Public computer center up to recently shared a T-1 line subsidized with school e-rate funds. Efforts are now underway to develop an alternate connection.

*"I'm just hoping we can hold on until we get connected through that California Virtual Campus grant I mentioned was delayed. Because of the complexity of connectivity at the broadband rates needed to connect us to CalREN (California Research and Education Network), they hired a Systems Integrator. The California Public Utility Commission has agreed to offset the higher costs of installation through their California Teleconnect Fund (CTF) program. So now, I'm working on a Service Discounts Certification Application*



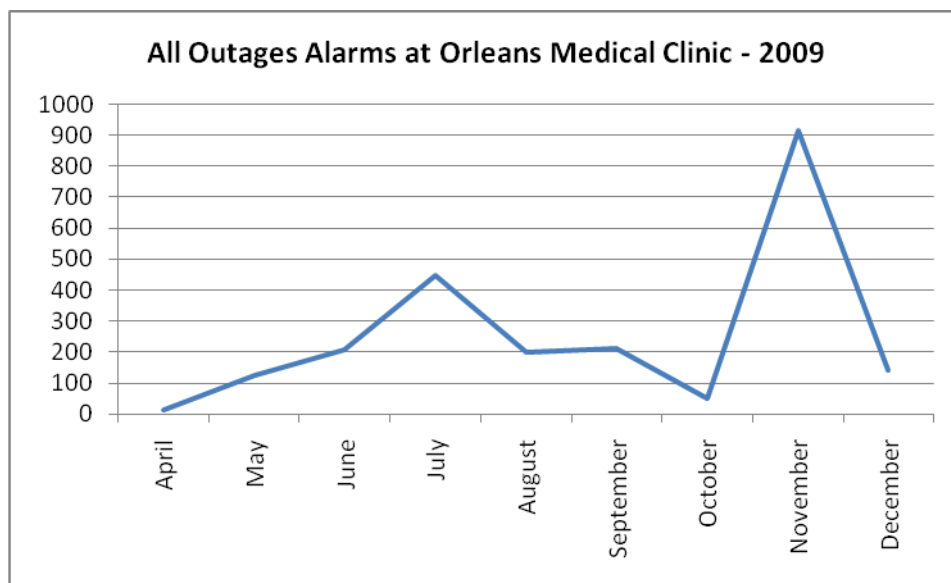
through the CTF. It's basically certifying that we qualify as a Community-Based Organization that provides job training, educational instruction, and a community technology program.

As a part of this application we are required to attach 501(c)(3) IRS documents, explain why the Computer Center's address is different than the Karuk Community Loan Fund (KCLF)'s, and a couple other questions. KCLF is located in Happy Camp.

I'm hoping this will fly, as it will provide us with connectivity for 3 years—at which point we should have our own 501(c)(3), as well as e-rate eligibility.”

Bari Talley  
Student Services Coordinator  
Community Computer Center/Panamnik Library  
459 Asip Road, PO Box 426  
Orleans CA 95556  
530-627-3081

- Telephony service is spotty at best<sup>21</sup>



**Table 35—All Telephony Outages Alarms at Orleans Medical Clinic - 2009**

From April to December, 2009 many interruptions in Verizon phone service were logged. The logging occurred on the Orleans Medical Clinic telephony service. This is a critical public safety issue as 911 service is also dropped. One example of the impact in July was at least one automobile accident occurred with attempts to use the phone system to call 911 thwarted until the next morning!! Similar examples can be given for fire reporting call attempts. This is unacceptable.

- Broadband Adoption funding potential?

Application already submitted for BTOP Sustainable Broadband Adoption funds through Siskiyou County Broadband Consortium, who is partnering with California Emerging Technology Fund for rural Siskiyou County broadband adoption (currently underserved).

<sup>21</sup> Source: Erik Cutright, Kurak IT Director, Happy Camp, CA  
Revised: February 22, 2010

## Karuk Tribe plans for Orleans<sup>22</sup>

The Karuk IT department is seeking to establish a unified reliable network to serve the tribal goals in Orleans, including:

- health care
- internet access
- tribal governance, and
- other needs as they arise.

Today access to the internet and information has become a key resource that simply cannot be neglected. Health care, commerce, communication and entertainment have come to rely on high speed networks, cities and communities have been polarized by their access or lack thereof. The need to consider this resource on par with water, electricity and telephone service only means that rural areas like those of the Karuk Tribe must have reliable access.

The information technology department of the Karuk Tribe has taken this need and using the limited resources at its disposal has planned and begun to implement many network technologies in order to meet these goals. Leasing bare copper from local telephone companies and using DSL technologies to link office across town where no existing data provider exists, communities such as Orleans, California.

