QUALITY OF LIFE IN BOULDER COUNTY 1998
A COMMUNITY INDICATORS REPORT
## THE BOULDER COUNTY
### HEALTHY COMMUNITIES INITIATIVE

The Boulder County Healthy Communities Initiative strives to promote healthy decision-making that will sustain the environmental quality, livability, and economic vibrancy of the Boulder County region.

The BCHCI was launched in 1995 to provide a long-term community-based planning tool for Boulder County residents. Over 400 people participated in a year-long planning process that produced a vision of a healthy future and a strategic plan. Since 1996, the BCHCI has translated the citizens’ plan into action by:

- encouraging neighbors to organize and solve problems close to home
- creating an open forum for civil dialogue about issues affecting long-term community health
- developing a county-wide community indicators project

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WHAT ARE COMMUNITY INDICATORS?

Very simply, indicators are pieces of information that tell us something about the status of a larger system. A favorite analogy in the field of community indicators is that of an airplane control panel or a car dashboard. An altimeter indicates a plane’s altitude. A gas gauge indicates a car’s fuel level. Based on what these indicators show, a pilot knows whether to fly higher or lower and a driver knows when to fill up the tank. Many kinds of indicators are used to inform many different kinds of decisions.

Community indicators reflect the status of a community’s health and quality of life. In order to know if we’re heading in a desired direction, we need some guides to show us the way. Indicators are a tool for helping us understand ourselves as a community. They can aid citizens, policy makers, government agencies, the media, businesses and local activists in identifying and exploring the relationships among a wide range of community health trends and conditions.

HOW DID WE GET HERE?

Quality of Life in Boulder County 1998 represents three years of public process and one year of professional data work. Various experts were convened as necessary to provide technical assistance.

The indicators contained in this first report are intended to measure progress toward or away from the vision of a healthy community that was developed through the BCHCI planning process. The vision was essentially the foundation from which we built the structure of the report. We then generated lists upon lists of potential indicators. In order to winnow down the list, several criteria were applied. Indicators were selected partially based upon their:

• VALIDITY - Does the indicator provide meaningful information about what is being measured?
• ACCESSIBILITY - Are the data available?
• UNDERSTANDABILITY - Can the indicator be easily understood by the general public?
• RELIABILITY - Can the indicator be consistently measured over time?

It should be noted that in some cases, these criteria were rather loosely applied to allow for flexibility in the selection process. Unfortunately, the best data were not available for all of the things that the community would like to monitor. In this first report, we included several indicators for which the data was less than ideal. However, we felt that qualitative presentation of certain indicators was better than none. By acknowledging the limitations of community data, we may find ways in the future to obtain more meaningful measures.

This particular set of indicators does not represent a final or comprehensive assessment of quality of life in Boulder County. Rather, this report should be read as an initial inquiry into the health of our community. Based on your comments, reactions, suggestions and questions, we hope to refine and modify the indicators in future publications to even better reflect community needs and concerns. If this first report serves as a catalyst for people to think and talk about community health and sustainability in a regional context, then we will consider our job well begun.

HOW TO USE THIS REPORT

In order to make this report easy to follow, the multiple themes of the vision were grouped into four areas of community focus: People, Environment, Economy, Culture & Society. The vision language related to each of these focus areas is presented in the introduction to each section.

Each area of focus is further broken down into several dimensions. Some dimensions are measured by only one indicator while others contain several indicators. The Table of Contents (facing page) provides the best overview of the indicators framework.

Each indicator is accompanied by a description, a rationale for why the measure was selected, and an explanation of what the data show. Linkages highlighting the relationships between certain indicators have been identified where appropriate.
BOULDER COUNTY AT A GLANCE...

Straddling the unique territory between the rolling, eastern plains and the craggy peaks of the Continental Divide, Boulder County is situated along Colorado’s northern Front Range of the Rocky Mountains.

