



P.O. Box 9, Glennallen, AK 99588.
Phone: (907) 822-5001, Fax (907) 822-5009,
cvda@cvinternet.net, www.coppervalley.org

Copper Valley, Alaska 5-Year Area Plan: 2010-2015

Appendix I

- I. COPPER VALLEY DEVELOPMENT ASSOCIATION: Who We Are*
- II. AREA DESCRIPTION: Where We Are*
- III. REGIONAL ECONOMY*
- IV. DOCUMENTATION OF RESOURCES*

I. COPPER VALLEY DEVELOPMENT ASSOCIATION: Who We Are

History and Organization of Copper Valley Development Association, Inc.

Copper Valley Development Association, Inc., a non-profit organization since 1990, began as an Alaska Regional Development Organization (ARDOR) . In 2002, CVDA became a Resource Conservation and Development Council, authorized by the U.S. Secretary of Agriculture.

Copper Valley Development Association, Inc. is governed by a board of nine directors that are elected by the general membership in a democratic process at the annual meeting. The board seeks representation from local private and public organizations including; Native organizations and corporations, business, education, health, natural resources, transportation, communications, tourism, utilities, and other professions. There is also support from federal land managers; there are no designated seats.

Copper Valley Development Association, Inc. is funded primarily through the Alaska Regional Development Organization (ARDOR) program, with federal support to the RC&D. Funds are also leveraged through various donations and fundraising projects.

Board of Directors:

Terry Keizer, President, *At Large*
Willard Hand, Vice President/Secretary, *Copper River District School Board*
Heidi Veach, Secretary Treasurer, *Native Village of Tazlina*
Bonnie Westlund, Director, *Princess Tours*
Gary Hay, Director, *Copper River Native Association*
James Sharpe, Director, *Mt. Sanford Tribal Consortium, Slana Area*
Joe Bovee, Director, *At Large*
Kristal Wilson, Director, *Wells Fargo Bank*
Wayne Challoner, Advisor, *National Park Service*

Staff:

Barbara Challoner: *Business Manager, ARDOR Program Coordinator*
Chantelle Pence *Project Coordinator*
Arlene Rosenkrans: *USDA RC&D Coordinator*
Ian Dorsey: *Youth-Adult Partnership Leader*

II. AREA DESCRIPTION: Where We Are

Introduction

History

Physical Geography

- Climate
- Geology & Topography
- Permafrost
- Hydrology and Water
- Forest Ecosystems & Native Vegetation
- Wildlife
- Fish Resources
- Land and Land Ownership

Population and Labor Force

- Population Demographics
- Employment & Labor Force
- Income
- Educational Attainment

Infrastructure

- Financial Institutions
- Transportation
- Aviation Weather Service
- Electricity and Power
- Communications
- Potable Water Resources
- Sewage Disposal
- Refuse and Recycling

Social Structures and Services

- Government
- Medical and Health Services
- Social Services
- Fire Protection and Emergency Services
- Housing
- Schools and Education
- Cultural and Recreational Resources
- Financial Institutions

Introduction:

The Copper Valley encompasses approximately 20,649 square miles about 150 miles east of Anchorage. The Copper River, one of the major rivers on the continent, has its headwaters at the base of the Wrangell Mountains and dissects the region, flowing 250 miles to the Gulf of Alaska near Cordova.

In the 2000 census, the region had a population of 3,120 up from 2,569 in 1990. The major population centers are focused in the Glennallen, Copper Center and Kenny Lake communities which are situated near the junctions of major highways or with access to recreational resources. They are also the major shopping and service centers for the area. Each of these communities has approximately 500 persons in their loosely defined boundaries.

Glennallen is the major commerce and administrative center, with major medical services, a library, the region's largest two schools, and the campuses of Alaska Bible College and Prince William Sound Community College. The Copper River School District and Ahtna, Inc have offices in Glennallen, along with the Bureau of Land Management, Alaska Department of Labor &



Workforce Development - Glennallen Job Center, Alaska State Troopers, and Alaska Department of Fish and Game.

Copper Valley Development Association offices are just south of Glennallen in the community of Tazlina, as are the headquarters for the Alaska Department of Natural Resources, Division of Forestry and the main maintenance facility for the Department of Transportation and Public Facilities. Copper River Native Association and the National Park Service have their main offices in Copper Center.



Kenny Lake is the agricultural center; hay, pork, beef, vegetables and bedding plants are the major commercial products; much of the produce is sold in Valdez, at a Farmer's Market in Copper Center and local subscription buyers. A limited amount of hay is sold elsewhere. Kenny Lake has a K-12 school, public library, two community halls, a sawmill and lumber business, feed supplier, and construction companies.

Other smaller communities in the regional are Tolsona, Nelchina/Mendeltna, Gulkana, Gakona, Sourdough/ Paxson, Chistochina, Slana/Nabesna/Chisana, Mentasta, Copperville, Tazlina, Chitina, and McCarthy/Kennecott. Many are small and offer a remote village lifestyle, with subsistence activities supplementing livelihoods.

History of the Copper Valley:

Traditionally, the Ahtna Athabaskan Natives occupied most of the upper Copper Valley; "Ahtna" is the Athabaskan name for the Copper River. Most settlements were either fish camps or winter "villages" along the river, or upland hunting and trapping camps.

The Kennecott Copper Company developed the mine and built the railroad between Cordova and Kennecott/McCarthy, which was active from 1910 until it shut down in 1938; it has now become a National Historic Landmark managed by the National Park Service.

Historic Copper Center Lodge



During the gold rushes in 1898 and 1899 the Copper Basin was a staging area for thousands of prospectors traveling to the interior Alaska; hundreds wintered at Copper Center.

Perhaps the greatest social and economic impact to this region occurred with the construction of the Trans-Alaska Pipeline in the mid 1970's. Many small settlements were built through the Copper Valley to accommodate the pipeline workers and their families, many of whom remained after construction was completed.

Physical Geography of Copper Valley:

Climate

The Copper Valley has a sub-arctic continental climate, with long cold winters and relatively warm summers. Winter temperatures range from 40 to -65°F, and in the summer between 60 and 90°F. The area has one of the drier climates in the State, with mean annual precipitation ranging from 8-17 inches across the basin. The annual snowfall is 47-49 inches, and snow is on the ground an average of 180 days per year. There is almost 24 hours of daylight from May until July. On the shortest day of the year, December 22, there are just less than 5 hours of direct sun, with dusk and dawn adding up to an hour of additional light.

Geology and Topography

The region is rimmed by the Alaska, Talkeetna and Chugach Ranges, and includes the Wrangell and St. Elias Mountain Range, which has nine of the 16 highest mountain peaks in North America. Mt. Wrangell is an active volcano and still has steam venting from near its summit. The Denali Fault and several other minor faults dissect the region. On November 3, 2002, a 7.9 magnitude earthquake, the largest in the world that year, shook the region, severely damaging some 28 miles of highway, local airstrips and houses.



During one or more early Pleistocene glaciations (35,000 to 9,000 years ago), glaciers from the surrounding mountains covered the entire basin floor. However, the last glacial advance left large areas of the basin ice-free. During periods of each major glaciations, ice dammed the channel of the Copper River through the Chugach Mountains forming a large proglacial lake in the central basin. Lacustrine or lake-derived sediments partially buried older glacial features. Over time, the lake level fluctuated widely, and eventually drained completely about 9,000 years ago. There are broad, nearly level terraces that extend for several miles on either side of the Copper River and its tributaries consisting of these clayey lacustrine sediments.

Following retreat of the glaciers and drainage of the lake, permafrost began to form in these fine textured lacustrine and glacial deposits. Rivers began to incise canyons in these sediments, and loess began to accumulate in proximity to major drainages. Away from the river canyons and above the terraces the landscape is dominated by low relief morainal hills and extensive till plains formed from glacially deposited materials.

Data obtained by USDA and NPS Geologists

Permafrost

Permafrost underlies the entire valley at varying depths except on flood plains and under lakes; its depth and ice content varies widely. Although not extensive near the soil surface, massive ice wedges and lenses do occur in the subsoil in some areas. A perched water table and saturated conditions are common above the permafrost during the summer due to restricted drainage.

The fire history of the site and the thickness of the insulating organic layer on the soil surface controls the depth to permafrost and water table. Disturbance of the organic layer usually results in increased soil temperatures and a lowering of the permafrost level. As permafrost thaws, a large volume of water is released. The occurrence of permafrost requires special consideration when selecting lands for clearing and agriculture and during construction of roads and buildings.

Data obtained by USDA "Soil Survey of Copper River Area, Alaska."

