
VI. ANALYSIS OF DEVELOPMENT PROBLEMS AND OPPORTUNITIES

A. Regional Assets and Strengths

The following examples are typically cited as economic development strengths in the region's human and economic resource base:

1. Natural Resources and Physical Setting

- High altitude, with most towns located above 7,500 ft. leading to cooler summers.
- Water resources, including mountain streams and snowmelt, reservoirs, the Rio Grande, groundwater, irrigation systems, and wells.
- Wetlands, performing a wildlife function and natural cleansing of surface water.
- Big game animals, trout, bird diversity, and hiking trails.
- Mountain scenery and wildlife.
- Timber, but availability more limited than past years.
- Over 2.0 million acres of public lands and access.
- Except for subzero nighttime temperatures in winter months, climate is usually moderate without tornados and blizzards.
- Known as a national center for days of sunshine, dry climate, and sun exposure.
- Mineral resources such as gold and silver.

2. Water Resources

- Extensive (but variable) surface and groundwater water resources including the Rio Grande and Conejos rivers and tributaries, lakes and reservoirs, mountain snow pack, and forest protection of watersheds.
- A Closed Basin project in the central Valley pumps water from a non-tributary vault and provides for some level of backup to meet Rio Grande Compact obligations.
- Extensive canals and water conveyance systems, pivot sprinkler systems, and acequia irrigation in some locations.
- Except in low spots in the central Valley, water is generally very high in quality.

3. Agriculture

- The Valley is the 2nd largest producer of fresh potatoes in the U.S., and 4th or 5th largest overall.
- Bumper crops of beer barley, spring wheat, alfalfa, natural hay, lettuce, spinach, carrots, canola, and other crops, and sizable herds of beef cattle, sheep, and other farm animals
- Extensive warehousing, packing, and shipping operations.

- Higher quality and higher concentrations of protein and anti-oxidant properties in crops and livestock grown at higher altitude.
- Better location for seed crops, with relatively fewer plant diseases and insect pests.
- Strong marketing cooperatives, such as the Colorado Potato Admin Committee.
- Presence of non-traditional forms of agriculture such as fish farms at geothermal sites, hydroponic tomatoes and other vegetables, quinoa, green manure (Sorghum Sudan), and others.
- The Ag Waste Treatment Facility in Center was uniquely designed to support value-added processing operations.
- Hard-working qualities in farm labor force.

4. Heritage, History, Culture

- Surrounded by a ring of 14,000 ft. peaks and presence of Spanish-language culture, the Valley holds a strong identity, both physically and culturally.
- Historic sites are distributed fairly evenly across the area.
- Blend of many ancestries and faiths.
- Pending designation of Alamosa, Conejos, and Costilla counties as a National Heritage Area.
- Heritage Tourism project in progress to produce travel itineraries.

5. Extensive Public Lands

- Over 2.0 million acres in public land ownership provides protection of watersheds, grazing land, timber, and a diverse range of outdoor recreation activities including sightseeing, camping, wildlife viewing, hiking, skiing, rafting, fishing, canoeing, hunting, rock climbing, snowmobiling, foraging, firewood gathering, nature study, and other activities.
- Major areas and management agencies include: Great Sand Dunes National Park and Preserve (National Park Service); Rio Grande National Forest (U.S. Forest Service); Bureau of Land Management (BLM); Alamosa and Monte Vista National Wildlife Refuges (U.S. Fish & Wildlife Service); and many State Wildlife and Fishing Areas managed by the Colorado Division of Wildlife. Wilderness Areas are also included in parts of the Forest Service lands.

6. The Nature Conservancy

- Presence as a major landowner in the Valley and Medano-Zapata buffalo ranch operation.
- Provides buffer lands to the Sand Dunes Park, and can offer nature workshops and conference facilities.

7. Tourist Attractions (in addition to Heritage)

- Los Caminos Antiguos and Scenic Thread Byways.
- Colorado Gators.

- Cumbres & Toltec tourist train to Chama, New Mexico, and San Luis & Rio Grande Railroad passenger service to La Veta.
- Wide range of outdoor recreation activities, such as hunting, fishing, hiking, rock climbing, and wildlife viewing.

8. College and Post-Secondary Educational Institutions

- Adams State College 4-year institution with graduate programs, and Trinidad State Junior College Valley Campus with 2-year degrees.

9. Non-Metro Lifestyles

- Less crowded and generally slower-paced.
- Rural lifestyles are attractive to families with children.

11. Highway Systems

- US 160 east/west, and US 285 north/south.

12. Railroads

- San Luis & Rio Grande and San Luis Central provide freight service.
- Narrow-gauge track on Cumbres & Toltec.
- Idle track from South Fork to Creede.

13. Regional Airport

- SLV Regional Airport in Alamosa has commercial air service to Denver International.
- Monte Vista has next largest airport, and many smaller airports are in various locations across the region.

14. Hospitals and Clinics

- SLV Regional Medical Center in Alamosa is the largest hospital and is continuing to expand services and specialists
- Rio Grande Hospital in Del Norte serves west end of the Valley
- Conejos County Hospital in La Jara has assisted living attached

15. Lower Cost of Living

- When compared with most parts of Colorado, living costs are lower in the Valley.

16. Influx of Retirees and Second-Home Owners

- Increasing numbers of retirees and second-home owners are bringing new sources of base income to the region.

- Most of this growth is evident in South Fork, Mineral County, Conejos Canyon, and the Baca/Crestone area in northern Saguache County.

17. Wolf Creek Ski Area

- Lift lines were expanded at the ski area along with an increase in skiers.
- A proposed Village at Wolf Creek with over 2,000 condo units and as many as 10,000 people represents a major prospect for South Fork, Del Norte, and Creede.

18. Arts and Crafts

- The Valley has a high per capita of artists and craft persons, and offers a more affordable cost-of-living than Taos, Santa Fe, and other places.

19. Affordability of Land and Housing

- With exception of South Fork, land for housing and business development is generally less expensive.

20. Regional Cooperation

- While each county has its unique differences and diverse population characteristics, the Valley is known for its ability to act in regional interest for issues involving the threat of water export, E-911, and others.

21. Non-Profits

- In addition to private business, non-profit organizations and programs represent a major economic activity.

B. Problems and Weaknesses in the Regional Makeup

The following are examples of weaknesses in the regional makeup of human and economic assets:

1. Location Off the Mainstream

- Distance from 4-lane highways and major population centers place the Valley at a disadvantage when competing for business expansions and relocations.
- Mountain passes into the Valley are not the deterrent for travel they once were, but still present problems in bad weather and road conditions.
- Air and bus travel into the Valley is expensive and limited.