Native Americans of the Cheyenne and Arapaho tribes were the first inhabitants of this area. The territory within Boulder County became part of the United States with the Louisiana Purchase in 1803. Settlement by homesteaders, gold miners, farmers, coal miners and traders left both physical and cultural imprints still visible in present day Boulder County.

Today, Boulder County covers 750 square miles. Urban, suburban and rural communities occupy roughly 80 square miles, while the remainder of the county is forested or lies in agricultural production.

In recent decades, the population of Boulder County has grown steadily. The decade between 1970 and 1980 witnessed a 44% increase in the number of people living here. Since then, population has increased by nearly 20% every ten years. By 2010, the population is projected to swell to 350,000.

Boulder County is comprised of a diverse array of communities, each with their own particular history, culture and sense of aesthetic values. Boulder, the county seat, is the largest city in the county and has a reputation for its policies regarding growth management and open space preservation.

Longmont* to the northeast has a history linked to agriculture and is now one of the county’s fastest growing cities. Suburban-style communities, such as Lafayette, Superior* and Broomfield* have expanded in the eastern part of the county, while towns built around old mining hubs like Nederland and Lyons are reminders of the county’s past. Nearly 50,000 Boulder County residents live in unincorporated areas, like Gold Hill, Niwot and Eldorado Springs.

*Represents communities which lie only partially in Boulder County.
SUMMARY OF INDICATORS

A COMMUNITY INDICATORS REPORT

THE INDICATORS - IN A NUTSHELL...

People
Based on these twelve indicators, the health status of people in Boulder County looks encouraging. We don’t exhibit high incidences of low birth weight babies, teen births or violent crime. Women in Boulder County appear to take advantage of reproductive health care services.

Despite the relatively healthy outlook, vulnerable populations exist here. A surprisingly large percentage of elders are misusing their prescriptions; one-third of the calls made for domestic violence involve the presence of children; and pregnant teens are half as likely to seek prenatal care as older women.

Other things to be aware of include rising child care costs and traffic accidents.

Environment
Taken together, these indicators clearly illustrate the varied yet related impacts of population growth and development on the quality of the air, land and water which surround us.

The high quality of the natural environment in Boulder County is a major community asset and has figured significantly in the economic growth and prosperity we’ve enjoyed. However, the costs and impacts of this growth cannot be ignored. Most of the environmental trends and conditions examined here – the “brown cloud,” stream impairment, loss of biological diversity, transmountain water diversions – are directly correlated with urbanization, as measured by land annexations, vehicle miles traveled, and conversion of agricultural land.

Economy
The economic indicators portray broad trends in employment, income, housing and business in Boulder County.

County-wide per capita income compares favorably to the rest of the state and nation; middle income service sector jobs account for most of the employment opportunity in the county; and housing prices are increasing faster than incomes.

Small businesses are receiving more loans from the Small Business Administration and more businesses are joining pollution prevention efforts.

Culture & Society
Education, arts and civic indicators give a snapshot of the status of culture and society in Boulder County.

Graduation rates hover around 83% in both school districts; overall dropouts have increased in St. Vrain Valley School District in recent years, and Hispanic students in both districts appear to be at higher risk for dropping out; achievement scores in Boulder County schools compare favorably to state and national averages.

Relatively weak voter turnout in the county for municipal elections reflects the wider trend toward lower levels of voter participation evident in the United States as a whole. Library usage appears to be increasing along with the population in most communities.
All individuals cooperate in valuing, respecting and caring for all people, especially young children, youth and the elderly. Young people thrive in safe, inclusive neighborhoods where the family and the community are sources of supportive relationships. Early childhood issues are a primary concern not only of families, but of neighborhoods, businesses and government. Citizens volunteer to meet the needs of all vulnerable children, at-risk youth, the ill and the disabled. In addition, the needs of the disenfranchised are met with the same compassionate energy.