Hydrology and Water

The major tributaries of the Copper River within the area are the Slana, Gakona, Gulkana, Tazlina, Klutina, Tonsina, and Chitina Rivers. Except for the Slana and Gulkana, all major rivers are glacial in origin. These rivers are characterized by steep gradients, braided floodplains, and high volumes of suspended sediments. Several mineralized springs, locally referred to as mud volcanoes, occur within 15 miles of Glennallen. Mud volcanoes are cone-shaped mounds of silt and clay from which mud, gas and mineralized water have been discharged.

There has been little documentation of the surface and groundwater sources in the area and their quantity and quality for drinking water and other uses; well log data are limited.

Subsurface water throughout much of the area is under artesian pressure beneath fine-grained material and/or permafrost. Water availability and quality varies dramatically throughout the region. Some of the Kenny Lake area has water at extremely deep levels; Glennallen water is

highly mineralized and sometimes iron-rich. Wells drilled in Glennallen, Gulkana, and Gakona have produced water that is somewhat saline.

There are multiple lakes with potable water in the region, but their accessibility, ownership and use concerns, organizational capacities to develop their use, and cost of capita, operation, and maintenance need to be considered for long term viability.

Excerpts taken from USDA publication "Soil Survey of Copper River Area, Alaska" and United States Geophysical Service

Forest Ecosystems and Native Vegetation



The Copper Valley is an extensively forested area. Forest types on productive well-drained sites include aspen, white spruce, mixed white spruce-aspen, and mixed white spruce-balsam poplar. In the southern end of the region, mixed stands of white spruce-paper birch can be found. Stunted black spruce and white spruce forests of low productivity occur on north facing slopes and other cold, wet sites with shallow permafrost. Seasonally flooded river wash on the floodplains of major rivers

supports dense alder shrub. Willow and heath shrub occupy bogs, fens, and narrow drainages. Wet sedge meadows are common on the margins of lakes and ponds. Steppe vegetation, characteristic of semi-arid areas elsewhere in northeastern Asia and northwestern North America is found on steep south-facing terrace escarpments.

The Copper Valley has a long history of frequent wild fires. Between 1900 and 1950, an average of 10,000 acres burned annually, although this average has been reduced with improved fire protection measures; an uncontrolled fire in the National Park in the summer of 2009 burned over 54,000 acres. High intensity crown fires that typically kill entire stands characterize the natural fire regime. Following forest fires, willow shrub dominates most sites until eventually replaced by forest vegetation. Stands are then replaced through natural regeneration.



Common berries found in the Copper Valley are low and high bush cranberries, raspberries, rosehips, low bush blueberry, crowberries and currants.

Wildlife

The diversity of the landforms, vegetation types and abundance of streams and wetlands of the Copper River Area provide habitat for a wide variety of Alaska's game and non-game mammals and birds. It is home to moose, caribou, fox, coyote, wolf, wolverine, lynx, hare, porcupine, bison and black and brown bears.

Moose, the most important big game animal in the area, are found throughout the Copper Valley. They are common at higher elevations outside the area in the



summer and fall and concentrate along the rivers at lower elevations in winter. The winter range and calving grounds of the Nelchina caribou herd are at higher elevations north and east of the area. Occasional caribou wander into the lower elevation forests. The Chitina bison herd inhabits the area between the Cheshnina and Nadina rivers on the east side of the Copper River. Many of the terraces and escarpments in this area are heavily grazed in summer and fall. Dall sheep and mountain goats are found in the Wrangell and Chugach Mountains adjacent to the area. They are an important sport game in the Wrangell St. Elias National Preserve.

Both black bears and grizzly bears are in the area. Black bears intensively utilize the floodplains and stream terraces along the Copper, Klutina, and other major rivers. Grizzly bears occur throughout the uplands, and concentrate along the Tonsina and other rivers and streams when spawning salmon are present. Among the more important furbearers in the area are coyote, red fox, martin, mink, lynx, muskrat, and beaver. Porcupines are common and snowshoe hare populations are cyclical.



Population levels are determined by the stage of vegetative succession, interspersions of vegetation types and other habitat features, seasonal animal migrations, hunting and trapping pressure, and other factors. Human uses of area wildlife include subsistence harvesting, trapping, and sport hunting.

Approximately 135 species of birds are summer residents of Interior Alaska; another 3 dozen or so are spring-fall migrants or occasional visitors to the region. (Armstrong 1980) Many of these birds can be found in suitable habitats in the Copper Valley. A variety of waterfowl, including Trumpeter Swans, nest in the area and utilize local lakes and ponds for rearing young and staging during their migration. Bald Eagles nest and fish along the major rivers. Spruce Grouse are common in spruce forests throughout the area.

Fish Resources

The Copper River and tributaries are spawning and rearing habitat for six species of anadromous fish. Salmon was probably one of the most important food resources of the Ahtna people, and it remains an important part of the diet of Copper Basin residents. Because of their long upstream journey, the Copper River salmon store up large fat reserves to sustain them, making them greatly valued for their high oil content. More information on the local fishery:

<http://www.sf.adfg.state.ak.us/Management/Areas.cfm/FA/copperSusitna.overview>

Based on escapement and harvest data, an average of 1 to 3 million salmon return to the Copper River annually. From 2003 through 2007, an average of 1.39 million sockeye (reds),



38,000 Chinook, (kings), and 306,000 coho (silvers) were caught commercially near the mouth, and about 800,000 salmon escaped upstream to spawn each year. On average, Alaskans harvested 180,000 sockeye, 6,000 Chinook and 2,700 coho in dipnets and fishwheels in the Copper River. About 8,500 residents participate in the fishery near Chitina.

The river and lake systems in the area support numerous species of fish including rainbow trout, Dolly Varden, whitefish, turbot, grayling, steelhead and northern pike.

Land and Land Ownership:

Over the last two decades, Alaska has experienced tremendous changes in land ownership and management. Many areas previously under federal management with have been conveyed under ANCSA to the State of Alaska, University of Alaska and Native Villages, Corporations and individuals; conveyances are expected to be completed by 2010. In 1980, the Wrangell St. Elias National Park and Preserve was formed and includes 1.2 million acres of private in holdings. The largest landowners are, in ascending order, the National Park Service (12 million acres), Ahtna, Inc., the State of Alaska and the Bureau of Land Management, (5.5 million acres).

Population and Labor Force:

Population Demographics

The area has a **population of 3120** according to the 2000 census, living in the 22 communities.

	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
Chisana	0	0	0	0	148	13	29	0	0	0	0	0	12
Chistochina	0	0	0	0	0	0	34	31	28	33	55	60	93
Chitina	0	0	0	0	171	116	176	92	31	38	42	49	123
Copper Center	0	0	0	91	71	80	138	90	151	206	213	449	362
Copporville	0	0	0	0	0	0	0	0	0	0	0	163	179
Gakona	0	0	0	0	0	0	46	50	33	88	87	25	215
Glennallen	0	0	0	0	0	0	0	142	169	363	511	451	554
Gulkana	0	0	0	0	0	0	25	0	51	53	104	103	88
Kenny Lake	0	0	0	0	0	0	0	0	0	0	0	423	410
McCarthy	0	0	0	0	127	115	49	0	0	0	23	25	42
Mendeltna	0	0	0	0	0	0	0	0	0	0	31	37	63
Mentasta Lake	0	0	0	0	0	0	15	0	40	68	59	96	142
Nelchina	0	0	0	0	0	0	0	0	0	0	0	0	71
Paxson	0	0	0	0	0	0	0	0	0	0	30	30	43
Silver Springs	0	0	0	0	0	0	0	0	0	0	0	0	130
Slana	0	0	0	0	0	0	0	0	0	0	49	63	124
Tazlina	0	0	0	0	0	0	0	0	0	122	0	247	149
Tolsona	0	0	0	0	0	0	0	0	0	0	0	0	27
Tonsina	0	0	0	0	0	0	0	0	0	0	135	38	92
Willow Creek	0	0	0	0	0	0	0	0	0	0	0	0	201
Total Population	0	0	0	91	517	324	512	405	503	971	1339	2259	3120

Population per Community, Historical Data

U.S. Census-Copper Valley Only

Figure 5 above identifies the communities in the area, with population figures with census data from 1880 to 2000. Some of these data may have been erroneous due to incomplete census collection.

According to the 2000 census, of the 3120 people of the Copper Valley, 1660 are male and 1448 are female*. The average age is 37 years and the median age is 33.7. According to the census, 20% of the population is Native American, mostly Athabaskan Indians, and 80% of the population is non-Native. It is expected that the 2010 U.S. Census will show significant population growth. The area has also seen an increase in seasonal use and dwellings.

*Some communities have reported 0% sampling in the 2000 census.