2. Workforce Skills

- In general, workforce skills are limited and not prepared for jobs in technical and emerging industry fields.

- Relatively lower levels of academic achievement than Colorado in most public schools.
- Few opportunities within the labor force system to upgrade skills and income.

3. Youth Out migration

- Graduating students with the highest achievement levels are leaving the Valley to find better jobs, further weakening the workforce capability to meet new demands.

4. Limited Tax Base

- A high mix of Federal land ownership limits the local government tax base, and ability to provide infrastructure and service upgrades beyond the basics.
- The PILT program provides some partial relief to the counties affected, but is not receiving full funding.

5. Limitations in Transportation Infrastructure

- Roads in the region are rated in generally poor condition.
- US 160 receives heavy seasonal traffic, with few passing lanes west of Alamosa.

6. Public and Job Commuter Transit Services are Limited or Unavailable

- Except for limited routes recently started by Alamosa Bus Company, job commuter and general public transit is not available in most communities.
- Alamosa Bus is not likely to continue public services without subsidies under the Federal Transit Act.
- Spiraling gas prices in combination with no real increase in wages further emphasizes the need for transit services.
- The lack of a functioning transit system for the workforce may be seen as a deterrent to development in the Valley.

7. Limited Retail Selection and Sales Leakage

- In general, the population and income levels in the Valley cannot sustain more than a limited selection of retail outlets which are unable to deter sales leakage from the region.
- Alamosa holds the highest concentration of retail and service activity, such as Wal-Mart, supermarkets, and medical services, and subsequently receives the largest portion of sales tax revenue.

8. Low Wages and Discretionary Spending Limitations

- Wages and per capita income in the Valley counties are generally the lowest (or among the lowest) in the State, which limits discretionary spending power to support business expansion.
- Lower income generally requires a greater number of social services to be provided, which places a greater burden on local governments to pay for social services.

9. Health Care Insurance Costs

- The number of workers and families who cannot afford health insurance is increasing, which increases the risk of absenteeism for employers and poor health and hardships on families and workers.

10. Telecommunications Infrastructure and Services

- Services have improved, but still considered limited by larger business operations.

11. Timber Sales Difficult

- Extensive supplies of drought- and beetle-damaged timber on the forest is being opened to harvest, but timber sales are too large for small contractors to bid.

12. Electrical Transmission Lines Inadequate

- The Valley setting is perfect for solar production of electrical energy, but existing transmission lines are inadequate for large-scale delivery to the grid.

13. Natural Gas Supply Inadequate for Center Ag Processing Expansion

- The existing gas pipeline to the Idaho Pacific potato plant and Town of Center is too small to supply the extra energy needed for plant expansion and still supply the town.
- This would have to be done mainly through public financing sources with complicated ownership and leasing arrangements.

14. Eyesores

- Entrances to towns often give a blighted and unsightly appearance.
- A large portion of track parallel to US 160 is being used as rental storage for hundreds of flatbed rail cars, to which many residents take exception.

15. County Revenue Limitations and Service Cuts for Safety Priorities

- A rejection of proposals to increase sales tax in Alamosa County is leading to cutbacks in social programs in order to fund jail expansion and basic safety services.

16. Wildfire Hazard

- Wildfire danger has increased in recent years due to drought, greater numbers of visitors, and expansion of seasonal and second home construction in wooded areas.

17. Cutbacks in Ag Production

- In order to be more in line with permanent reductions in water supply, farmers cut back the acreage being farmed by 18%, and are going for 20%.

C. Development Opportunities

The following were identified as offering the greatest opportunities for development based on the region's diverse range of assets:

1. Renewable Energy Production

- National emphasis on renewables, high gas costs, foreign control of gas, climate change/global warming, need for clean energy.
- Solar energy production, based on sunshine, vacant land, dry climate, high altitude.
- Biodiesel, based on ability to grow canola for blending oil.
- Wood pellet manufacturing and use as fuel for college campus and other buildings, based on beetle-damaged trees and other forest biomass.
- Cellulosic ethanol, using wheat straw, hull-less barley, or other local crop.
- Gasification plant, using a diversity of biomass and waste products.
- Geothermal, adapted for aquaculture and hydroponic vegetable operations.
- Wind-farms producing electrical energy for the grid, based on finding a viable site.
- As more operations come on line, consider a Renewable Energy Academy for the Valley.

2. Manufacturing Renewable Energy Equipment

- A concentration of solar and other renewable energy operations in the Valley may also provide opportunities to manufacture solar panels and other equipment or components.

3. Business Opportunities to Supply Renewable Energy Operations

- Supplies and services will be needed to maintain the energy operations, which present opportunities for local supply businesses to review and expand current inventories to meet a wider range of industry needs.

4. Workforce Upgrading

- The advent of renewable energy jobs presents an opportunity for workforce development and training institutions to upgrade the skill levels in the workforce, giving better wages and job benefits to workers and attracting new industry prospects.

5. Value-Added Ag Products

- High-end starches, such as pharmaceutical-grade starch.
- Packaging made from potatoes as an alternative to plastic.
- Niche markets.
- Localize food distribution, such as Valley-grown products to schools.

- Organic crops.
- Byproducts of value-added processing, such as distillers dried grains.
- Novel varieties of potatoes.
- Barley malting.
- Carrot juice and beta carotene.
- Anti-oxidant properties in Valley crops.
- As more operations come on line, consider an Ag Research Institute for the Valley.

6. Larger Gas Pipeline to Center

- The pipeline would enable the IP potato plant to expand; create a redundant power loop to meet peak load demand for the plant, town, and entire length of pipeline corridor; and provide for future growth of the value-added industry and Center age complex.

7. Value-Added/Renewable Energy Park

- Decision to pursue this further would provide opportunity to make a showcase project of showing how to combine a renewable energy power source in value-added production, and opportunity to upgrade Monte Vista's Veterans Lagoon wastewater treatment facility.

8. Targeted Industry Study

- A Targeted Industry Study which is being planned has potential to reveal new and yet unforeseen opportunities for industry and business development.