The citizens enjoy access within their community to the basic human needs, which include shelter, food and safety of person and property. As a part of this safety, citizens are free of substance abuse and the abuse of others. Every family has access to nurturing, affordable and comprehensive child care services. Health care of every kind is available to all.
1 LOW BIRTH WEIGHT

Indicator Description

Number of babies born with low birth weight as a percentage of all live births. An infant weighing less than five pounds, eight ounces at birth is considered low birth weight.

Why We Are Measuring This

The well-being of children is central to any community’s future. Public health experts find that an infant’s birth weight is a critical factor in his or her survival, growth and development. Low maternal educational level is one of several factors related to low birth weight.

What the Data Show

The first graph (1a) shows the low birth weight trend in Boulder County among mothers who have less than twelve years of education and who are eighteen years of age or older. The percent of low birth weight babies within this population has remained fairly stable, ranging between 8 and 10 percent over the past seven years, with a high point of 12% in 1994.

The second graph (1b) compares a seven-year average low birth weight figure for all women in Louisville, Longmont, Lafayette, Broomfield and Boulder. In all communities the frequency of low birth weight babies is below the rate for the rest of Colorado (8.5%) and the nation (7.3%).

Linkages: Teen Birth Rate (#2), Prenatal Care (#7)
2. TEEN BIRTH RATE

Indicator Description
Number of live births per 1,000 girls aged 10-17 in Boulder County.

Why We Are Measuring This
Teen pregnancy and birth are associated with a whole range of negative outcomes for the teen mother and her children:
- Low birth weight babies
- More likely to receive public assistance
- Lower educational attainment for teen moms
- More likely to be poor with limited employment options

What the Data Show
The teen birth rate in Boulder County has varied slightly, but neither an upward or downward trend is discernible over the past five years. The teen birth rate has averaged 8 per 1,000 teenaged girls since 1992. Teen births accounted for 2.8% of total births to women in Boulder County from 1992-1996. There are about 100 births per year in the County to girls aged 10-17.

Boulder County teen birth rates compare quite favorably with the rest of the state (13 per 1,000) and the nation (14 per 1,000) on teen birth rates. These data do not include figures for older teens (18-19); however, the birth rate to teens in this age group in Boulder County is quite a bit higher (41 per 1,000 in 1996).

Linkages: Low Birth Rate (#1), Prenatal Care (#7)

3. PRESCRIPTION DRUG MISUSE BY ELDERLY

Indicator Description
Percentage of the population 55 and older surveyed in the Boulder County Older Adults Health & Lifestyle Survey who reported misusing prescription drugs. Misuse consists of frequent, potentially risky drug taking behaviors, such as overuse, underuse or combining drugs with alcohol.

Why We Are Measuring This
Elderly people face a unique set of health needs. Many are depressed, having lost loved ones or suffer from physical ailments, resulting in social isolation from the rest of the community. Yet healthy, older adults can bring tremendous resources of wisdom and experience to their families and communities.

Older people are at risk for medication misuse for a number of reasons, including having multiple medicines and physicians, misunderstanding of doctors’ instructions, complex dosage schedules and prohibitive cost of medications.

What the Data Show
3,000 residents of Boulder County over the age of 55 were surveyed and approximately 1,140 responded (43%). Thirty-nine percent of respondents reported misusing prescription drugs.

Although there are no national or state averages with which to compare this figure, the survey found prescription drug misuse to be the most common health and lifestyle problem among those 55 and over.
4. DOMESTIC VIOLENCE WITH CHILDREN PRESENT

Indicator Description
Percentage of domestic violence incidents for which charges were filed where children were confirmed as present. The total number of incidents is derived by adding up reports from the Boulder County Sheriff, Boulder Police Department (P.D.), Broomfield P.D. (Boulder County part), Lafayette P.D., Longmont P.D., Louisville P.D., and the University of Colorado P.D.