Employment and Labor Force:

Year-round employment can be found with service industries, federal and state agencies, the local school district, Ahtna Inc., Alyeska Pipeline Service Co., Copper River Native Association and Tribal governments. The majority of the seasonal employment is geared towards tourism and construction. Federal and State agencies also hire many seasonal employees for fire protection, maintenance and visitor services. Residents also work outside the region, in Valdez, Bristol Bay and the North Slope. The Copper Valley area has no industrial enterprises and limited commercial agriculture in the Kenny Lake area. Many residents augment income with subsistence activities and permanent fund dividends.

The figure below shows the most recent information available the area employment by sector.

agriculture, forestry, fishing, hunting, mining	22
construction	118
manufacturing	15
wholesale trade	38
retail trade	106
transportation, warehousing and utilities	85
information	9
finance, insurance, real estate, rental and leasing	41
professional scientific, management, administrative and waste management	50
Education, health and social services	264
arts, entertainment, recreation, accommodation and food services	87
other services	99
public administration	113

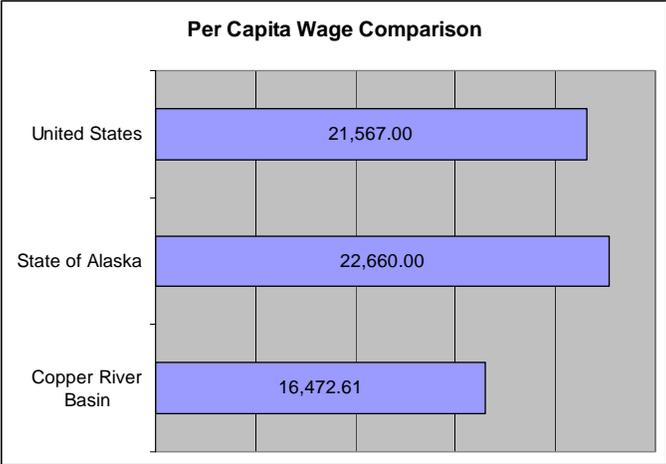
Figure 7 Area Employment by Sector

Information from 2000 Census-Copper Valley Only

Employment figures specifically for the Copper Valley are not provided by the Alaska Department of Labor but are grouped with the Valdez/Cordova Census area. It is estimated that unemployment estimate range from 9% to as much as 50% in some communities; underemployment is chronic in the region. Because of the seasonal nature of employment in the region, unemployment rates vary greatly between summer and winter. In 2008, Sumer unemployment rates were 5.9% while winter was 9.8%, with a yearly average of 8.4%. In 2007, 19.6 % of the Alaskan workforce was non-residents; this was 34.5% for the Valdez /Cordova census area.¹

Income:

Community and regional wages per capita from the 2000 Census are shown on the chart below. This is compared with Alaska and national averages. The State per-capita income average for 2000 was \$22, 660, which is close to the national average of \$21,567.

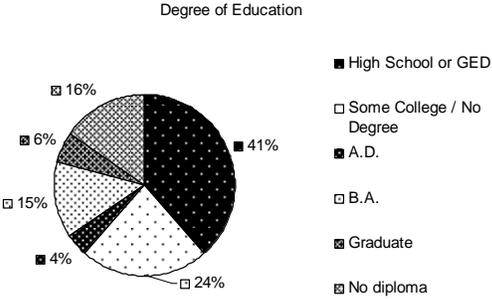


The Alaska Division of Public Assistance and Department of Education and Early Development showed that in the 2007-2008 school year, 38.9% of students in the Copper River School District were living with parents receiving public assistance, including temporary assistance, Medicaid or food stamps.

Subsistence plays an important role in supplementing this income. “Buying replacement food could cost rural households thousands of dollars, assuming meat and fish would cost \$3 to \$5 per pound”. According the Alaska Department of Fish and Game, Subsistence Division, in 2000, in rural Southcentral Alaska, 153-178 pounds of subsistence meat is harvested annually that has an estimated value of \$612 to \$712.



Educational Attainment:



Of the 85% of residents who have graduated with a diploma from high school, 23% have some college experience with no degree, 4% have an associate degree, 14% have a bachelor’s degree, and 6% have graduate level degrees.

2000 Census; Copper Valley Only

Infrastructure:

Transportation:

Three major highways bisect the Copper Valley are linked by the road system, with the exception of Chisana in on the north side of the Wrangell Mountains; road access to McCarthy can sometimes be limited in the winter months. The Glenn Highway is the main corridor running roughly east from Anchorage to Glennallen. The Richardson runs from Valdez generally northward to Fairbanks, with intersections to the Glenn Hwy, and the Tok cutoff. The Tok Cutoff from Gakona Junction to Tok and is the main access route to Canada and the lower 48 states.



There are few secondary roads. The Old Edgerton connecting Kenny Lake and Willow Creek is a maintained gravel road. The Edgerton Highway runs through Kenny Lake into Chitina and is a paved two-lane road. In Chitina, it becomes the McCarthy Road, which is unpaved for 59 miles, where it ends at the footbridge across the Kennicott River. The Nabesna Road runs from Slana on the Tok Cutoff to the headwaters of the Nabesna River. It is paved to Mile 4, where it becomes gravel for the remaining 40 miles.

The Denali Highway, with summer access to cars, leads from Cantwell to Paxson and was once the original route to the Denali National Park. The first 22 miles that lead to the Tangle Lakes from Paxson are paved.

The Alaska Department of Transportation and Public Facilities has its main facility in Tazlina (Mile 111 Richardson Hwy), with outlying stations in Ernestine (Mile 63 Richardson Hwy), Nelchina, Chitina, Paxson and Slana to carry out road maintenance.

There are freight services based in the Copper Valley and Anchorage area that service the area on a daily basis. Cars and U-Haul vehicles are available for rental in Glennallen.

The District Airport at Gulkana is classified as B-III by the State of Alaska. It has two paved runways, the longest 5000 x 100 ft., with a safety area of 300 x 6200 feet. It has a bearing capacity of 190,000 lbs. for a twin-type landing gear configuration. It can handle a Lear 35A and C-130.



There are several charter flight services available in the area for flight seeing and transportation based in Gulkana, McCarthy, Tolsona, Chisana and Nabesna.

The following public airports are located in the region with these classifications:

Gulkana: (District airport)	Thompson Pass (DNR owned, local)
Chitina: (community class/local)	Paxson-BLM owned (unclassified)
McCarthy: (community class/local)	Slana has a 1,800-ft. private strip at Duffy's Cafe
Chistochina: (local)	
Copper Center/Klutina: (local)	
Tazlina: (local) (in the Nelchina-Mendeltna area)	

There is fuel service at Gulkana airport and there are two businesses in the region which offer plane repair and maintenance, one in Gulkana and the other in Kenny Lake.

There are many private airstrips located throughout the valley.

Aviation Weather Service:

The U.S. Federal Aviation Administration maintains a weather station at the Gulkana Airport which gives pilots weather information and transmits data to the National Weather Service. It is maintained through a private contracting firm.

Electricity and Power:

Copper Valley Electric Association, Inc. (CVEA) <http://www.cvea.org/index.htm> is a member-owned non-profit electric cooperative serving the City of Valdez and the greater Copper Valley. CVEA was incorporated in 1955 in Glennallen, and began providing service to Valdez following 1964 Earthquake.

CVEA serves 3,700 customers and distributes electricity produced at four generating stations over 400 miles of distribution line: 156 miles of the Richardson Highway, 80 miles of the Glenn Highway, 12 miles of the Tok Road and 17 miles of the Edgerton Highway. Major customers include Alyeska Pipeline Service Co., the City of Valdez, Petro Star Valdez Refinery, High Frequency Active Auroral Research Program (HAARP), the National Park Service, Princess Hotel, Alaska DOT, schools, and numerous other governmental and commercial customers.



CVEA operates and maintains two diesel plants, a cogeneration facility, the Solomon Gulch hydro project and the related transmission system. CVEA has some unique electric reliability considerations in that the utility serves two distinctly different service areas which are separated by

Thompson Pass. The areas are connected electrically by the FDPPA owned 138-kilovolt transmission line that is prone to extended outages caused by avalanche (once as long as nine months). Given this constraint, CVEA must maintain adequate power generation capacity in both districts in the event the transmission line is out of service. The need to install and maintain generation in both the Valdez and Copper Basin districts accounts in large part for the high cost of electricity for the region. The average revenue per kWh paid in 2009 by residential customers in the Copper Basin and Valdez was 17.04¢ and 16.0¢, respectively.

In April of 2009, CVEA the purchase of the Solomon Gulch hydro facility and transmission lines from the Four Dam Pool Power Agency. In 2008, CVEA was received funding for a feasibility

study and permits to develop the hydro electric potential of Allison Lake near Valdez. This project, if developed, is expected to displace fossil fuel generation in excess of 20,000 MWhs per year. In 2010, a new diesel generator for the Glennallen plant will be installed.