In other areas where DSL is no longer serving the growing data needs of the tribe, wireless and fiber optic technologies are being employed. With a look to the future the only viable technology able to serve large data needs for medical imaging, telehealth, electronic medical records and the ever growing library of online resources (e.g., Wikipedia) the only reliable and viable technology will be fiber optics.

In Orleans the Karuk tribe has three buildings on one property that will be/need to be linked via fiber:

- clinic,
- Department of Natural Resources/Fisheries and
- an outbuilding.

Then that compound needs to be linked to the new Housing maintenance shop next to the elementary school, also consisting of three small buildings. That building complex will need to be linked to the senior nutrition center/ Computer center building.

They will be handling a large volume of paperwork online via electronic document management. The facilities need to be in place to handle large amounts of image data. They would like to host training and orientation videos in order to facilitate new hires.

At this time they are utilizing a 4 wire "Telegraph" line (dry copper) from the phone company, because it's the only network across town. Outgrowing the 4mbps that it currently offers will force us to either run fiber or wireless to fill in our bandwidth needs. They have one circuit in place with plans to order a 2<sup>nd</sup>.

Current costs are \$1000 per install of hardware (one time) and \$100 per month recurring. If there were alternatives, such as a local ISP with 4+ meg symmetric service, then they would utilize that infrastructure. They need private networking across town and not just lots of internet connections. If the connections are cheap and fast, then they will use them and use a VPN

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<sup>22</sup> Source: Chris Kleeman, Karuk IT  
Revised: February 22, 2010

structure over the top of the public network. Route path will be considered (i.e., if like happy camp all local traffic is first backhauled to another location only to be resent back into town, then they will NOT be utilizing that path as it will introduce to many other issue, regarding reliability and security.

Recap 3 buildings on one site, (the current clinic on highway 96) connected to: 1) The Housing maintenance shop consisting of 3 buildings (on highway 96 next to the elementary school) and 2) The Senior Nutrition and meal program facility also housing the Orleans Computer Center



## SR 96 Data from Redwood Coast Connect (RCC) Report

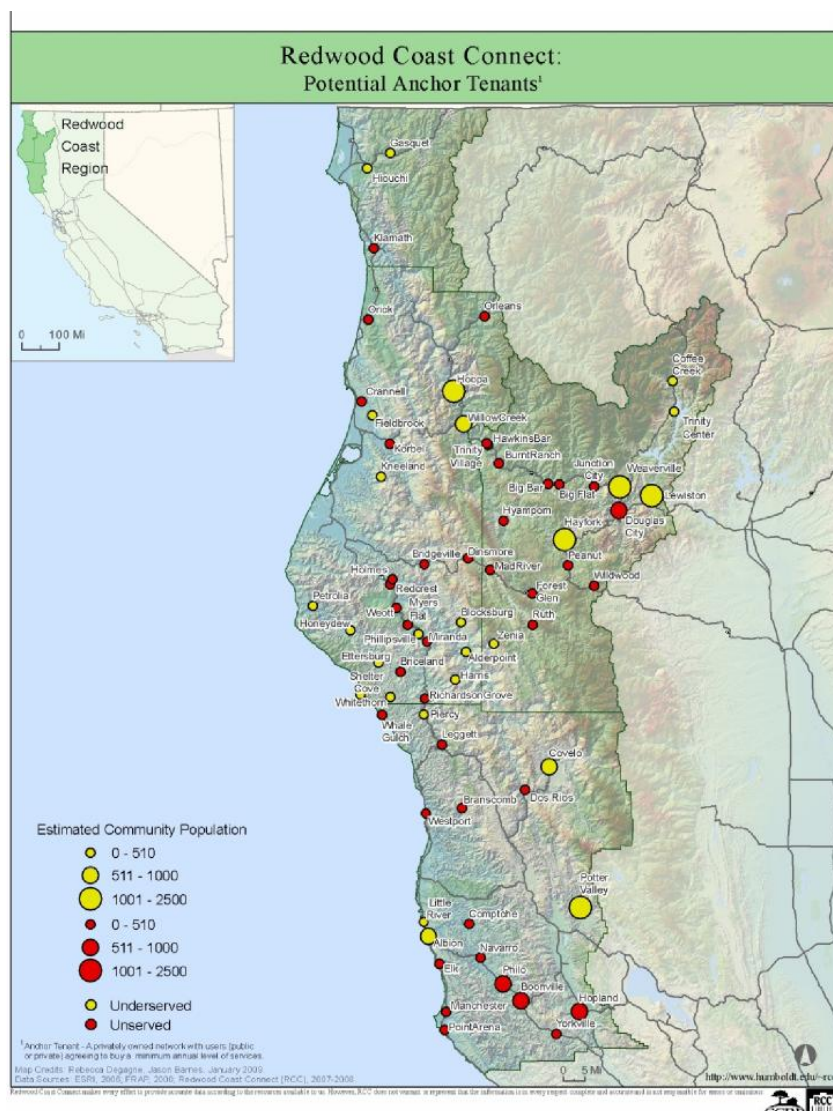
Note: page numbers are references to the RCC Report<sup>23</sup>