9. Tourism Opportunities (examples excluding railroads)

- Tourist attractions in the Valley are widespread, and almost any community can improve on marketing their attractions, and capturing more tourists spending by providing more services.
- Tourist, trucker, and business traveler traffic on US 160 is increasing, and always represents opportunity to develop more services to increase the capture rate.
- The Great Sand Dunes represents the Valley's largest tourist destination, and will be drawing larger numbers and types of visitors than ever before as a result of the upgrade from Monument to National Park.
- Pending designation of the Sangre de Cristo National Heritage Area further enhances the draw to the Valley, and offers many opportunities to make needed improvements at historic sites, expand services for a new wave of heritage tourists, and generate fee revenues for private landowners.
- A Heritage Tourism Pilot Project is winding up and will provide itineraries for heritage tourists.
- Nature-based and eco-tourism is still the fastest growing, and offer business opportunities in connection with viewing areas, such as a proposed Valley branch of the Colorado Birding Trail.

10. Railroads

- The recent passenger rail service to La Veta and Antonito by the San Luis & Rio Grande Railroad has increased ridership, and promises to do more by adding more routes.
- Commuter rail is also a possibility with the SL&RG.
- The South Fork to Creede branch of track offers opportunity for excursion service, or conversion from Rails-to-Trails.
- A Narrow Gauge Park was mentioned as a possible opportunity.

11. Business Development Center

- The proposed Business Development Center offers the opportunity to create one-stop services for businesses.
- The opportunity to create a Multimodal Facility at the Center is being studied.

12. Business Incubator

- Co-location of business services with the Business Development Center also creates opportunity to develop a business incubator.

14. Main Street Programs

- Main street programs provide an opportunity for communities to focus on their most important assets and tap into funding not otherwise available.

15. US 160 Major Cross-State Corridor

- Many see 4-laning of US 160 as a preferred east/west cross-state corridor which would attract new business opportunities.

16. Transit Services

- A contingent commitment of Federal Transit Act funds has already been made to start up and support job commuter and general public transit services for the region in 2008-2009, pending results of a Coordinated Transit Services study detailing workable services and operating plan, and showing how matching funds can be raised.
- Opportunity is also at hand with the pending FTA funds and Transit study to establish a Regional Transit Authority.

17. Expand Research Capacity

- Increased demand for research assistance, and additional research required to advance renewable energy and other technical projects, presents the opportunity to expand SLVDRG research capacity.

18. EPA Study

- EPA selection of the region to conduct a San Luis Basin Sustainability Project will create a national model for using metric formulas to predict sustainability of regional economies, and the opportunity to share the results for future CEDS planning.
- Appointment to the project data team offers a chance to enhance the research program, and potential for increased levels of participation and future project opportunities to benefit the region.

19. Private Correctional Study

- Increased demand for correctional facilities, and private investment interest in the industry, presents the opportunity to research the feasibility of a private correctional facility in a portion of the region having support for such development.
- While controversial, this would also provide a large number of jobs, and create a new market for locally grown food products.

20. Other Projects and Proposals Offering Development Opportunities

- Village at Wolf Creek.
- Albuquerque air route.
- RV Park.
- High Altitude Training Center.
- Events and marketing focused on locally-produced arts and crafts.
- Build green buildings.

D. External Forces Potentially Affecting the Economy

A partial listing of external forces with potential to affect the regional economy are as follows:

- Global warming and climate change, with an adverse effect on agriculture, water resources, forest resources, and wildlife. The urgency to develop clean energy sources and reduce hydrocarbon emissions also provides an opportunity for our region to develop solar and other renewable energy resources.
- Escalating gasoline prices, resulting in increased costs of production; further erosion of disposable income; and higher prices for food and other goods reflected in higher shipping and production costs. This also carries an urgency and opportunity for our region to develop cost effective biofuels.
- Potential for an extended recessionary period leading to a reduction in private investment, lower sales volume, and reduced public services.
- Potential for continuing impacts of sub prime mortgages, resulting in higher interest rates and credit tightening; continued home and business foreclosures; and a loss in consumer spending power.
- With unrestrained growth in the metro areas, more threats on water exports and sale of agricultural lands.

E. Relevant Material from Government-Sponsored or Supported Plans

1. Governor Ritter's Colorado Promise

In his promise to the voters in 2006, Governor Bill Ritter laid out an ambitious agenda for State Government which is being incorporated into plans at the department level. The plans most relevant to our CEDS planning include the categories of New Energy Economy; Economic Development and Job Growth; Transportation in the 21st Century; and Broadband Internet Access. In general, the plans and policies put forth will fortify or provide additional guidance to us in formulating strategies and selecting action plans for the CEDS. Some also infer potential sources of funding support.

Selected elements from the **New Energy Economy** initiatives are as follows:

- A promise to ensure that rural communities are not just beneficiaries, but important drivers of the New Energy Economy through production of wind, solar, and biofuel energy.
- The San Luis Valley is specifically mentioned as one of the sunniest parts of the State and Nation, and Colorado has a goal of bringing in an even larger slice of a \$4 billion solar industry.
- Continued support for the creation of a Colorado Clean Energy Fund to provide seed money for development of new technologies.
- Pursue federal workforce development funds, such as the federal Energy Policy Act of 2005.
- Public-private partnerships are encouraged in order to establish statewide standards for creating and expanding markets for renewable energy products.
- Create a more favorable investment climate by streamlining the regulatory process, and where fiscally prudent, offering tax credits, rebates, and other incentives to new and developing businesses. These would include manufacturers and consumers of hybrid vehicles, solar panels, wind turbine components, and other clean-energy equipment.
- Further the networking and cross-pollination of the State's research and development teams including NREL, and Colorado's universities, businesses, skilled workers, ranchers, and farmers.
- Support a Colorado Renewable Energy Collaboratory including the School of Mines, University of Colorado, Colorado State University, and NREL to work towards a shared vision of making Colorado a recognized world leader in reliable, secure, clean, and economically viable energy resources and technologies.
- Become a leader in the design, production, maintenance, and repair of alternative fuel and renewable energy production facilities.
- Create renewable energy degree, certificate, and apprentice programs.

The following selected elements are notable on **Economic Development and Job Growth**:

- On the promise to strengthen regional economies, the San Luis Valley is one of 5 regions in the State singled out for strategy planning based on the region's unique strengths and assets.

- Assurances are made to establish regional partnerships between State government and each region to conduct research and analysis on economic and labor force trends; courting businesses that show an interest in locating or expanding in the region; and developing business recruitment and retention packages that include information on existing incentives, business tax policies, available land, workforce training programs, and other information to assist business owners in decision-making.
- Programs will be results-oriented with measurable outcomes, and do more to help businesses access under-utilized federal programs.
- Direct all State agencies that play a role in economic development to focus on the common goal of job creation.
- Conduct an aggressive marketing program for the State's \$8 billion tourism industry.
- Promote greater coordination and cooperation leading to a rational statewide incubator a strategy.
- Create a Colorado Jobs Cabinet comprised of senior business leaders, representatives of higher education, economic development, and workforce officials to align the State's economic development and education goals with funding and strategies for preparing a modern labor force.
- Promote opportunities and programs for small businesses to ensure they have access to the information they need, and access to capital.