Chitina Electric Inc. (CEI), a subsidiary of the Chitina Native Corporation, has been providing electric power to Chitina residents since 1981. In 2009, it built a new facility near the airport, with three new generators, one 67 and two 117 KWh. The older 135 KWh was kept as a stand by. With the new lines connecting the airport to the town, there are eight miles of line and services to about 80 customers. Power cost equalization subsidies available from the State reduces the base cost of 53¢ per KWh by 29.8¢ per KWh for residential customers. Subsidies are for up to 500 KWh/household and 6,000 KWh for community facilities; there are no subsidies for businesses.

The privately owned company, Alaska Power and Telephone Company provides electricity from Mentasta Lake to Chistochina. In Chistochina, the base electricity costs in spring 2009 were \$.48 per kW. With Power Cost Equalization subsidies, residents pay \$.35 per kWh. This subsidy is not available to businesses

Slana residents also use private generators or solar power. Outlying residents along the McCarthy and Nabesna roads maintain their own generators, supplementing with solar generation.

Fuel oil and propane are delivered by two local providers with offices in Glennallen. Mentasta and Slana are serviced by heating oil and propane providers in Tok. Most homes are heated with fuel oil and wood. Propane is generally used for cooking and heating water.

Communications:

The local service provider is Copper Valley Telephone Cooperative. The Cooperative is a rural independent telephone cooperative which serves members who live and work within 9000 square miles that include Valdez, Glennallen, Mentasta, Copper Center, Chitina, and Tatitlek. Copper Valley has had digital cellular service for several years. Alaska Telephone Company provides service to Chisana.



There are several Internet services available to local residents. Dial up and high-speed access are now available to residents. Some remote communities such as McCarthy are not serviced by local Internet service and must use a Satellite connection or long distance rates.

Interactive Television provides service for local schools and Prince William Sound Community College (PWSCC), providing linkages between district schools for classroom instruction and the Valdez campus for PWSCC.

The Alaska Rural Communications Service (ARCS) replaced Rural Alaska Television Network (RATNet) in 1995 and provides programming to 248 rural communities. There is a transmitter on Stuck Mountain near Willow Lake that broadcasts ARCS programming to Basin residents. ARCS offers a mix of educational, public, and commercial television from commercial Anchorage stations, as well as the Alaska Public Broadcasting Service.

Wrangell Mountain TV Club formed in the early 1970's to set up a transmitter on Willow Mountain for two to three stations. Installation was funded by grants and maintenance is funded by private donations, transmitting from satellites. Many residents also own private satellite dishes and local businesses provide equipment, consultation and installation

The *Copper River Record* <http://www.copperriverrecord.com> is the local newspaper published bi-weekly with a distribution of 800. The Anchorage Daily News can be delivered to most residents along the major road systems. The Valdez Star is also distributed free to Glennallen box holders.

Three radio stations service the area:

- KCAM-broadcast from Glennallen with support from SEND International, Inc, a Christian mission <http://www.kcam.org/>
- KCHU public radio based in Valdez and translated in the Glennallen and McCarthy areas via transmitters on Tolsona Ridge and the McCarthy Lodge. www.kchu.org/
- KMBQ, an FM station, rebroadcasts from Wasilla <http://www.kmbq.com/>

Potable Water Resources:

Current water systems are public or private wells, and many households and businesses have water trucked in on a weekly basis from a private business in Glennallen (up to 3,000 gallons) by Copper River Native Association in Copper Center. With many poor-quality wells in Glennallen, many have delivered water. Glennallen Heights utilizes two wells to serve a piped system. Residents that do not have a private well or have water that is not suitable for drinking haul their own water in 300-500 gallon tanks or small jugs for drinking. Public water distribution is available at the following locations:



or

- Tazlina RV Park, Mile 111 Richardson (privately owned-fee)
- Kenny Lake Community Well (\$50 annual fee)
- Kenny Lake Fire Hall (monthly fee collected based on estimated consumption)
- Gulkana Village
- Gakona Junction (private coin-op \$4 for 160 gallons)
- Chitina Fire Hall (coin-operated)
- Mentasta Lake
- McCarthy uses public-accessible stream

Sewage Disposal:

Only the Glennallen town area is serviced by a piped sewage system as the presence of poor soils and drainage could not handle the high concentration of waste from business and residential dwellings. The wastewater of some 60 customers is pumped up to sewage lagoons above the town. This is managed by the Glennallen Improvement Corporation, a non-profit entity, and its construction was funded by Alaska Village Safe Water; user fees fund the operations. In 2010, extension of service to the Alaska Bible College, Glennallen Height's subdivision and east to the Richardson Hwy, to include the visitor's center and Ahtna Corporation offices will be completed.

Most area residents use a septic tank system at their homes. All homes financed by the AFHC must have a system built to Alaska Department of Environmental Conservation specifications. A few businesses and residents maintain holding tanks. Outhouses are also common when homes are on poor soils, and gray water drains into a sump area. The privately owned Copper Basin Sanitation offers a septic pumping service and maintains a leach field disposal system for the waste that it collects. In Glennallen, the Water Works, Moose Horn RV Park and Northern Nights RV campgrounds offer RV septic disposal for a fee, as does the Kenny Lake Mercantile.

Copper Basin Sanitation also offers rental of portable toilets, 10,000-gallon sewer tanks, and has service for sewer line steaming, thawing, cleaning and snaking.

JD Services in Tok services the Mentasta and Slana area with septic pumping.

Refuse and Recycling:

The locally owned Copper Basin Sanitation (CBS) is a private business that provides refuse collection service for Glennallen, Gakona, Gulkana, Sourdough, Meiers Lake, Paxson, Tangle Lakes, Chistochina, Indian River, Slana, Tazlina, Copper Center, Kenny Lake, Chitina, McCarthy, and Tonsina. Transfer sites in Nelchina and Lake Louise Road are serviced by Wasilla Refuse Inc. JD Refuse Service in Tok services the Village of Mentasta Lake. The Village provides dumpsters for the offices, clinic and local families. The Alaska Public Utilities Commission certifies all three utilities. Tolsona Corporation operates its own landfill for their community. Mentasta Lake also used two dump sites located on private land.

Households can have private collection service with CBS Services, with the rates dependent upon volume and location within the valley. The refuse is taken to the Glennallen Regional Landfill, a Class II landfill, located at Mile 123 of the Richardson Hwy, which is on land leased from the State of Alaska by CBS Services. In 2007, about 9,700 cubic yards of waste were taken to the landfill.

Local recycling options are available in Glennallen provided by a local non-profit organization, Recycling

Our Area's Resources <http://209.161.169.176/~roar/ROAR/Home.html> . Collections of office and mixed paper, newspaper, and aluminum cans at the transfer site are backhauled to Wasilla. Baled cardboard from businesses is also collected in a separate transport trailer and



backhauled. Chistochina, Gakona, Gulkana and Chitina have recycling drop-off centers maintained by the village.

Many residents and businesses burn much of their paper and cardboard waste in burn barrels in their yards to avoid dumping costs and to save landfill space.

Social Structures and Services:

Government:

The area is all rural or remote, as defined by the Alaska Rural Governance Commission. It lies within the unorganized borough area of the State, and has no incorporated municipalities, other than eight Tribal Village Councils that govern their villages. Many communities have non-profit community-based groups or leagues that have historically received capital matching grant monies and revenue sharing monies from the State of Alaska for operation of area services and infrastructure. The capital matching grant monies and revenue sharing monies from the State of Alaska was reinstated in FY2008. The schools are funded through the State of Alaska. The Copper Valley Development Association, Inc. <http://www.coppervalley.org/> is a regional non-profit that serves the region as an Alaska Regional Development Association and a USDA Resources Conservation and Development Council. Incorporated in 1991, it assists small businesses and non-profits organizations with economic development opportunities and resources.

The Alaska State Legislature is the direct governing body of the area. The area is represented in the State Legislature by Senate District F and C and House Districts F12 and C6.

Borough formation is a controversial subject in the region for a variety of reasons, including opposition to property tax.

Medical and Health Services:

Cross Roads Medical Center is a faith-based family practice clinic with licensed physicians and support staff keeping regular weekday hours with a nurse on around the clock. It provides rural general medical care with health screening supported by x-ray, lab and a licensed pharmacy. There are four beds in the facility for overnight care. A Physical Therapist is also on staff. There is 24-hour emergency and trauma service with access to air ambulance services. The closest full-service hospitals are located in Mat-Su, Valdez and Anchorage.

The Glennallen Chiropractic Clinic offers full chiropractic services and massage therapy.

The Alaska Department of Public Health operates the Glennallen Health Center, located at Mile 186 on the Glenn Highway, which has an itinerant public health nurse who is in the community during the third week of each month. The center furnishes some preventative medications, limited family planning, prenatal and well-child screening, immunizations and TB tests, STD and HIV screening and counseling, and health and parenting education. Visits are done in the Glennallen clinic, in homes and at area schools.