### Unserved and Underserved Communities Prioritized by Demand, Supply and Revenues (Humboldt County)

Humboldt County	Estimated Residences	Demand Rank	Supply	Backhaul Needed	Estimated Annual Revenues
Hoopa	1882	High	Low	Yes	247,907
Orleans	270	High	None	Yes	66,554

Page 7

**Table 36—Unserved and Underserved Communities Prioritized by Demand, Supply and Revenues (Humboldt County)**



**Table 37—Potential Anchor Tenants**

Page 9

<sup>23</sup> <http://redwoodcoastconnect.humboldt.edu/?content=docs>

County	Communit	Providers in alphabetical order -	Recent activity/plans in communities
<b>Humboldt</b>	Hoopa	Velocity Technology	CASF application at CPUC
	Orleans	Unserved	Residents have requested meeting with RCC team to talk about possibilities; CASF

Pages 17-18

**Table 38—Redwood Coast Served/Unserved Communities**

### **Humboldt Broadband Supply and Demand by Town**

<div> <div>APPARENT DEMAND</div> <div> <div>High</div> <div>Medium</div> <div>Low</div> <div>None</div> </div> </div>	Briceland Myers Flat Orleans Weott	Alderoint Blocksburg Fieldbrook Hoopa Miranda Whitethorn Willow Creek	Trinidad	Eureka Fortuna Garberville Redway
	Bridgeville	Blocksburg	Bayside Blue Lake Carlotta Hydesville	Arcata Cutten Ferndale Loleta McKinleyville Rio Dell Scotia
	Crannell Orick Phillipsville	Kneeland Shelter Cove		Benbow Fields Landing
	Dinsmore Ft. Seward Holmes Korbel Redcrest Richardson Grove	Ettersburg Harris Honeydew Petrolia		Fernbridge Samoa
	None/Underserved	Low	Medium	High
	SUPPLY			

**Table 39—Humboldt Broadband Supply and Demand by Town**

### 3.5 Humboldt County Supply/Demand Summary

Detailed information on a town-by-town basis is available in Appendix VII.

Humboldt County has approximately 133,000 residents. A total of 47 towns and their surrounding areas were studied. The 2000 Census data show the per capita income at \$17,203 , and the median household income at \$31,226.

#### **Supply Comments**

Humboldt is a county where a denser population and a high level of consumer and business demand have created robust broadband deployment in certain areas. Better - served areas include those with higher populations or those close to areas with higher populations. It is also a study in the stark contrast between the haves and the have-nots owing to typical rural geographical issues. There are still a number of unserved and underserved communities, generally in areas of difficult or isolated geography and/or low populations.

- The results showed that 43% of towns are ranked in the high and medium categories, which cover 89% of the county's population.
- The results showed that 57% of towns are ranked in the low and unserved categories. They include approximately 11% of the overall county population.
- The expense of building and operating backhaul to these isolated areas has precluded local deployment of broadband.

•

#### **Demand Comments**

Survey data showed the following indicators of strong demand:

- Humboldt County has a high take -rate for services when they are available, 61%, which demonstrates a high -level of general community awareness of the importance of broadband and the need for broadband.
- Approximately 23% of the population is without broadband.
- The average price people were willing to pay for residential service was \$31.53.
- Approximately 61% of the towns (97% of the population) were ranked with either high or medium demand, showing a strong understanding of the importance of broadband for both residential and business use.

Page 48-49

### Aggregated Demand in Underserved Communities

Underserve d Towns in Humboldt County	Estimated Residences	Normalized Demand	Demand Rank	Participation	Residential Demand	Business Demand	Leadership
Hoopla	1882	21	High	4	4	3	5
Orleans	270	23	High	5	5	4	5

**Table 40—Aggregated Demand in Underserved Communities**

The normalized demand number includes a balance of factors considered critical to the quick uptake of broadband and a service-provider friendly environment as shown in the table above. Residents and businesses in the underserved areas were the judges of whether they believed broadband was important to them. The data showed a wide variation between underserved communities with high demand and those with low demand. In general, the very small communities that showed no estimated residences (population data could not be confirmed), typically showed little or no demand for broadband services. Fieldbrook was the only exception to this.