Pertaining to Transportation, the Governor pledges to put a 21st century multimodal transportation system in place to match the 21st century economy, which would support our work in assisting with regional transportation planning in general, and our special efforts to encourage general public and job commuter transit services.

For broadband Internet access, a "digital divide" in rural Colorado is recognized, although this would be disputed among some Internet Service Providers. A State-installed Multi-Use Network (MNT) was linked to all the county seats in Colorado, but remains largely unused because of a lack of effective "last mile" broadband technologies. Interest is expressed in exploring wireless technology and a universal service fund as a potential solution.

2. Federal Lands Planning and Management

The Federal land management agencies described in Chapter H. of the Background Information are responsible for over half the region's land area, with a mandate to "... integrate resource use and protection with the public's use, recreation, and livelihood." These great lands support tourism and outdoor recreation; protect watersheds for the economy based on agriculture; harbor and supply timber and mineral resources; guard the wildlife habitat; and sustain grazing areas. Planning and policy decisions on the extent of resource use, access, harvest, fees, and rules of conduct are generally based on scientific studies and findings, budgets, staff capacities, and statutory and federal policies, and are subject to considerable public review and comment.

Examples of the management decisions and issues most relevant to CEDS planning, and most likely to impact the economies of the region and surrounding communities, are those based on the number of visitors allowed; access

in terms of roads, trails, hourly and seasonal restrictions, and mode of travel; timber sales and harvest quotas; mining, drilling, and extraction activities; protection of riparian areas; grazing permits; fishing and hunting regulations; threatened or endangered species; camping availability and restrictions; RV and camper waste disposal; and many more.

Land acquisitions, expansion of boundaries, and additional Park Service management responsibilities for the Great Sand Dunes in becoming a National Park, has required a closer look at the anticipated increase in visitor numbers and impacts. Plans include preparations and additional staff to accommodate the visitor increase, and this should also create additional business opportunities such as lodging, RV camping, restaurants, and other services at the park borders. Still controversial is a proposed north access road to the park from the Baca Subdivision, and oil and natural gas exploratory drilling on the wildlife refuge and hunting preserve lands in the northwest corner of the park.

Management Plans, Environmental Impact Statements, and frequent Schedule of Proposed Action (SOPA) lists for the Rio Grande National Forest and BLM San Luis Resource Area contain the plans and policies for similar sets of concerns to the Park Service. Timber harvest quotas; timber sale types, sizes, and locations; firewood permits; wildfire control; and grazing permits are also determined by these agencies.

When Louisiana-Pacific was evaluating the area for a waferboard plant in the 1980's, 35 MMBF (million board feet) was available to sawmills in South Fork and other Valley locations. A reduction to 17 MMBF in the early 1990's led to the closure of the South Fork operations, and layoffs of several hundred sawmill workers and loggers. Today, that quota is only 10 MMBF, supporting only a few smaller mills and logging operations, and more logging is being done on private lands.

Forest damage from prolonged drought and beetle infestations resulted in some large tracts which did not become available until recently. A considerable amount of wood waste is also available from brush clearing and thinning as a wildfire mitigation measure. Together these sources of supply represent potential business opportunities for production of fuel biomass, manufacturing of small diameter products, or other commercial uses.

While the timber resources are playing a more modest role in the forest plans, the visitor and recreational aspect of the forest is reported to have expanded significantly. As part of its review role, the Forest Service also conducted an EIS study on plans for the Village at Wolf Creek located on private land in-holdings at the ski area. Clearance is pending resolution of issues concerning road access.

3. Government-Supported Plans at the Local Level

In our experience, city and county Master Plans, Comprehensive Plans, Land Use Plans, and Zoning Plans are providing guidance for the orderly development and attainment of future visions and goals which are limited in scope to their community or county, and generally do not have a well-developed regional perspective. What we find most relevant in these plans are the provisions made for future economic development by purchasing or reserving land and water rights, and designing “opportunity zones” and prospective business or industrial parks. Some also consider actions needed to improve physical appearance of downtown areas for shopping and tourism, and the development potential in restoring or converting existing buildings and former business or industrial properties.

To the extent that these issues have been addressed, we are participating with the county and city/town entities and relying on their assistance to comply with planning guidelines, and advising on planning improvements or revisions needed to accommodate new development opportunities. A few pertinent questions relating to the CEDS might be: To what extent do the plans include accommodation for renewable energy development? And: To what extent do the plans contain a vision of their role within the context of a regional perspective?

To advance their planning work, local governments generally rely on assistance from the Department of Local Affairs to cover or share the costs of hiring consultants to conduct the planning work. Since 2001, the DOLA databanks show 5 funded plans including the Alamosa County/City Comprehensive Plan which is still in progress: Conejos County Comprehensive Plan Update; Costilla County Land Use Plan; Monte Vista Ski-Hi Complex Master Plan; and South Fork/Del Norte Land Development Code. The assumption is made that other entities are relying on plans older than 5 years, or realizing the need for fresh plans and updates.

F. Consistency with State and Local Workforce Investment Strategies

1. Colorado Workforce Development Council

Preparing our workforce for a new order of job opportunities in the solar and other renewable energy fields will require a close alignment to State workforce investment strategies, which are being designed by the Colorado Workforce Development Council in lieu of any unified training approach at the national level. With 16-20 years of rapid growth predicted for the renewable industries, and with 18% of the workforce eligible for retirement in 10 years, this will be a challenging task to meet the industry demands.

To be able to fill the new job qualifications for solar and other renewable energy positions, which may have no relationship to agriculture or historical employment patterns, will require a significant effort on the part of our workforce development and training institutions. But this will be well worth the effort in terms of the wage and skill improvements for workers, and the creation of a more attractive labor pool for other industry prospects.