Mt. Sanford Tribal Consortium <http://www.mstc.org/> has health clinics staffed with community Home Health Aides or Aide Practitioners in the villages of Chistochina and Mentasta. They

provide health care assessments, treatment and referrals in consultation with a licensed physician. The conduct routine lab tests and provide health education.

Chitina Village Council has a new clinic near the airport with two staff.

Copper River Native Association (CRNA) <http://www.crnative.org/> has health clinics staffed with community Home Health Aides or Aide Practitioners in the villages of Copper Center, Tazlina, Gakona and Gulkana. They provide health care assessment, treatment and referrals in consultation with a licensed physician. They conduct routine lab tests and provide health education. They provide outreach services to area schools for health education.

CRNA also operates the Wrangell Mountain Dental Clinic, which staffs a dentist and hygienist. They do outreach and education to students at the local elementary schools, supplying fluoride rinses and dental hygiene education.

Social Services:

The following agencies have offices located in the Copper Valley:

- *Alaska Department of Labor & Workforce Development*, ESD-Glennallen, offers career and vocational counseling and information, employment services and listing of job openings <http://www.jobs.state.ak.us/eo/officers.htm> .
- *Copper River Community Mental Health Center*, Copper Center under Copper River Native Association provides counseling, referrals, family planning, Twelve-Step Support groups, and substance abuse counseling.
- *Hudson Lake*, substance abuse facility run by CRNA Behavioral Health Department.
- *Fee Agent* for general assistance programs with CRNA Tribal Community Services.
- *Senior Nutrition Program and Food Bank* administered by CRNA Tribal Community Services.
- *Head Start* has a facility in Copper Center for pre-school education for qualifying families
- *Connecting Ties* in Tazlina provides support for people experiencing disabilities.
- *Court Advocates*
- *Advocates for Victims of Violence*, Glennallen office
- *Child Advocacy Center*, with offices in the old Gakona School.

Fire Protection and Emergency Services:

The Copper River Emergency Services has a staff of 2 backed by several volunteer first responders and an ambulance service. It serves the entire Copper River Region training volunteers and acquiring needed equipment and funds. Ambulances are housed in Chitina, Kenny Lake, Glennallen and Copper Center

Volunteer fire stations are located in McCarthy, Strelina, Chitina, Kenny Lake, Silver Springs, Copper Center, Tazlina, Glennallen, Gakona, and Tolsona.

The Alaska Department of Natural Resources has its headquarters for the Southcentral fire district in Tazlina and maintains equipment and staff during the summer fire season.

The Local Emergency Planning Committee is responsible for putting together a strategic plan for dealing with catastrophic events and emergencies in the community.

The State of Alaska provides law enforcement through the Alaska State Troopers, with three officers based in Glennallen. CRNA started a Village Public Safety Officer (VPSO) program in 2008, with a VPSO office in Gulkana. Currently two offices staff the program. The Bureau of Land Management and National Park Service also staff certified Law Enforcement Officers which work with Troopers during search and rescue and other regional emergencies.

Housing:

Housing and apartments are limited in the Copper River Valley. Prices for an average three bedroom home can range from \$80,000.00 to \$200,000.00, depending upon the amenities. Raw land is approximately \$2,000.00 per acre in larger tracts to \$12,000.00 per acre in a subdivision. Forty percent of the housing in the region is substandard and is usually owned, not rented.

Copper Valley Regional Housing Authority (CRBRHA) provides affordable housing for families and individuals from moderate to low-income residents in the Ahtna region. CRBRHA manages about 100 rental units, ranging from efficiency models to four bedroom units. These are located in Gulkana, Gakona, Chistochina, Mentasta, Tazlina, Kluti-Kaah (Copper Center) and Chitina. An average monthly rent runs about \$500 to \$1200. CRBRHA also assists tribal members to obtain assistance through the Housing Preservation Program to improve existing homes.

The Department of Interior has 8 housing units for newly-hired Bureau of Land Management and Park Service employees to rent in Glennallen while searching for more permanent housing. It maintains a permanent house in Slana, with additional summer housing available in Slana, Copper Center, McCarthy, Kennecott and Yakutat. The park does not have sufficient housing to address the needs of permanent and seasonal employees, and reasonably priced, adequate housing is difficult to find in the local commuting area.

Because much of the land is federal, state, or Native-owned, property for development is found in a few select locations. Properties are generally listed with agencies located outside the region.

Schools and Education:

The main office for the Copper River School District <http://www.crsd.k12.ak.us/> is located in Glennallen. Area schools are located in: Glennallen K-12; Copper Center K-6; Kenny Lake K-12; Chistochina K-6; and Slana K-12. There are about 490 students throughout, a drop of 18% over the past five years. Shifting demographics, more educational choices for parents from outside of the region, and a migration from the rural to urban areas in Alaska are reasons for this decline.

The Gateway School District, headquartered in Tok, administers the Mentasta School which has an enrollment of 18.

There is a private school located at SAPA Christian Center in Kenny Lake.

Because of the distance in some instances, and personal choice in others, correspondence or home schooling is a viable option for local education. Certified correspondence courses are available through the Copper River School District and the Alaska State Home Schooling Program.

The Prince William Sound Community College (PWSCC), is part of the University of Alaska with independent accreditation. PWSCC's main campus is in Valdez with extension campuses located in the Copper Valley and Cordova. The community college offers a variety of certificates and degrees including Associate of Arts degree, Associate of Applied Science degrees in Office Management and Technology and Human Services. Several vocational certificates are offered as well as a comprehensive Adult Basic Education program, which includes General Education Diploma (GED) preparation and testing. Tutoring services are available in many of the local villages and communities throughout the Copper Basin. Several courses are offered by distant education methods that include video streaming, computer/on line, and independent study in Chitina, Kenny Lake and Chistochina.

The Alaska Bible College is located in Glennallen and offers post secondary education to an average of 40 full and part-time students yearly. Fully accredited by the Association for Biblical Higher Education), the college offers a four-year Bachelor of Arts degree with four emphases, a two-year associate of arts degree, a two-year Bible and Ministry Certificate, and a one-year Bible Certificate program.

Cultural and Recreational Resources:

With impressive scenery and opportunities of hunting, fishing, canoeing, river-floating, snow machining, boating, backpacking, skiing, horseback riding, dog-mushing and camping, the area has great recreational opportunities. The area has two rivers with world-class king and red salmon sport fisheries. It has at least seven float rivers that are road-accessible at beginning and end.

The land available for recreation varies greatly from summer to winter. Since much of the basin is low, boggy ground, it lends itself more to winter activities; the frozen ground allows greater access to the land.

In addition to a growing number of RV parks owned by private individuals, four agencies provide and manage recreation resources in the Copper Valley. They are the Bureau of Land Management (BLM), National Park Service (NPS), Alaska Department of Transportation and Public Facilities (DOT&PF) and the Alaska Department of Natural Resources, Division of Parks (DNR). BLM also manages approximately 1,400 miles of trails in the region, for both foot and ATV access along with the Gulkana Wild and Scenic River Corridor.



There are public libraries in Glennallen and Kenny Lake. In the summer of 2009, Ahtna Heritage Foundation opened a cultural center in the Wrangell – St. Elias National Park Visitor Center. The recently refurbished George Ashby Museum is in Copper Center.

Financial Institutions

Wells Fargo and First National Bank operate full-service branches in Glennallen.

III. REGIONAL ECONOMY

Economic Sector Overview Services

- Private Business & Utilities
- Education
- Health, Social & Emergency Services

Public and Private Administration

- State of Alaska
- Federal
- Private & Non Profit Corporations

Tourism and Visitor Services

- Overview
- Visitor Facilities
- Guided Tours
- Fishing and Hunting

Construction and Maintenance

- Private
- State and Federal

Natural Resource Development

- Forestry
- Agriculture
- Mining
- Trapping and Fur Farming
- Oil & Gas Development & Servicing
- HAARP

Small Manufacturing

Economic Analysis

- Locational Advantages and Disadvantages
- Factors Directly/Indirectly Affecting Performance

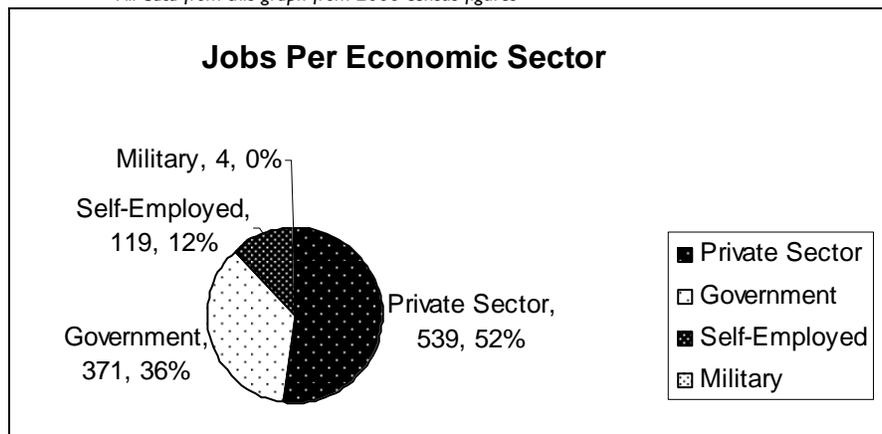
Economic Opportunities

Existing Plans and Planning Process

Economic Sector Overview:

The graph below demonstrates the different sectors of the economy and how they contribute to local jobs

All data from this graph from 2000 census figures



Services:

This sector servicing the resident population is the largest percentage of the employment in the region. Although many of the basic service and retail business are privately owned, much of the funding for these and the other service jobs comes from State and Federal monies supporting the local resident needs.