Why We Are Measuring This
The safety and protection of children is a major emphasis in our vision for healthy people. Young people in our community should be free from abuse and the emotional impacts of seeing others abused. There is a known correlation between witnessing abuse as a child and becoming an abuser as an adult.

What the Data Show
For the county as a whole, the rate of domestic violence with children present has remained roughly the same since 1994, averaging about 33% of all calls made for domestic violence. This number is a known undercount for a number of reasons. Due to different reporting procedures among the different police departments, not all incidents with children present are reported as such. Also, children often hide during domestic violence episodes, further adding to the undercount.
5. HOMELESSNESS AND BASIC NEEDS

Indicator Description

- Adults served at the Boulder Shelter for the Homeless.
- Number of intake interviews at Emergency Family Assistance Association (EFAA) in Boulder, Longmont and Lafayette. EFAA conducts an intake interview when a person walks in their front door to request help. Phone requests are not counted as intake interviews.

Why We Are Measuring This

As with the elderly, the homeless are another group of community members that are often overlooked. Meeting the needs of the disenfranchised with compassion is part of our commitment to creating a healthy community.

The Boulder Shelter for the Homeless is the only agency that serves homeless adult men and women without children in the county. EFAA collects information about families in need of service in Longmont, Lafayette and Boulder. The number of intake interviews provides information about families who may be seeking assistance for a wide variety of basic needs besides shelter. For example, clients come to EFAA because they no longer qualify for food stamps, their utilities were discontinued or because they can’t find transportation to work. On average, one individual at the intake interview represents about 2.7 people in need, usually children.

What the Data Show

In 1995, the Metropolitan Denver Homeless Initiative (MDHI) estimated that there are 300-400 homeless people on any given night in Boulder County.

The Boulder Shelter for the Homeless has seen a 5% annual increase in overnight clients for the past five years. From the October to April season of service, the Boulder Shelter served 1,300 unduplicated clients.

Other Boulder Shelter data:
- Maximum capacity: 93 beds (68 beds on-site + 25 beds at overflow site)
- 17,000 bed nights (210 nights per season X average of 80 clients per night)
- 27,000 meals served in winter season
- Average of 75 people per night in winter 1998
- 140 nights of overflow in winter 1998

The number of intake interviews handled by EFAA has increased slightly over the past six years. The annual average is just under 13,000 interviews; 1995 and 1996 yearly counts were higher than the average.
6. WEEKLY CHILD CARE COSTS

Indicator Description

Average weekly cost charged by child care centers for infants, toddlers and pre-schoolers, by community. The dollar amounts shown represent what most families would need to pay to obtain child care for each age group.

Note: though families who receive government subsidies do not have to pay the whole amount, they represent only a small proportion of those families needing child care services.

Why We Are Measuring This

Child care is an essential service for working parents, yet the cost of these services can place a heavy financial burden on those who most need them. The demand for child care services continues to grow as more mothers work outside the home, as the number of two wage-earner families increases, and as welfare reform takes effect.

Though this indicator does not tell us about the quality of the child care being offered in our communities, we do know that if child care is too expensive, families may be forced to make do with inadequate care or to leave children completely unsupervised.

What the Data Show

In Boulder County as a whole, child care for infants tends to be the most expensive kind of service, averaging between $100-150 per week. Toddler care costs range from an average of $95-130 per week, while pre-school care costs an average of $83-120 a week.

In all communities, with a few exceptions, the cost of child care has risen steadily each year. Overall, child care for all age groups is least costly in Broomfield and most expensive in Boulder.

• Infant care costs have increased between 5-8% annually in each of the communities, with Longmont and Broomfield showing the greatest increments.
• Toddler care has risen between 4-8% per year. Louisville shows the smallest cost increase while Broomfield represents the higher end.
• Pre-school care has increased between 6-9% annually in Boulder County cities. Louisville’s pre-school care cost has risen by 64% from 1990 to 1997, an average of 9% per year. The cost of Boulder’s pre-school child care has increased the least over the seven year span (<6% per year).