Occupations identified by the Council specific to solar power include: Electrical Engineers; Material Science Engineers; Electrical Technicians; and Architects. For the wider spectrum of renewable energy, the following additional occupations were listed: Aeronautical Engineers; Physicists, Chemists, and Biochemists; Agricultural Specialists; Hydrologists and Hydraulic Engineers; HVAC Contractors; Biologists and Ecologists; Geologists, Geochemists, and Geophysicists; Sales and Marketing; and Business Support Services. Others listed for overall industry demand include the following: Electrical Power-Line Installers and Repairers; Mechanics, Installers, and Repairers; First and Second Line Supervisors; Plant Maintenance Staff; Electrical, Mechanical, and Civil Engineers; Construction Workers and Skilled Laborers; Customer Service Representatives; Operating Engineers; and Construction Equipment Operators.

Training initiatives for Colorado are being planned through The Rockies Alliance for Process Technology, consisting of 5 Colorado colleges and 8 national energy and process companies. Establishment of a Colorado Jobs Cabinet is also included the Governor's *Colorado Promise* initiatives, and the intent to create job opportunities in the manufacturing of renewable energy equipment and components is also mentioned. Manufacturing would likely require an entirely different set of occupations.

A Council presentation at the 2007 Annual Demography Meeting outlined a "Strategic Workforce Development Framework" which provided a summary of its workforce investment strategies. For craft skill occupational classifications this included the following:

- Support for regional apprentice and craft programs.
- Structure contracts to obligate contractors to assist in workforce development.
- Expand cross-craft skills acquisition.
- Create regional craft hiring pools plus temporary housing capacity.

For degreed skill classifications this included the following:

- Long-term internship arrangements with universities and community colleges.
- Sponsored and targeted scholarships.
- Public-private marketing of technical careers to traditional and non-traditional students.
- Development and support of large-scale co-op education programs.
- Adjunct teaching at universities.
- Working with career development offices.
- Marketing of industry and careers.

2. South-Central Colorado Workforce Center

Workforce Center offices in the San Luis Valley area are located in Alamosa and Monte Vista, and combine the services of the former Job Service with subsidized job training for economically disadvantaged clients by Rocky Mountain SER/Jobs for Progress. Besides regular job matching and placement, the Center maintains a job

exchange network with multiple access points, and a network of one-stop career centers across the State. In addition, it plays a more active role in screening for job openings, and one-on-one job development counseling for clients. Programs under Rocky Mountain SER include On-the-Job Training; Vocational Training; Supportive Services; and Work Experience.

In order to maintain consistency with local workforce development strategies, we maintain our membership in a partnership of business and industry, labor, government, and education representatives established by the Workforce Center. Our Strategy Committee also reflects efforts to involve workforce development and training representatives as stakeholders in the CEDS planning and implementation process.

In addition, we are using the Center services for job referrals to projects receiving BLF assistance, and also to verify family income of the applicants to ensure that a majority being hired for the project meet HUD low or moderate income guidelines. Business borrowers are also advised of training services offered by Rocky Mountain SER, and federal tax credits may also be available to employers through the Work Opportunity Tax Credit (WOTC) and Welfare-to-Work programs.

As part of its service delivery, the Workforce Center reports an emphasis on raising the standard of living for its clients, and reducing income equality. We also maintain a policy in our BLF program to ensure that wages proposed in the assisted projects meet or exceed prevailing wages for the occupation and area, and in no case can be less than the authorized State Minimum Wage.

G. Past, Present, and Projected Economic Development Investments

1. Early Area and Economic History, 1840-1970

Notable events in the region's economic history from 1840-1970 are summarized in Chapter A. of the Background Information on Area Description and Development History.

2. EDA Development District Investments, 1970-1993

Chapter A. also summarizes notable development investments beginning with the inception of the San Luis Valley Economic Development District in 1970 up until the time of SLVDRG consolidation in January 1994. From 1970-1980, the six counties in the Valley were included as part of the Southern Colorado EDD in Pueblo, with a major focus on local government infrastructure improvements and services needed to prepare for future growth. A separate District for the 6-county area was confirmed in August 1980 under the SLV Council of Governments (COG) and Regional Development and Planning Commission (RDPC), with emphasis shifting to job-creating projects such as the Alamosa Mushroom Farm (currently Rakhra Mushroom Farm), ethanol alcohol production from potatoes, and a number of other prospects building mainly on the Valley's agricultural and timber resources which did not materialize.

Following spending cuts affecting its programs, the COG terminated its operations in 1982 and the RDPC took over the EDA District operations, establishing a Revolving Loan Fund (currently Business Loan Fund) as a primary tool for advancing projects, and adding an emphasis on tourism. This also included an extended evaluation by Louisiana Pacific Corporation for a large wafer-board manufacturing plant based on aspen resources (which did not materialize); and strategies to utilize the Valley's geothermal resources for aquaculture, which resulted in the Colorado Gators attraction and Tilapia farm, and led to a nationally acclaimed aquaculture training class at Trinidad State Junior College.

3. District Investments Under The SLVDRG Administration, 1994-Present

Development investments under the SLVDRG, representing a consolidation of a State-funded Economic Development Council into the RDPC in January 1994, are also summarized in more detail in Chapter A. of the Background Information. This increased the programming strength of the District by adding the State's Enterprise Zone program to the RDPC's loan program as tools to advance projects, and added a stronger interface with DOLA-funded projects.

One of the most notable projects was development of the ag waste treatment facility in 1998, which made it possible to expand value-added processing for the Valley at the ag warehousing, packing, and shipping complex in Center. Facilities are currently being utilized by the Idaho Pacific/Otter Tail dehydrated potato processing plant, and also hosted startup operations for carrot processing and European-style peeled potato products which investors were unable to sustain.

In 2005, we provided loans for the Alta Fuels biodiesel blending and distribution operations, which opened up new possibilities for the expansion of biodiesel production based on ideal conditions for growing canola and setting up oil crushing facilities. Recent studies, however, indicate that the canola acreage required to support a crushing plant would probably not be feasible at the present time. In January 2007, business loans to Moraine Partners were a key factor in the purchase and re-opening of the starch plant north of Monte Vista, which promises to produce higher-value starch products.

Starting in 2007, renewable energy, and particularly solar-produced energy, appears to offer an even greater level of opportunity for the region, and replaces value-added agriculture in the No. 1 spot. This was recently confirmed with development of an 8.2 megawatt solar panel and CSP farm north of Alamosa by the SunEdison/Xcel Energy partnership, which is the largest of its kind in the nation. An optimal sitting for a wind-farm is also in progress, although this is perceived as having a greater potential on the eastern plains of Colorado. Opportunities for renewable energy production from wood biomass and cellulosic ethanol remain as potentials, but have yet to produce specific investment projects.