Private Business and Utilities:

The sector provides services to local residents and businesses, and agencies such as groceries, basic supplies and repairs, utilities and fuel, and financial.

While most are privately owned, the two major utilities are public-owned cooperatives. This sector has been steadily increasing as the population grows and the increased number of residents assures the basis for business success. With the advent of high-speed Internet services and increased use of phone lines for telecommunication, the number of phone lines has risen from 1979 in 1998 to 2508 in 2003. Copper Valley Telephone Cooperative employs 9 full time people with an additional 4 hired full time/seasonal.

The Electric Cooperative, CVEA, has 37 full time employees including 13 in power generation, 3 in engineering, 7 in operations and 14 in customer service, accounting and administration.

Chitina Electric, Inc. has three full time employees, a manager, an accountant and plant operator.

Water Works, a privately-owned business that delivers water to area residents, employs one to three residents. Copper River Native Association delivers water one time per week using up to 3 full time employees at CRNA.

Copper Basin Sanitation, a privately owned business, employs 7 full-time and 3 part-time people in its office, at the landfill, and as drivers and maintenance workers. Their volume of business has remained stable over the last five years.

The weather service at the Gulkana airport is a private firm contracted to Federal Aviation Administration that employs 3 ½ full time positions.

The Glennallen Improvement Association employs 1 ½ full time positions, maintaining the local sewer and piped water system.

Education:

The three major education institutions provide many high quality jobs in the area. The Copper River School District employs 46 certified teachers and an additional 51 classified employees who serve as instructional aids and in administrative, food service, and custodial services. Full-time employees receive retirement and health benefits through the State of Alaska.

Prince William Sound Community College employs two full time staff to administer their courses and facilities. There are two part-time staff in Adult Basic Education and 4-5 part-time tutors in outlying areas. A part-time student hire each semester assists the administrative staff. About 10-15 local residents obtain part-time employment each term teaching classes through

the college. This is a State-funded institution, with additional proceeds from student tuition. Most students are already residents of the community when enrolling in classes.

The Alaska Bible College has a staff of 7-8 instructors and administrators (some do both duties) and 13-14 support staff. Their primary income sources are gift income, student tuition and fees, and their Auxiliary. The majority of these students come from outside the region.

Health, Social and Emergency Services:

The primary health care provider in the region, Cross Roads Medical Center, employs two full time licensed physicians, a nurse practitioner, a registered pharmacist, along with twenty either full or part-time support staff.

The State of Alaska has reduced the presence of its Public Health Services in the community over the past few years. They continue to lease and maintain a facility, but no longer supply an office assistant to the program. The public health nurse frequents the area for one week a month and uses local facilities for housing.

Copper River Native Association, (CRNA) operates and staffs four clinics. There are two full time staff members in Copper Center with one itinerant employee, one full time employee in Tazlina, one full time employee in Gulkana with one on call person that serves both Tazlina and Gulkana. There is one full time person in Cantwell with one itinerant staff.

CRNA also manages the Wrangell Mountain Dental Clinic, which supports a full-time dentist and hygienist, along with 4 support staff.

Most of these social and medical services administered by CRNA are funded by appropriations from State and Federal programs. Clinic fees supplement these revenues. The nearest optometrist is now based in Valdez.

There is a private practice with a registered chiropractor and one support staff for that office.

Alaska State Troopers operates out of Glennallen, with up to three Troopers. One full time administrator, one part-time staff person and over 40 volunteers make up Copper River Emergency Services, or CREMS. The fire departments in the Copper Valley are entirely operated by community volunteers.

Public and Private Administration:

State of Alaska:

The Alaska Department of Natural Resources has its headquarters for the Valdez/Copper River Area in Tazlina and maintains equipment and staff during the summer fire season. The Valdez/Copper River Area office is under the Northern Regional Office located in Fairbanks.

The Division of Forestry maintains an office year-round, with one full time employee and 10 permanent seasonal employees working in administration, forestry and fire control. The Tazlina office is one of the four central fire service centers in the Northern Region for the State of Alaska, covering the area south of the Alaska Range and there is a large staff in the summer months for fire protection, maintaining equipment and response to wildfires.

The Department of Fish and Game maintains an administrative office in Glennallen, employing 6 permanent and 8 seasonal persons.

Federal:

The two largest federal employers in the Copper Valley are Wrangell-St. Elias National Park and Preserve <http://www.nps.gov/wrst/index.htm> and the Bureau of Land Management. <http://www.blm.gov/ak/st/en/fo/gdo.html>



Wrangell-St. Elias National Park and Preserve has its administrative headquarters and main visitor center in Copper Center with about 40 permanent employees. During the summer of 2008 and 2009, the park hired about 90 seasonal employees, stationed in Copper Center, Slana, McCarthy, Kennecott and Yakutat. Those who are employed with the National Park Service work in visitor interpretive services, cultural and biological resources, law enforcement, trail crews, and maintenance/construction.

The Bureau of Land Management (BLM) staff has also grown over the past five years. The BLM manages a large network of trails and the federal subsistence hunts. In 1998, there were 12 full time and 3 seasonal employees with 10 volunteers stationed out of Glennallen. In 2009 that had increased to 20 full time employees, 14 seasonal workers, 4 “Campground Host” volunteers and approximately 25 volunteers.

The USDA Natural Resources Conservation Service has one permanent staff, and the Kenny Lake Soil and Water Conservation District maintains a part-time District Manager.

Private Corporations and Non-Profits:

Collectively, one of the largest employers in the Copper Valley is the staff of the Native regional corporation, Ahtna, Inc. <http://www.ahtna-inc.com/>, and the Village Tribal Councils and Village Corporations who manage Native lands and programs. Offices for these entities are in Glennallen, Gulkana, Gakona, Chistochina (Cheesh’na), Mentasta Lake, Cantwell, Tazlina, Copper Center (Kluti Kaah), and Chitina.

Tourism and Visitor Services:

Overview:



For well over 100 years, visitors have been making their way to the picturesque communities of the Copper Valley. The region's most striking characteristic is its combination of accessibility and natural, scenic beauty and wilderness solitude. Because of its central location, it is easily accessible from Tok, Fairbanks,

Valdez, and Anchorage. Predicted by the Alaska Visitor Association, *"The Wrangell-St. Elias*

National Park area holds the greatest potential for tourism development in the State of Alaska."

Since 2008, the Alaska Travel Industry Association has encouraged tourists to visit the park. The fisheries and improved recreational access attract increasing numbers of visitors each year. The park is also developing additional facilities along the road systems, which will likely draw more visitor and encourage visitors to stay longer in the area.

Park visitation is on the rise, and in recent years, approximately 60,000 people have visited park visitor centers and ranger stations along the Copper River Valley's road systems annually. An additional estimated 30,000 visitors experience the park through one of the commercial operators, to include air taxis, tour operators, hunting guides, backcountry hiking and climbing guides.



A new Princess Resort Hotel opened in 2002 with 85 rooms of double occupancy, in conjunction with the new Wrangell St Elias Visitor Center. The National Park Service is restoring the Kennecott Mine as a tourist attraction, as well as upgrading other visitor amenities within the Park. Marketing for winter tourism and recreation is taking place with a major dog sled race and snow machine race now in place. Heli-skiing developing in the Thompson Pass has also brought increased winter visitors passing through the area. The road transportation improvements are making access to the Valley much easier and safer. These and other tourist development activities will bring in ever increasing numbers of visitors to the area.