The towns with the largest number of estimated residences scored in the medium to high rankings for demand. One notable exception is Orick, which scored low, but in reality has residents and businesses whose demand is high. This is based on

feedback received in June 2008. However, the town has been studied for a number of years, and residents and businesses have grown discouraged because broadband is not forthcoming.

As is typical in the region, there are very few anchor tenants in the underserved towns. A few have schools and state offices, but generally only residential and business broadband services are needed. The exceptions include the following:

- Orleans: winery and USFS

Page 50-51

#### Estimated Market Revenues and Buildout Costs in Underserved Communities

Underserved Towns in Humboldt County	Estimated Residences	Applicable Infrastructure Scenario(s)	Local Loop Capital Needed	Possible New Annual Revenue	Notes
Hoopla	1882	New	\$2,427,145	\$247,907	Requires backhaul
Orleans	270	New	\$581,111	\$66,554	Requires backhaul

**Table 41—Estimated Market Revenues and Buildout Costs in Underserved Communities**

This chart depicts the number of residences in the underserved areas, possible infrastructure scenarios, an approximation of the buildout cost for local loops in the area, and possible new annual revenues if buildout is done. For towns with very small populations, the term *unknown* was used for the number of residences. As such, the local loop cost for that area was unable to be calculated. In some cases, it was known that dedicated line circuits were needed which is reflected in the potential revenue.

The buildout of these towns is dependent in every case (except for Kneeland) on provisioning adequate backhaul to the town. In some cases, additional capacity could be provisioned by fixed wireless providers if enough residences and businesses were willing to sign up together for services. In some cases, an incumbent-owned fiber runs through the town, but residences and businesses are unable to gain access to it (Highway 101). More information on backhaul scenarios can be found in Section 4 of this report.

Page 52-52

#### Differences between the CBTF maps and the RCC maps

California Broadband Task Force (Baker) (Wireline)	Redwood Coast Connect (Wireline and
<p>Broad view of NW California</p> <ul style="list-style-type: none"> <li>• Incomplete – major providers missing</li> <li>• Overestimates coverage due to smoothing and 3km cell size</li> <li>• Does not include WISPs (fixed wireless)</li> <li>• Does not portray backhaul issues</li> </ul>	<p>Detailed view</p> <ul style="list-style-type: none"> <li>• Includes almost all providers</li> <li>• Coverage acquired in numerous ways, from GIS maps to estimates drawn in</li> <li>• Includes WISPs (fixed wireless), which significantly changes the view of broadband connectivity</li> </ul>
<b>Humboldt</b>	

<ul style="list-style-type: none"> <li>Sisqtel coverage (Siskiyou County) shown going downriver to Orleans (Humboldt County)</li> </ul>	<ul style="list-style-type: none"> <li>Coverage does not reach Orleans, which is in Verizon territory, probably due to smoothing and 3km cell sizes; however, it points out a “close by” provider for alternative scenarios. Also provided awareness that smaller telcos provide great DSL coverage</li> </ul>
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Page 63

**Table 42—Differences between the CBTF maps and the RCC maps**

Community Service Districts (CSDs) and SB1191

Thanks to SB 1191, CSDs now have broadband added to the 31 other powers already authorized (water, sewer, streetlights, cemeteries, etc.). For most communities, the first choice for service will be a private provider, such as a phone company, cable company or wireless ISP. However, for those communities too small or too remote who have been waiting a long time, CSDs can offer another option for broadband service. CSDs are trusted community organizations, they have billing systems in place, and as a government entity CSDs can apply for grants to fund up-front infrastructure. CSDs could outsource broadband operations.

There are a number of CSDs on the Redwood Coast that could take advantage of this legislation. The following CSDs are eligible:

**Humboldt**

Orleans

Page 70

California Advanced Service Fund (CASF) Possibilities

During the process of gathering data, the CASF application period was opened. This CPUC fund was created by a surcharge on telephone bills, and is targeted at bringing broadband to unserved and underserved communities in California, many of which are rural. This fund contains \$100 million; funded applications will receive 40% of capital costs for broadband implementation. The RCC team asked all providers in the region to apply, but there were specific unserved areas targeted:

Possible project areas 3/28/2008	County
Orleans	Humboldt
Pecwan/Johnson (no telephone service)	Humboldt

**Table 43—California Advanced Service Fund (CASF) Possibilities**

The following areas were posted on the CASF website over the summer of 2008. By late fall, decisions about funding are expected to be made. Not all of these communities are unserved.