4. Projected Investments

Projects and prospects in the solar energy field are anticipated to provide a major focus for investment in the next five years. A \$125,000 study to assess the feasibility study for a 100-MGW CSP plant will soon be underway, and we hosted presentations from investor groups in 2007 considering a 1,000-MGW operation in the Valley. This will also require new transmission lines for transferring electrical power produced here to the grid.

These operations will also require major skill upgrades in the workforce, and the prospect of manufacturing solar equipment and components would provide a much greater number of job opportunities than management of the production operations which are highly automated.

In other renewable energy fields, prospects based on wood biomass, and new cellulosic ethanol technologies may also become feasible based on local supplies of wheat straw or hull-less barley. In other industries, a combination of the Sand Dunes National Park, designation of a National Heritage Area, and tourist trains is expected to increase the number of investments in the tourism economy. A planned Targeted Industry Study is anticipated to expose an entirely new set of industry potentials and opportunities for investment, which may require some modification or revision of the CEDS strategies.

H. Regional Economic Clusters

1. Status With Regard to Cluster-Based Analysis and Strategy Implementation

The identification and analysis of economic clusters as required in the 2007 CEDS guidelines represents an important new direction in economic development policy needed to confront a dynamic and highly competitive marketplace which is becoming increasingly complex, knowledge-based, and with global dimensions. First described in 1990 by Harvard Business School Professor Michael Porter in his book entitled *The Competitive Advantage of Nations*, the cluster strategy is credited with transforming weak economies into powerful new centers of business activity having a competitive advantage over other places.

Although many of our activities and project selections reflect a basic understanding of concepts similar to those used in the cluster-based approach, we have yet to conduct a systematic study of clusters or to take on a formal cluster initiative. Our purpose here is to provide a fairly elaborate report on the cluster doctrine and precepts for reference by the staff and Strategy Committee in considering the future adoption of a cluster-based strategy as part of our CEDS planning and implementation process.

Regardless of our rural location, we may already be going through what the literature calls a "developmental process," which may "sustain our momentum" for implementing a cluster-based approach. This would most likely be based on our potentials to become a national provider of solar and other clean energies, and our

expanded Strategy Committee already includes some of the stakeholders needed to carry out a cluster-based program.

2. Cluster Definitions

The cluster concept can be viewed from several different perspectives, and the terms “industry cluster,” “business cluster,” and EDA’s use of “economic cluster” generally refer to the same thing. A definition we found in James Gollub’s report to EDA entitled *Cluster-Based Economic Development: A Key to Regional Competitiveness* is as follows:

“Industry clusters are agglomerations of competing and collaborating industries in a region networked into horizontal and vertical relationships, involving strong common buyer-supplier linkages, and relying on a shared foundation of specialized economic institutions. Because they are built around core export-oriented firms, industry clusters bring new wealth into a region and help drive the region’s economic growth.”

One of our dictionaries describes “agglomeration” as a “heap or cluster of disparate elements.” A “vertically-integrated cluster” is made up of industries that are linked through buyer-sellers relationships; and a horizontally-integrated cluster” includes industries which might share a common market for end products, use a common technology or labor force skills, or require similar natural resources.

A definition offered by Steven Zystra in his article entitled *Economic Clusters: Focusing on Limited Resources*” in the March 2002 Pittsburgh Technology Council’s newsletter, was one of our surf picks:

“A cluster is a geographic concentration of competitive firms in related industries that do business with each other. Each cluster includes companies selling primarily outside the region, as well as support firms supplying raw materials, components, and business services.” And Zystra goes on to say: “Clusters provide synergy, and that leads to competitive advantage. In clusters --- available pools of experienced workers are larger and more diverse; suppliers tend to congregate for increased efficiency; and a competitive spirit builds, stimulating rapid growth, and innovative, energetic strategic alliances form.”

In the Harvard Business School’s Institute for Strategy and Competitiveness website, Porter notes that clusters represent “... critical masses in one place of linked industries and institutions --- from suppliers to universities to government agencies --- that enjoy unusual competitive success in a particular field.” And further notes that clusters affect competition in three ways: By increasing the productivity of companies based in the area; by driving the direction and pace of innovation; and by stimulating the formation of new businesses within the cluster.

A definition from the section on "Cluster-Based Economic Development" in EDA's website is as follows:

"Industry clusters are geographic concentrations of competing, complimentary, or independent firms and industries that do business with each other and/or have common needs for talent, technology, and infrastructure. The firms included in the cluster may be both competitive and cooperative. They may compete directly with some members of the cluster, purchase inputs from other cluster members, and rely on services of other cluster firms in the operation of their business."

And finally, Porter notes that: "Clusters are a prominent feature on the landscape of every advanced economy, and cluster formation is an essential ingredient of economic development. Clusters offer a new way to think about economies and economic development; new roles for business, government, and institutions; and new ways to structure the business-government or business-institution relationship."

3. Advantages of a Cluster-Based Approach to Economic Development

In addition to advantages of the cluster approach already portrayed in the above definitions, there are many others which need to be considered in making a cluster-based strategy commitment. Some notable ones summarized from Gollub, Porter, and other references are as follows:

- The formation of clusters promotes faster product improvements and innovation than would otherwise take place.
- The cluster-based approach is market-driven. A basic logic is to help markets work more effectively by bringing the region's key industries (demand side) together with private and public sector sources of economic inputs (supply side).
- A greater level of information exchange gives a more accurate reading of the region's competitive position, and relation to global markets.
- Brings all the stakeholders together, both large and small companies and suppliers.
- Places a great emphasis on development of collaborative solutions --- different from "experts" or "blue ribbon committees."
- Illuminates opportunities to grow the economy by moving to higher value-added activities.
- May create vertical-linkages by helping exporting industries find and recruit new local suppliers or business services that will enhance productivity and generate more employment.
- Presence of a concentration of firms in specific sectors of a cluster ends up attracting other similar or related producers as well as spin-offs and start-ups --- these are horizontal-linkages in the economy.
- Can become satellite sources of value to another region's clusters (can become strategic partners).
- Could also become "nodes" or "centers of excellence," in what might be called "network-based clusters."
- Geographic, cultural, and institutional proximity provides companies with special access, closer relationships, better information, powerful incentives, and other advantages that are difficult to tap from a distance.