Visitor travel through the area is of three major types:

- Those people traveling through the area to reach major destinations such as Valdez, Anchorage and Fairbanks, including motor coach tours
Most tourists are on a loop from Anchorage to the ferry at Valdez, leaving or entering Alaska by way of Tok, or coming south from Fairbanks to fish in Prince William Sound
- A growing number of visitors choosing to stay and explore the area with the growing number of visitor services and tours now available. Likewise, those bound for the region's major draw, the McCarthy/Kennecott area is beginning to become a destination.
- Large groups of sportsmen, primarily Alaskan residents who travel to the area for caribou and moose hunting, salmon dip netting and sport fishing.

Alaska Visitor Statistics Program (AVSP) data is available only for the community of Glennallen. However, since most of the visitor traffic to the region flows through Glennallen, it provides a reasonable representation of visitation to the region. According the AVSP, more than 100,000 nonresident visitors traveled to Glennallen during the summer of 1993. A majority of visitors to Glennallen were independent travelers (95%). The independent traveler numbers were down in 2006 to 69,000 and are indicative of a trend among independent travelers to the region.

Due to national economic conditions, the actual number of tourists traveling to Alaska as independent travelers has been declining over the past four years, and many independent

business operators that cater to this segment of the market have experienced declining sales and customer counts. The large tour operators who own their own facilities have had to discount their excursions to maintain customer counts in 2009. As a result, the cruise industry has announced that three cruise ships will be redeployed from the Alaska market to other areas of the work in the 2010 season.

Visitor Facilities:

There is one major year-round hotel in Glennallen that is frequented by travelers and visiting business and agency personnel. Several small lodges, bed and breakfasts and cabin complexes house visitors year-round. Availability increases in the summer months with the Princess Lodge and many bed and breakfasts and RV parks opening in May for the summer visitors. This employs students and local residents, along with an influx of seasonal employees to work in the visitor industry. The Chamber of Commerce has a part-time employee that maintains the visitor center during the summer months; most of the staff at the center are local volunteers. Most of the lodges and hotels also offer meal service, which also employs local and non-resident employees.

Guided Tours:

A small but growing number of flight seeing and guided hiking operations are based in McCarthy, Chitina, and other communities along the Richardson Highway. The opening of the Princess Hotel brought a dramatic increase in the number of guided tours available to visitors, most of them based out of the lodge in Copper Center. These include dog mushing (on land), river rafting on the Copper River, jet boat tours on the Klutina and Copper Rivers, ATV vehicle and natural history tours. Tours to surrounding visitor Facilities, museums and communities are also available. Guided snow machine tours are also being developed by local businesses. Currently, local residents with small businesses, local non-profits and Tribal corporations are offering these tours. Individuals based outside of the region also run some of these tours.

Fishing and Hunting:

The Copper River is world renowned for its red and king salmon. For a number of years, there has been guided fishing on the Klutina River in jet boats and along the Gulkana River in rafts. Annual angler days in the Copper Valley increased steadily through the mid-1990s. The harvest there rose from 532 in 1977 to 8,868 in 1997. These high harvest rates were sustained through the early part of the new century but are subject to fish abundance, water conditions, and regulations; 2009 saw early closures in the king salmon fishery. There are 21 fishing guides registered for the Copper Center, Gakona, and Glennallen areas, which have negotiated with Ahtna Inc. to provide access to the river and surrounding lands.

Several residents in the Kenny Lake area make a living working on or having businesses with charters based in Valdez.

Many Alaska residents rely on the fish resources of the area for subsistence / personal use. The Chitina dip net personal use fishery is one of the most popular in the state. The Chitina subsistence dip net fishery is also attracting a growing number of Alaskans. The number of

issued personal use permits averages around 8,400 per year. Subsistence permits issued by the State and Federal government have ranged from 1,284 in 2000 to 1,456 in 2008.

The river and lake systems in the area support numerous species of fish. Other well known fish include rainbow trout, Dolly Varden, whitefish, burbot, grayling, steelhead and northern pike. These also attract a growing number of Alaskan and non-residents as other areas of the State become more developed and crowded.

There are 14 commercial hunting guides registered to guide in the Wrangell-St. Elias National Preserve, some of them headquartered in Chisana, Nabesna, McCarthy and remote private in-holdings in the Park. Most of these visitors fly in and spend little time in the Copper Basin communities.

Alaskan residents generally travel through the area to hunt on the road system. These are not guided and mostly add revenues to local merchants who sell supplies, gas and sometimes accommodations, although many are self-contained.



Construction and Maintenance:

Private:

The largest construction firm in the region is Ahtna Construction and Primary Products. They also secure contracts outside of the region, but house their workshops and offices in the community. There are also smaller privately-owned construction firms that work on small business and home construction. Generally large construction projects such as schools have major contractors based outside of the area, but subcontract to local businesses for different aspects of the project.

State and Federal:

The largest construction and maintenance employer is the State of Alaska, Department of Transportation and Public Facilities. It does not house its administrative offices in the area, but maintains 6 Stations with road crews for construction and maintenance in the summer and snow removal in the winter. There are some seasonal employees hired in the summer to help with the maintenance of facilities and roads. The National Park Service and Bureau of Land Management also hire several summer maintenance employees to build and maintain trails and visitor facilities.

Natural Resource Development:

Forestry:

Ahtna, Inc. is the primary private forest landowner along with the Tazlina Village and Chitina Village Corporations. The Alaska Division of Forestry and Bureau of Land Management also manage some lands for commercial harvest. Over the past decade, the spruce bark beetle has infested approximately 700,000 acres of forest in the Copper River Valley, killing many older

white spruce trees in the area. As a result, private landowners, such as Ahtna, are looking at stumpage sales of beetle-killed timber to reduce fire hazards and return lands to productive forests. White spruce has excellent structural quality, uniformity and strength and is a favorite for use in construction and a popular choice for log homes. The pulp is also widely used for paper production because of its strength and ability to bleach easily to white and future sales of white spruce and aspen have been proposed for export to be used in paper production.

A local sawmill owned by SAPA in the Kenny Lake area harvests and mills timber for beams, log cabin construction and rough-cut dimensional and kiln-dried lumber, siding and flooring. They also market firewood along with a few other small businesses in the area. Wood is readily available and is already an important heating fuel in many communities.

The occurrence of diamond willow is common throughout the area, which has growing interest by woodcrafters. Diamond willow, with its 'diamonds', is an excellent choice for hand crafted canes, furniture, and decorations.

Agriculture:

There are approximately 2000 acres in production at this time, mostly in the Kenny Lake area. About 20 families are earning some income from farming and agriculture in the region. Current crops in production are brome grass hay, oats and alfalfa, and small acreages of potatoes and vegetables. Kenny Lake farmers produce the highest quality hay in the State of Alaska. Many families maintain home gardens for personal use. A few businesses raise bedding plants for sale in the spring and early summer. A few local businesses raise vegetable for weekly subscriptions and farmer's markets in Copper Center and Valdez.



Local Produce at Farmer's Market

There is limited livestock production at this time, with local production of beef and hogs; the largest hog farm in the area maintains about 500 animals. Eggs are also produced for the local market.

An access road to State agricultural lands has been developed on the west side of the pipeline, with some 2,100 acres disposed in land sales, with several more thousand acres showing agricultural potential. Tenants are now finishing access and meeting State clearing requirements on the 11 parcels. There are two large tracts along the Richardson of 320 acres; one is actively being developed with 100 acres cleared.



Land:

The State of Alaska and University of Alaska has been disposing of lands through subdivision sales and remote staking near Lake Louise-Nelchina, Glennallen, Silver Spring/Copper Center, and McCarthy. Plans are for future State land sales near the Little Nelchina River, Brenwick-Craig Road, and Klutina River Bluff (Copper Center). As conveyances of State lands become finalized, there may be more land identified by the State for sales.

Mining:

There is a long history of copper and gold mining in the region. Deposits of minerals that include gold, copper, zinc, tungsten, lead, molybdenum, nickel, and cobalt have been identified. There has been exploratory drilling for hard rock deposits of platinum and nickel north of the Denali Highway near Tangle Lakes. Several placer gold deposits are active in holdings within the National Park.

Fisheries:

The Gulkana River Hatchery near Paxson is the largest producer of sockeye salmon fry in the world. It is also the largest incubation facility for all species of salmon. The economic value to the commercial fishing industry equals approximately \$3,971,000 a year. This does not include the fish caught for subsistence use or sport fishing. The Gulkana River Hatchery employs up to 4 permanent and 19 seasonal residents through the year and provides a substantial economic return to the local community. Additional employees with both state and federal agencies continue research into improving development and expansion of other species of fish in the area.

Trapping:

The Copper Valley is home to many furbearers, fox, coyote, wolf, lynx, martin, ermine and wolverine. There are approximately 100 trappers a year who trap furbearers in Game Management 13. Trappers do not register, they simply get trapping licenses, and not for specific areas. Many prices for these furs have dropped significantly over the past few years due to the increased number of uniform-quality farmed furs now available on the market. The local fur dealer recently closed his business and now furs must be brokered in Fairbanks, Anchorage or sold to individuals. Traditionally, there were several fur farmers in the Kenny Lake area.