County	Zip Code	City
Humboldt	95546	Hoopa, Weitchpec
	95556	Orleans

Red = unserved

Page 72

**Table 44—CASF website postings by zip code for SR 96**



#### 6. Highway 96 Scenario Capital and Revenue

This scenario connects Highway 299 and Somes Bar, in Siskiyou. In addition, backhaul and last-mile service could be built down river on Highway 196 to Johnson, which has no phone service. Much of this area is tribal land of the Hoopa, Karuk, and Yurok tribes.

Build fiber from Willow Creek to Johnson and to Somes Bar. Provide wireless Internet access in unserved communities.

<b>Total Demand Revenues</b>	
Residential	\$164,578
Business\$	\$11,799
Public	\$36,000
Wholesale	unknown

<b>Estimated Capital</b>	
Backhaul	\$3,341,000
Local Loop	\$ 441,140

<b>Discounted Cash Flow</b>	
w/o public	\$956,822
w/public	\$1,152,409
Est. Subsidy	\$2-2.5 million

Page 87

**Table 45—Highway 96 Scenario Capital and Revenue**

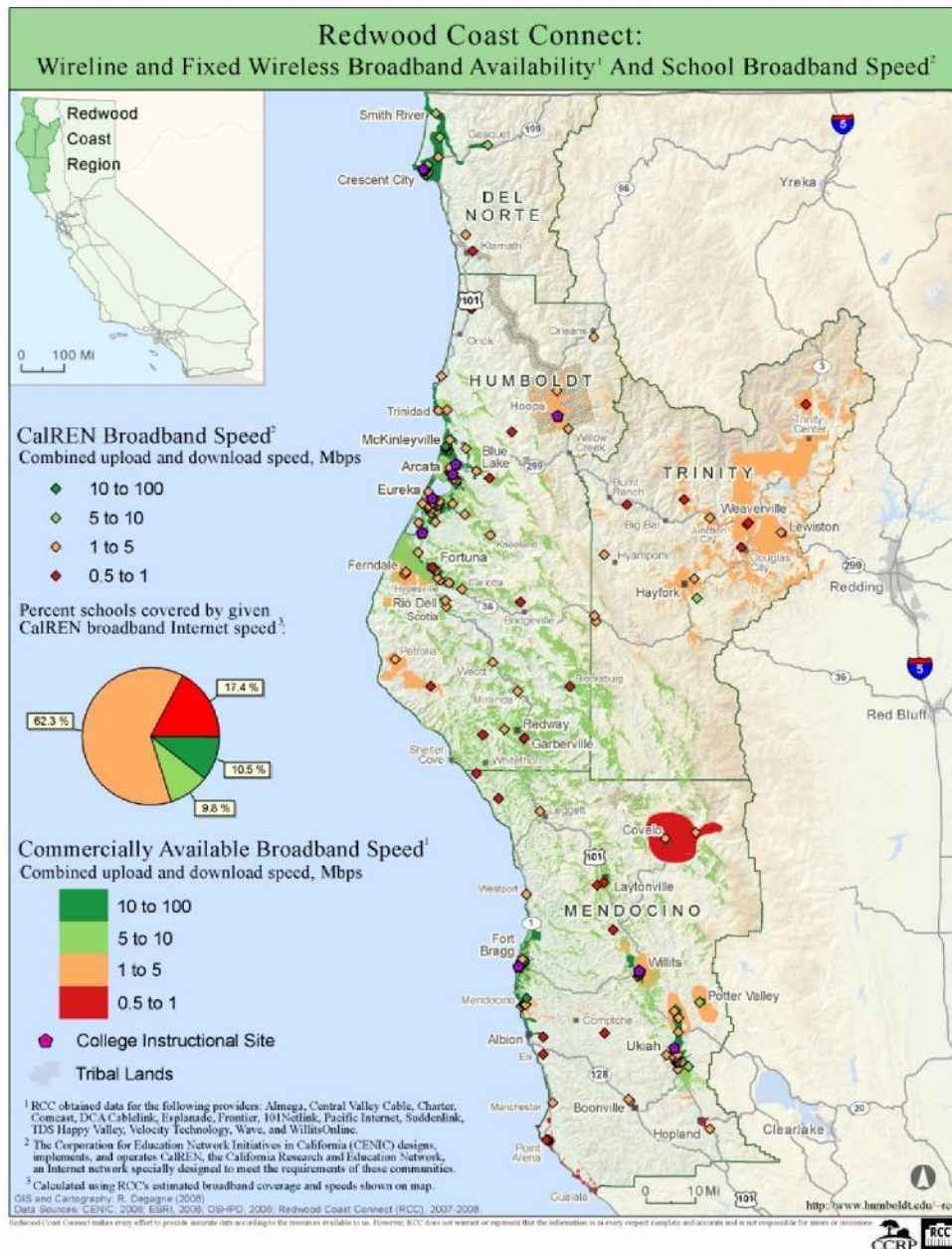
Appendix I. Presentations Given about Redwood Coast Connect