To further elaborate on the advantages of cluster-focused implementation to “bring all the stakeholders together,” we need to describe the 7 main categories of “economic infrastructure” or “foundations,” which are as much a part of the cluster as the exporting industries and their suppliers, and also referred to as “building blocks.” Following are some descriptions we borrowed from Gollub and the Southeast Colorado E3 Partnership (providing consulting services to a larger southeast Colorado region including Pueblo):

- Adaptable skills: Education and training systems to prepare and advance worker skills.
- Accessible technology: Systems to discover and develop scientific innovations, and how the region deploys ideas.
- Adequate financing: The region’s access to capital for initiation, expansion, and restructuring industry.
- Available infrastructure: Includes (among others) transportation, power, and environmental, and reflects the region’s capacity to provide mobility, support operations, and provide facilities for the economy.
- Advanced communications: Telecommunications, data, and information processing.
- Acceptable regulatory and business climate: Reasonable costs of doing business, and the region’s tax, regulatory, and administrative environment.
- Achievable quality of life: Public safety, housing, health care, cultural, and recreational amenities.

4. Commitment Needed to Carry Out a Cluster-Based Program

It is one thing to understand the benefits of cluster analysis, and another to put forth the commitment necessary to implement a cluster-based strategy with all the players involved. Interest and participation in the current round of CEDS planning may provide some indication of the region’s willingness to put forth this level of commitment. This will also require a new mindset for “cluster thinking,” and eventual capability for “cluster action.” Zystra sums it all in his “New set of rules” as follows:

- Think economic process, not agency function. Economic development requires cooperation of all governmental and private organizations.
- Think system, not program. Programs are far less important than the way they are carried out and fit within a strategy.
- Think building blocks, not gimmicks. Strengthen community foundations that help businesses become competitive rather than relying on incentives.
- Think clusters of businesses, not firms.
- Think marketplace demand, not supply. Signals and pressures from the marketplace should drive economic development policies.
- Think catalyst, not direct supplier. Act as a catalyst, broker, or partner, using public resources to encourage businesses to support efforts to improve the economy.
- Think economic region, not political boundaries.
- Think impact and quality, not quantity. Invest in a few good programs, rather than giving a little something to every program that comes along.

5. Cluster Identification Methods

In general, it takes something that competes beyond the regional borders to define a cluster, and in rural areas we would expect only a few industry groupings to have the breadth of industry concentration, suppliers, and economic foundations needed to make the region truly competitive. In the San Luis Valley, only the export volume and activity surrounding and supporting potatoes and other agricultural products may reach the level of a cluster, and we are hoping this will eventually be the case for one based on solar and other renewable energy production. Tourism may also be approaching this level, but the impacts in dollar terms have so far been unimpressive compared with agriculture.

We have not conducted a quantitative study to identify or illuminate unexpected or potential clusters, or to better describe existing ones, but we have planned a Targeted Industry Study which could provide a first step in this direction. A major study recently conducted by Purdue University with EDA support entitled *Unlocking Rural Competitiveness: The Role of Regional Clusters* offers the following criteria for selecting target industries and clusters:

- Average payroll wages equal to or higher than national industry average.
- Relative immunity to recessions.
- High total earnings.
- High potential to generate taxes.
- Export products (or potential for export).
- Potential for import substitution (industry or cluster fills a need currently being supplied from the outside).
- High amount of value-added.
- High industry multiplier.
- Cluster Location Quotient substantially larger than 1.
- Cluster experiencing both national and regional employment growth.
- A cluster and its industries whose growth is attributed more to regional factors than to national or industry mix factors (as demonstrated by shift-share analysis).
- Positive local growth projections.
- Part of a group of industries targeted by State government for development.

The Purdue study reports three principal methods for measuring and evaluating clusters, described briefly as follows:

Location Quotient Analysis --- Calculated by dividing regional employment in Industry X by total regional employment, and dividing that quantity by national (or state) employment in Industry X divided by total national (or state) employment.

- If LQ is less than 1, region is less specialized in Industry X, and needs to import goods to satisfy local demand.
- If LQ = 1, region produces just enough in Industry X to satisfy local demand.
- If LQ greater than 1, region is more specialized in Industry X and exports output to other regions.

Shift-Share Analysis --- Measures the influence of national (or state) growth (or decline) on Industry X; the influence of industry share on the growth (or decline) of Industry X; and regional share effect on growth (or decline) of Industry X.

Input-Output Analysis --- A highly technical exercise based upon the development of input-output tables and multipliers for jobs, earnings, and output for each sector, subsector, and industry of the economy. This requires extensive research to identify and measure the volume and types of goods and services which are being exported out of the region for a given industry, and the volume and types of goods and services needed to maintain that industry which have to be imported from outside the region.

Multiplier tables are reported for various regions of the nation from the RIMS II (Regional Input-Output Modeling System) by the Bureau of Economic Analysis (BEA). A set of these we are using for the San Luis Valley counties is included in Chapter K. in the Background Information. Unfortunately, these apply to a multi-county "Southern Colorado Region" which includes five of the Valley counties (excluding Mineral), and the southeastern Colorado counties of Baca, Custer, Huerfano, Las Animas, and Prowers, which have economies totally unlike the San Luis Valley and appear to be an arbitrary choice on the part of the BEA researchers. Given this kind of unlikely configuration, it would seem we have little to gain from further analysis of the detailed Input-Output tables.

6. Agricultural Production and Processing Cluster

Some level of cluster identification can be made by relying on our own observations, familiarity with data sources and research tools, and using the Base Industry Analysis provided by the State Demography Office. A full description of the analysis applied to counties in our region is included as part of Chapter K. in the Background Information.

The components making up the Agriculture (or Agribusiness) segment in this analysis are generating the greatest amount of basic income for the regional economy --- 37.9%, and thus "driving the economy." The amount associated with agriculture, however, barley surpasses the contribution of base income from the Household Sector (36.2%), which does not export any products or services and cannot by itself meet the definition of a cluster.