Data source: City of Boulder, Department of Housing and Human Services, Division of Children, Youth and Families
### 7. Prenatal Care

**Indicator Description**
Percentage of pregnant women in Boulder County who received prenatal care within the first trimester of pregnancy. Four age groups are compared over seven years.

**Why We Are Measuring This**
Pregnant women who receive proper prenatal care early in their pregnancy tend to deliver healthier babies than women who do not. Inadequate prenatal care has been linked to low birth weight. Teens who become pregnant are less likely to receive prenatal care than older women.

**What the Data Show**
For each age group, the trends are positive. More women, especially teen moms, are seeking early prenatal care in Boulder County. Mirror larger state and national trends, the 10-17 age group is still the least likely to receive prenatal care.

![Graph showing percent of pregnant women receiving prenatal care](Data source: Boulder County Health Department)

### 8. Top Reasons for Emergency Room Visits

**Indicator Description**
The top reason for emergency room (ER) visits is compared among five life cycle stages.

**Why We Are Measuring This**
The ER is intended to treat urgent or life-threatening conditions which will become worse if not handled immediately.

These data provide information about which types of health care problems people are seeking to treat in the ER. This indicator is a measure of appropriate use of the ER and by proxy, it provides a glimpse of health care accessibility.

**What the Data Show**

<table>
<thead>
<tr>
<th>Infants (under 2 years)</th>
<th>Nervous system-related, includes ear infections (91% of these visits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children (2-12 years)</td>
<td>Injury (e.g., open wounds, fractures and contusions)</td>
</tr>
<tr>
<td>Adolescents (13-17 years)</td>
<td>Injury</td>
</tr>
<tr>
<td>Adults (18-64 years)</td>
<td>Injury</td>
</tr>
<tr>
<td>Older Adults (over 65 years)</td>
<td>Injury, followed closely by “ill-defined condition”</td>
</tr>
</tbody>
</table>

The overwhelming majority of infants going to the ER are diagnosed with ear infections. This may indicate that a lack of other off-hour care exists for infants or that parents may not be aware of how to detect ear infections.

The rest of us seem to go primarily to treat injuries. The most common children's and adolescent's injuries come from falling or being hit with an object, often while playing sports. Adult injuries result mostly from work-related incidents involving cutting or piercing. Most elderly people sustain injuries from falling. A high percentage of older adults also go to the ER for ill-defined problems with the head, neck, abdomen and chest.
9. ROUTINE CHECK-UPS

Indicator Description

Percentage of adult men and women who have had a routine check-up by a doctor within the past year. These data come from a survey called the Behavioral Risk Factor Surveillance System (BRFSS), which is conducted annually by the Colorado Department of Public Health and Environment. The population surveyed in Boulder County is too small to show on an annual basis, so the data points represent combined figures for the time periods 1990-92 and 1993-95.

Why We Are Measuring This

Routine check-ups are preventive measures that people can take to avoid costly health problems in the future. Check-ups provide an opportunity for screening health problems such as high blood pressure and cancer, for education about healthy lifestyle choices, and for assistance and referral to appropriate services. By looking at routine check-ups, we are seeking a measure of wellness or preventive health behavior rather than of sickness.

What the Data Show

Females are much more likely to see a health care provider routinely, in large part because of their annual gynecological exam. Though the trend line is too short to tell very much, it does look like routine check-ups are increasing among both men and women in Boulder County.
Indicator Description
Percentage of 11th graders who reported being drunk within the past month and percentage of 11th graders who reported ever smoking cigarettes. Data are taken from the American Drug and Alcohol Survey and are shown for both Boulder Valley School District (BVSD) and St. Vrain Valley School District (SVVSD). The survey is based on self-reported information.