Organization	Date	Presenter(s)
Orleans/Comptche/Orick CSDs - CA Senate Local Government Committee SB1191 testimony	4/2/2008 & 6/4/2008	Tina, Peter, Denice

Page 104

**Table 46—Presentations Given about Redwood Coast Connect**

## Redwood Coast schools



**Table 47—Redwood Coast Schools**

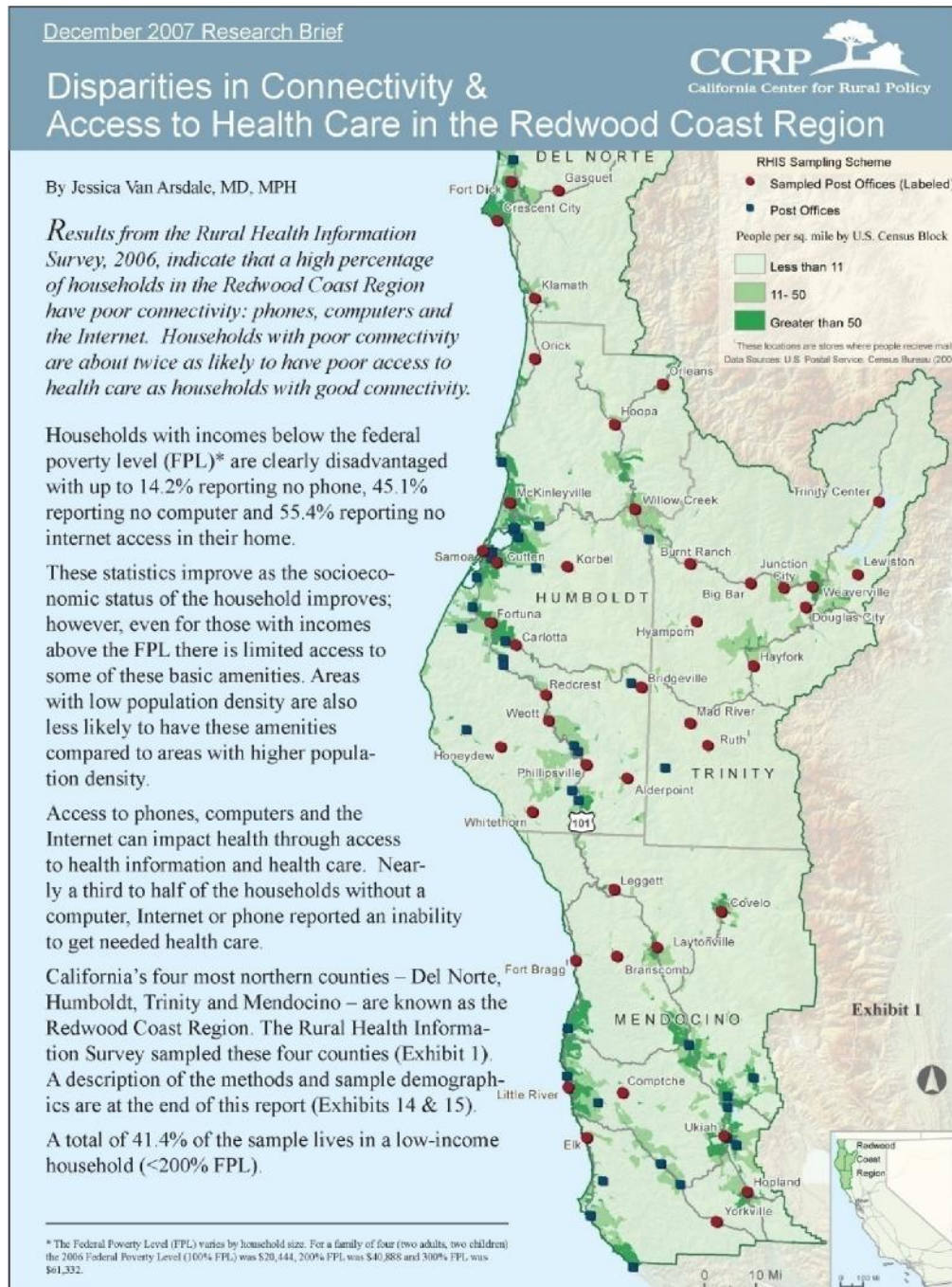


Table 48—Rural Health Survey Map

## Appendix VII. Humboldt Town-by-Town Analysis

### *Supply and Demand Summary*

#### **Hoopa**

The Broadband Supply is LOW. (10 points)