Components in agriculture include:

- Agricultural production: Farms and ranches producing the crops and livestock which are being exported from the region and drawing basic income to drive the economy. Potatoes are the largest export crop, followed by barley for brewing, winter wheat, other grains, and canola; alfalfa and native hay; row-crop vegetables such as spinach, lettuce, and carrots; mushrooms grown under cover; potato and other seed crops; hydroponic tomatoes; and livestock including beef cattle, horses, sheep and lambs, goats, and hogs.
- Agricultural inputs: The “indirect suppliers” to agriculture including farm services and technical assistance; businesses providing chemicals, fertilizers, and composting; seed companies; crop harvesting services; crop and livestock inspectors; commercial, specialized, and government ag lenders; farm real estate and insurance agents; farm product wholesale distributing operations; workforce development and employment agencies; warehousing, packing, and shipping operations; water storage and irrigation companies; farm labor contractors; farm worker housing; veterinarians; crop spraying services by airplane; farm implement and equipment companies; animal feed stores; lumber and hardware stores; electric and plumbing services; water drilling, pipes, and pumps; fencing materials; crop research stations; refrigerated storage; fuel suppliers; product development and technical engineering; farm cooperatives; marketing agencies and services; trucking, shipping, and rail freight companies; accountants and financial services; utility companies; waste management services and landfills; wholesale buyers and brokers; and large-scale retailers.
- Agricultural processing: Includes what used to be called “Food & Kindred Products Manufacturing,” and a portion of many of the activities and functions listed above. A thin line separates “processing” from packaging or minor value-added enhancements to fresh produce, but it usually refers to a process which alters the raw product by cutting, drying, cooking, or changing it in some form. This “adds value” to the product from the labor saved to the end user. Under the North American Industry Classification System (NAICS) for describing industries which is now in practice, agricultural processing is lumped into “Food Processing,” whether it be for edible or industrial products. While significant efforts have been made to develop agricultural processing in the region, the most notable at the present include only two companies: the Idaho Pacific/Otter Tail potato dehy plant in Center; and the Moraine Partners potato starch plant northeast of Monte Vista which is in the process of being re-opened after many years of being closed.

The Agriculture cluster has its greatest concentration is in Rio Grande County (\$88.3 million, 50.2% of county, 61.5% of regional agriculture), followed by Saguache County (\$21.3 million, 38.1% of county, 14.8% of regional agriculture); and Alamosa County (\$20.6 million, 13.6% of county, 14.3% of regional agriculture). Agriculture base income is only \$6.0 million in Costilla County, but 21.1% of its county base income. Agriculture in Conejos

County is \$7.4 million, but derives only 12.1% of its economy from agriculture, with the greatest amount (55.9%) coming from households.

With the exception of the ag concentration in and around the Town of Center, and a strip along US 285 north of Monte Vista, most of the ag cluster is too spread out to gain a perspective based on observation alone. Center more or less epitomizes what you expect to see for an ag cluster and includes: potato warehouses and packing sheds; the IP dehy plant; ag waste treatment facilities; rail sidings and loading platforms; trucks loaded with produce; farm worker housing; farm servicing shops and stores; banks; a nearby CSU Agricultural Research Station, and many more. Monte Vista has implement dealers, ag chemical distributors, a Coors barley storage facility, the starch plant, a carrot shipping operation, and the Gosar Farms specialty meats operation, but most are not contiguous.

Due to the already extensive concentration of ag industries and representation in the supply chain, the implementation of a cluster-based approach would appear to a feasible and worthwhile undertaking, and should be considered.

7. Potential Cluster Formation Based on Solar and Other Renewable Energy Resources

With the recent development of the Xcel Energy/SunEdsion 8.2 MGW solar farm north of Alamosa as the nation's largest of its kind; a solar CSP feasibility study soon to be underway for a much larger 100-MGW operation; a national dilemma facing the need for clean energy and a way to reduce energy use and costs; and visions announced by the Governor of Colorado and two native son members of Congress; we have every right to believe that the Valley will soon have the competitive advantage of an industry cluster based on solar energy production.

This will require development of transmission lines for power distribution; a greater level of sophistication to meet the workforce demands of the cluster industries, and improvements needed in all categories of our economic foundations; direct involvement of research and development expertise; and a yet unknown spectrum of suppliers and equipment manufacturers. Other clusters (or sub-clusters), networks, nodes, or other collaborations may also be possible based on other renewables such as wind energy; biodiesel, hydrogen, or other types of fuel production based on renewable resources; geothermal; wood waste and other biomass; cellulosic ethanol; or yet unforeseen innovations.

According to the cluster literature, we can nurture a cluster, give it a climate in which it can grow, but we cannot force a cluster to happen. This will be driven almost entirely by national and global demand, and forces within the marketplace. We can, according to the rhetoric, conduct an implementation strategy for our existing clusters in agriculture, tourism, or any others we may yet identify.

Because of its potential scope and economic importance, the cluster-based approach will probably become an essential part of the future planning process, starting no later than firm plans for construction of the CSP Plant and transmission lines have been determined.

8. Tourist, Visitor, Recreation, Arts, and Entertainment Candidate Cluster

We are proposing a nominate or candidate cluster based on tourism, visitors, and travelers in general, and which also combines other business activities in recreation, arts, and entertainment fields aimed at tourists and residents alike. This is not to say we are on a cluster scale equal to the Aspen and Summit County ski areas, to the art centers of Santa Fe and Taos, or to the tourist meccas of Rocky Mountain National Park or Yellowstone, but we do have a diversity of attractions which many rural areas (even in Colorado) would be envious.

First and foremost is the Great Sand Dunes National Park and Preserve, which serves as the region's major tourism destination, attracting visitors in the 250,000 range. Examples of other attractions mentioned throughout the CEDS include tourist railroads; ski area; extensive national forest, wildlife refuge, wilderness, and other public lands for hiking, camping, fishing, hunting, wildlife viewing, ecotourism, and other pursuits; a repertory theatre; geothermal spas; alligator farm; running and track sports; and many more.

Added to this, and representing what may be a sub-cluster of activities based on heritage tourism, is soon to be a focus of national attention with designation of the Sangre de Cristo National Heritage Area. The Valley's concentration of arts and crafts talents may also tie into this. Emergence of a solar-based cluster supplying clean energy on a massive scale may also become a national tourist attraction.

In spite of the improvements made in marketing, Internet reservations, and main street enhancements on the part of many communities, tourism and other activities tied to it performs below its potential compared with many Colorado areas, and could probably benefit from a more formalized cluster-based approach with a more focused region wide perspective. Viewed from a base industry analysis, tourism ranks a distant third in the regional economy, representing only 11.5% of the base income.

Cluster segments in the base industry analysis include lodging, camping, and resorts; portions of the restaurant industry; tourist goods and services; tourist-related transportation (including airline, bus, tours, and tourist passenger rail); and seasonal and second-home construction and real estate. The construction portion of this would appear to be a divergent but growing sector of the economies in western Rio Grande, Mineral, and northern Saguache counties, and may eventually attain the status of a cluster.

Many attempts have been made to establish a truly regional approach to tourism, and the various Chambers, Lodging Tax Boards, business associations, and local development groups should probably consider a new effort following the concepts and tenants of the cluster-based approach.