Why We Are Measuring This
Young people who use alcohol and tobacco early and regularly are more prone to become substance abusers as adults. Alcohol and tobacco are among the most prevalent and easily obtainable drugs available to teens. Tobacco use is now known to cause debilitating and costly health problems among smokers. Because of the highly addictive nature of cigarettes, teen tobacco use is especially concerning as a public health issue. It has been shown that if people don’t start smoking by the time they are eighteen, they are less likely to ever start.

Alcohol abuse among teens has been identified strongly with the leading causes of adolescent death: unintentional injury, homicide and suicide. Substance use during the adolescent years can have severe health impacts as well as negative consequences for scholastic and future work performance.

What the Data Show
The percentage of high schoolers who reported ever smoking a cigarette is very similar in both Boulder County school districts. About sixty percent of 11th graders have tried smoking.

Surveys found that 42% of BVSD and 33% of SVVSD 11th graders had been drunk within the past month. Alcohol use is higher in both school districts than in the nation as a whole (29%). The state of Colorado reports that 37% of 11th graders reported having been drunk within the past thirty days.
11. GENERAL CRIME STATISTICS

Indicator Description
The overall number and the rate of “people” and property offenses reported per 1,000 persons. Offenses reported include both adult and juvenile crime. This figure does not indicate how many arrests were made. Totals are comprised of offenses reported to Boulder County Sheriff’s Office and the police departments in Boulder, Broomfield, Lafayette, Longmont, Louisville, and the University of Colorado-Boulder. Data are compiled by the Colorado Bureau of Investigation.

“People” crimes include murder, manslaughter, death by negligence, rape, robbery, aggravated and simple assault. Property crimes include burglary, larceny, and motor vehicle theft.

Why We Are Measuring This
General crime statistics are basic indicators of public safety. Distinguishing between people and property crimes is one method of breaking down offense data. Generally, property crimes are viewed through a somewhat different lens than are crimes against people.

What the Data Show
The trend lines are based on the total annual number of reported offenses, while the numbers at each data point (in parentheses) represent the crime rate per 1,000 persons for that year (see charts 11a and 11b, facing page). Property crimes such as burglary and larceny are the most commonly reported offenses in Boulder County. The most common crime against persons is simple assault (no weapon), followed by aggravated assault (presence of a weapon). There are an average of 100 rapes reported per year in Boulder County.

While the number of “people” crimes has increased slightly since 1993 (11a), there is no statistically significant trend either up or down in the “people” crime rate. The number of property crimes showed a decline from 1991-1993 (11b) and have risen roughly 3% per year thereafter. The property crime rate decreased slightly from 1990-1993 and has remained flat since then, averaging about 53 per 1,000 over the past seven years. It is interesting to note that while crime rates have remained essentially flat, the Boulder County jail population has increased dramatically in recent years.

12. TRAFFIC ACCIDENTS

Indicator Description
Number of road-related accidents per year, including fatalities, injuries and property damage on all roads in Boulder County. All roads includes city streets, county roads, and state highways.

Why We Are Measuring This
Accidents associated with cars and roads exact a high toll on our health and safety as well as on our economy. The costs to the community in terms of insurance and medical expenses related to traffic accidents are significant.

What the Data Show
Over the past six years, the number of traffic accidents has risen steadily. The average number of road accidents from 1990-1995 was 5,825 per year. The percent increase from 1990-1995 was roughly 13%.

Looking at the percent change in vehicle registrations and at population growth over this same time period, we see that both have risen at about the same rate, between 13-14% from 1990-1995. Not surprisingly, population growth, number of vehicles registered and road-related accidents appear to correlate pretty closely (see chart 19b, page 22). Therefore, as population continues to grow, we can expect to experience more traffic accidents in Boulder County.
A VISION FOR THE ENVIRONMENT

Understanding that all natural systems have limits, we are committed to improve and protect the environment. So that we may meet the needs for present and future generations, we strive toward a balanced relationship between human populations and the ecosystems of which we are a part. We cherish clean air, pure water, wildlife, plant communities, and the vistas and visual spaces that surround us.