- Wired Broadband Providers: none
- Fixed Wireless Broadband Providers: Velocity Technology
- Mobile Wireless Broadband Providers: Edge/AT&T, Verizon Wireless
- Highest Speed Available from a wired or fixed wireless provider: .768 megabits upload, .768 megabits download (does not meet CPUC 1 megabit upload/3 megabit download recommendation)
- Availability of adjacent coverage outside of town is MEDIUM.

The apparent broadband demand is HIGH based on local interest shown through participation in the RCC project and local leadership in creating broadband demand. (21 points)

*Page 123*

#### **Orleans**

The Broadband Supply is NONE/UNDERSERVED. (0 points)

- Wired Broadband Providers: none
- Fixed Wireless Broadband Providers: none
- Mobile Wireless Broadband Providers: none
- Highest Speed Available from a wired or fixed wireless provider: none
- Availability of adjacent coverage outside of town is none.

The apparent broadband demand is HIGH based on local interest shown through participation in the RCC project and local leadership in creating broadband demand. (23 points)

*Page 125*

Orleans is on the Klamath River in the far northeast corner of Humboldt County, only 8 miles from Siskiyou County. Karuk tribal headquarters are in the area. Orleans has no cellular service. Orleans' telephone service is from Verizon, but DSL is not available. There are no WISPs serving the area. Yet, their neighbors and friends just up the road 8 miles in Somes Bar have DSL from Sisqtel, who provides DSL to almost all their customers in Siskiyou County, no matter how remote. This points out a huge difference in broadband deployment between a small local phone company and a large phone company such as Verizon.

Klamath River and Trinity River communities on the Yurok tribal lands span two counties: Del Norte and Humboldt. There is no direct road connecting the Yurok tribal headquarters in Klamath (Del Norte County) with the other tribal communities up the river – Weitchpec, Johnson, and Pecwan in Humboldt County. None of these communities have broadband available. Further, Johnson and Pecwan (downriver from Weitchpec) have no electricity or landline or cellular phone service. Jack Norton School in Johnson is served by generator power and satellite. Verizon and PG&E have partnered to bring poles and service closer to Johnson and Pecwan, but the gap is still more than 10 miles.