Oil and Gas Development and Servicing:

The construction of the Trans Alaska Pipeline was the single largest boom to area growth that has occurred in recent history. Population numbers in the community increased dramatically in the mid-70's and although they decreased after the construction ended, they never returned to pre-pipeline levels as workers chose to make their residence in the community.

Alyeska Pipeline Company continues to employ some area residents at Pump Station 11 at Mile 188 Glenn Hwy; Pump Station 12 (Mile 65 Richardson Hwy) was recently closed and operations consolidated at Pump Station 11.

Ahtna Inc. is also drilling for gas reserves about 12 miles east of Glennallen.

The Alaska Natural Gas Development Authority (ANGDA) has explored a route for an all-Alaska natural gas line that would pass through the region, with the transportation of these reserves to Valdez along the existing Trans Alaska Pipeline corridor. This would again bring an influx of construction and maintenance workers to the region.

HAARP:

High Frequency Active Aurora Research Program (HAARP), is operated by the US Department of Defense near Gakona. It is used for upper atmospheric and solar-terrestrial research. It was designed and built by Advance Power

Technologies, Inc., a subsidiary of Raytheon Corporation, with involvement of staff from several universities, including the University of Alaska's Geophysical Institute. Some local construction companies, including Ahtna Construction were employed for initial construction and now provide nightly security coverage. Local surveyors were also employed. Although the high energy demands of the testing are fulfilled with on-site generators, local utilities provide housekeeping power and telephone, and local utilities and service providers supply water, trash and sewer removal and routine cleaning.

Small Manufacturing:

This is probably one of the smallest sectors of the region's economy. There are local entrepreneurs and small businesses with home-based businesses in crafts, using local wood, furs and other materials to produce goods for the locals and visitors to the area.

Economic Analysis:

Locational Advantages and Disadvantages

Advantages:

- On the road system with easy access to Anchorage
- Crossroads of many travel routes and destinations
- Gateway to Wrangell-St. Elias National Park and Preserve, World Heritage Site
- The Trans-Alaska pipeline corridor passes through the Copper Valley on its route to Valdez. There is potential for access to natural gas if it is transported along this corridor.
- Access to Copper River and fish resources
- 100 miles from ice-free port
- No property taxes
- No sales or income taxes
- No zoning or building permits required for home construction

Disadvantages:

- Difficult to track changes in labor force and other statistics as lumped into the Cordova/Valdez Census area and not differentiated in reporting
- Not on rail system or power grid
- Too close to Anchorage to develop local economies

- Rural Character associated with bush, but not roadless, so disadvantaged from certain programs designated only for roadless bush
- Availability of private land

Factors Directly/ Indirectly Affecting Economic Performance

Environmental factors:

- Winter temperatures and darkness
- Winter road conditions
- Permafrost in combination with fine-textured soils for construction
- Low forest productivity
- Lack of potable water and drilling of wells is an expensive and risky proposition, and maintenance is costly in cold temperatures due to the high cost of electricity.
- Difficulty installing approved septic and sewage treatment systems and lack of piped systems outside of Glennallen
- Distance to markets and ports
- Low population and population density
- High cost of power
- Not linked to state rail system
- No access to natural gas reserves
- Lack of private land
- Limited health care facilities
- Limited home health care providers
- Limited low-cost housing
- Limited housing meeting AHFC loan requirements
- Low school enrollment for more school opportunities and programs
- Lack of skilled and well-educated work force
- Limited access to news outlets and mass communication, Internet, especially in outlying communities
- Limited childcare and after school programs for working parents
- Limited business opportunities due to proximity of communities to large Anchorage markets
- Limited professional services
- Limited local options for financial lending
- Cost of living
- Limited office and retail space for rent or lease
- High substance abuse rates
- High cost of fuel
- High cost of homeowners insurance for fire protection
- Lack of availability of homeowners insurance

Economic Opportunities:

- Tourism-guiding and services

- Sport fishing and hunting
- Forestry
- Small Manufacturing
- Oil and Gas Development
- More local services that economically fit the needs of residents
- Mining
- Niche agricultural markets and agricultural development

The major resources of the area are the natural beauty, wildlife, forest products, minerals, agriculture, oil and natural gas (undeveloped). The Copper Valley is experiencing substantial growth, with little or no infrastructure or capacities to manage that growth.

There are several major economic development projects on the horizon. Some of those proposed are:

- A Natural Gas Pipeline from the North Slope to Valdez.
- Major hotels
- Anchor businesses
- Railroad expansion connecting the area to existing rail lines
- Continued recreational access enhancements
- Native Corporation land use developments

If any or all of these projects come to fruition the impact on the area could be profound.

Existing Plans and Planning Processes:

State Agencies:

State of Alaska, Department of Transportation and Public Facilities:

- *Interior Alaska Transportation Plan, 2009*
<http://projects.ascg.com/iatp/Documents.asp>
- *Copper River Basin/Upper Tanana Basin Regional Airport Plan, 2003*
http://www.dot.state.ak.us/stwdplng/projectinfo/project_pages/copper_basin
- Annual State Transportation Plan (STEP)
- *McCarthy Road/Chitina Valley Roundtable Project Phase III Report, August 2002*

Alaska Department of Natural Resources:

- *Copper River Basin Area Plan, 1986*
<http://dnr.alaska.gov/mlw/planning/areaplans/copper/index.cfm>
- *Denali to-Wrangell St. Elias-*
<http://dnr.alaska.gov/mlw/planning/mgtplans/denali>
- *Rural Alaska Tourism Infrastructure Needs Assessment-Copper Valley, 1997*
www.dced.state.ak.us/oed/toubus/pub/2_copper_valley.pdf

Federal Agencies:

National Park Service:

- *Wrangell-St. Elias National Park and Preserve General Management Plan, 1986 with McCarthy Area revisions; 2002.*
- *Kennecott National Historic Landmark Area Plan*
- *McCarthy Road Scenic Corridor Plan*
- *Nabesna Road Scenic Corridor Plan (draft in 2009)*
- *WRST Front Country Plan (to be completed in 2010)*
- *Copper River/Wrangells Tourism Planning and Development Strategy, National Park Service, 1997*

Bureau of Land Management:

- *East Alaska Resource Management Plan, 2007*
http://www.blm.gov/ak/st/en/prog/planning/east_alaska_plan.html
- *Gulkana Wild and Scenic River Management Plan, 2005*
http://www.blm.gov/ak/st/en/prog/nlcs/gulkana_nwr/gulkana_river_plan.html
- *Delta National Wild, Scenic and Recreational River*
http://www.blm.gov/ak/st/en/prog/nlcs/delta_nwsr.html
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Regional Plans:

- *Copper River Country Regional Branding & Marketing Plan*
http://www.dced.state.ak.us/oed/dart/pub/CRVBusinessPlan_final.pdf
- *Comprehensive Economic Development Strategy Update, Copper River Native Association, 2009.*
- *Copper River School District-Strategic Planning-2009*
- *Copper Basin Health Needs Assessment Strategic Plan, Copper River Native Association, May 2004*
- *Comprehensive Economic Development Strategy, Copper Valley Development Association, 2003.* http://alaskanpower.org/wp-content/uploads/2008/06/cv_ceds_2003.pdf
- *Emergency Operations Plan-Local Emergency Planning Committee, 2004*

Community Plans: http://www.commerce.state.ak.us/dca/commdb/CF_Plans.cfm

- Chistochina-Cheesh'na Tribal Council
- Chitina-Chitina Traditional Indian Village Council
- Gakona-Native Village of Gakona (not on website)
- Kenny Lake-Kenny Lake Community League (not on website)

IV. DOCUMENTATION OF RESOURCES

Community Resources and Input

Robert Wilkinson and Sharon Crisp, Copper Valley Electric Association

Martin Finnesand, Manager of Chitina Electric Inc.

Danny Rosenkrans, Bruce Rogers, Wrangell St. Elias National Park and Preserve

Judy Chapman, Alaska Department of Transportation and Public Facilities

Sharon Daniel, Copper Basin Sanitation

Alaska Bible College

Prince William Sound Community College

Bureau of Land Management

Alaska Department of Natural Resources

Cross Roads Medical Center

Copper River Native Association

Rita Stadtmiller, Department of Fish and Game – Glennallen

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Copper Country Collection, History and Recipes from Kenny Lake, Alaska; 6th edition, 2009

Copper River School District Web Site

Copper Valley Electric Association, 2003 Legislative Effort, January 1, 2003

2000 US Census information

Soil Survey of Copper River Area, Alaska; USDA Natural Resources Conservation Service, 1986.