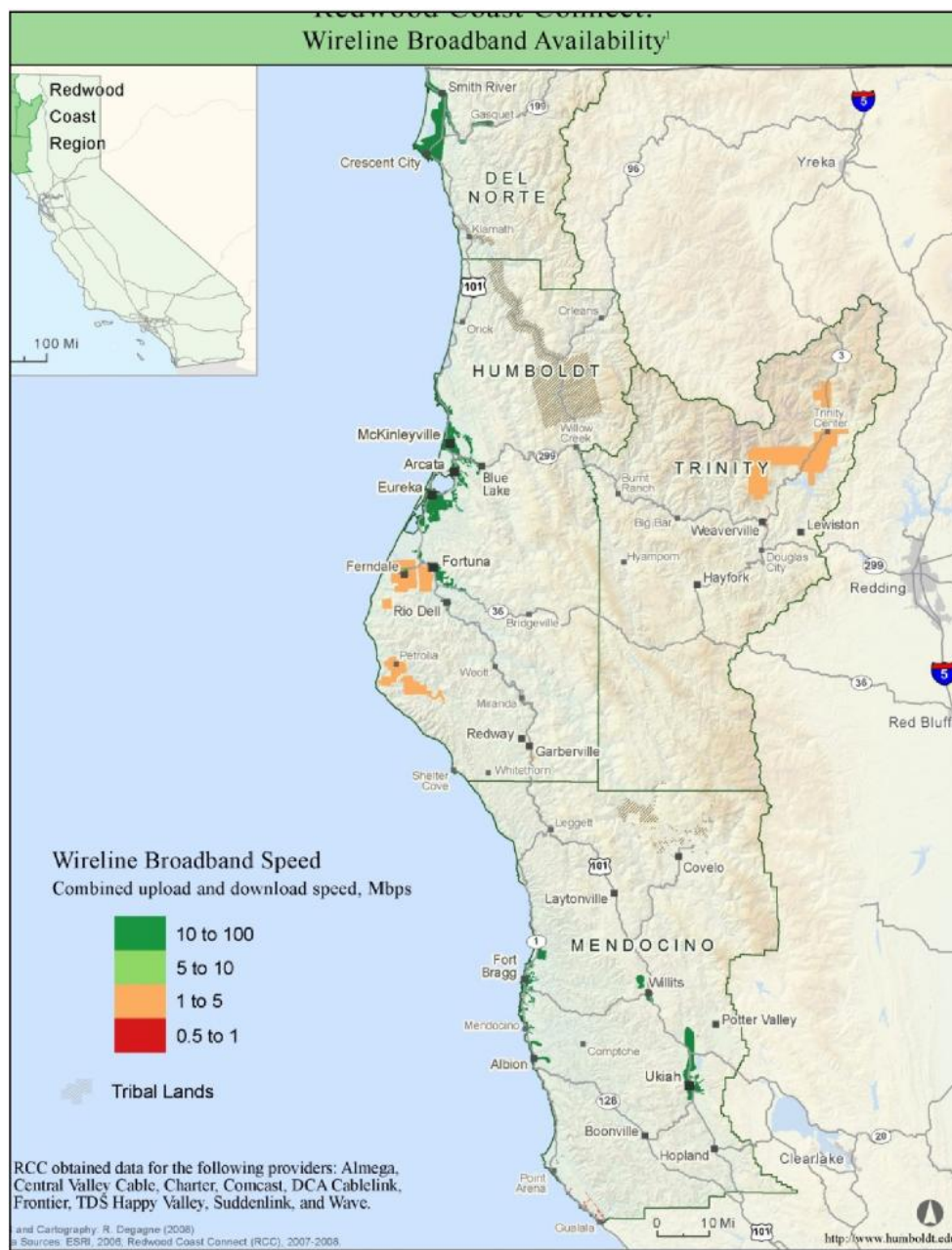
Trinity River towns of Hoopa and Willow Creek have some broadband, though speeds are slow. Hoopa is served by Velocity Technology (WISP). Willow Creek is served by Almega, the cable company, though only in a very small part of downtown Willow Creek.



Between Willow Creek and Junction City, there are many unserved communities: Salyer, Burnt Ranch, Del Loma, Big Bar, Big Flat. They see themselves as a region irrespective of county boundaries, and from a telecom perspective, they all have the same phone company.

*Pages 150-151*

## Wireline Broadband Availability



**Table 49—Wireline Broadband Availability**

The above map shows the geographic availability of broadband telecommunications in Humboldt County. These figures show that broadband services are widely available in the greater Humboldt Bay Area. For many other areas of the County, broadband service is not available. Unserved areas include: Briceland, Bridgeville, Crannell, Ft Seward, Holmes, Korbel, Myers Flat, Orick, Orleans, Phillipsville, Redcrest, Richardson Grove, Weott, and the Yurok Reservation communities of Wautek/Johnsons, and Pecwan (which do not have basic telephone service). Underserved areas, which are defined as having a combination of one or more of the following: slow speeds, less than three providers, backhaul issues (availability and/or cost), no wireline coverage, small provider coverage area, include: Bayside, Carlotta, Fieldbrook, Honeydew, Hoopa, Hydesville, Kneeland, Petrolia, Weitchpec, and Willow Creek.

Ubiquitous broadband service availability will help the County accomplish many of its economic development objectives. Broadband will help strengthen and retain existing

businesses and organizations. Broadband availability is also essential to create and recruit new jobs within identified targeted industry clusters who need reasonably priced advanced telecommunications services in order to compete from a rural location in a world economy. New residential and commercial development projects should include the infrastructure components necessary to support modern communication technologies such as conduit space within joint utility trenches for future high speed data equipment and flexibility in conduit placement to allow for easy retrofit for high speed data systems.

Medical services in Humboldt County are limited by our remote location. Telemedicine, which is the use of communication technology to provide and support health care when distance separates the participants, could help improve healthcare in Humboldt County. Telemedicine can allow specialist to augment their practices by providing services to smaller surrounding communities. Also, telemedicine can allow resident's access to specialists without the burden of traveling hundreds of miles to other more populated areas of the state. With the help of telemedicine, Humboldt County residents can have equal access to the best specialists in the medical profession.

Expanding broadband and wireless services to smaller and remote communities will have several additional benefits. Improved telecommunications infrastructure will support public safety and emergency services by improving communications and access to information. Economic development objectives such as improved tourism, industry diversification, job creation, and promoting local businesses will benefit from a stronger on-line presence. Additionally, broadband technology will enable online education opportunities, telecommuting, and reduce the need for other vehicle trips.

*Pages 175-176*