Transportation systems are improved and are integrated into land-use planning as they expand. Safe, clean, efficient, and cost-effective alternate modes are accessible to citizens throughout the county.

Social interaction is encouraged by the creation of many safe, mixed-use and accessible “people places.” Children and elders are integrated into the daily life of the community. Each neighborhood has a “small-town” and “walkable” atmosphere. The uniqueness of each community is encouraged, while all collaborate to achieve sustainable goals for the region among them.
13. AIR QUALITY

Indicator Description

To measure air quality, we used the Pollutant Standard Index (PSI). PSI is a reporting system for air quality that standardizes data for three pollutants that have implications for human and environmental health: carbon monoxide, low-level ozone and particulate matter, known as PM 10. The PSI summarizes raw data from Boulder County air quality monitors. The PSI is based on the following ratings:

<table>
<thead>
<tr>
<th>PSI</th>
<th>AIR QUALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-50</td>
<td>Good</td>
</tr>
<tr>
<td>51-100</td>
<td>Fair</td>
</tr>
<tr>
<td>101-200</td>
<td>Poor</td>
</tr>
<tr>
<td>201-300</td>
<td>Extremely Poor</td>
</tr>
<tr>
<td>301-500</td>
<td>Dangerous</td>
</tr>
</tbody>
</table>

Using this Index, we counted the number of days that the air quality in Boulder County rated either GOOD or FAIR during the years 1990-1997.

Why We Are Measuring This

Air quality in Boulder County has become an issue of major concern to residents. Increasing population density and modern metropolitan living creates air pollution, which is then exacerbated by the unique, natural topography of our region. Temperature inversions in the Boulder Valley trap pollution closer to the ground, increasing the potential harm to people and the environment.

The overwhelming majority of carbon monoxide (CO) pollution in our area is a direct result of automobile use. CO deprives people of necessary oxygen and particularly affects those with cardiovascular and pulmonary disease, children and pregnant women.

Low-level ozone (O3) is a secondary pollutant, meaning that it is not emitted directly from one source, but arises from a chemical reaction in the presence of sunlight. Negative impacts are:
- Lung damage, in healthy people as well as in those with already-impaired respiratory function
- Damage to trees and plants

The infamous “brown cloud” is caused by concentrations of particulate matter ten micrometers (PM 10) in size and smaller that are suspended in the air. PM 10 results from the burning processes of power plants, cars, fireplaces and woodstoves. Human health impacts of PM 10 vary from person to person, but can negatively affect the respiratory tract. The environmental effects of particulate matter include:
- Visibility degradation
- Climate change
- Vegetation damage
- Acid deposition in remote areas

What the Data Show

According to Air Pollution Control Division, the Boulder County monitors have not exceeded the national standards for these three pollutants between 1990-1997.

From 1990 to 1997, the air quality in Boulder County was categorized as either GOOD or FAIR, with the majority of days falling into the GOOD rating. There were no days in which the air quality fell below the FAIR rating. The average PSI from 90-97 was 43. This trend appears to be holding steady. The days that our air quality fell into the lower quality PSI rating tended to occur in the months of June and July.

This indicator does not address visibility issues associated with particulate matter less than 10 micrometers in size, which has recently been identified as a problem along the Front Range.

Linkages: Vehicle Miles Traveled (#19), Land Annexation (#17)
14. EXTIRPATED AND DECLINING SPECIES IN BOULDER COUNTY

Indicator Description

Extirpated species are those that have become locally extinct since the settlement of this area by people of European descent. Declining species are not yet extirpated but are at risk of disappearing.

Species are categorized by the landscape they inhabit - county-wide, mountains, plains - and are labeled “E” for extirpated or “D” for declining (see charts, facing page). Other species of concern are mentioned as well.

Data are collected by the Colorado Natural Heritage Program, Boulder County Parks and Open Space Department and Boulder County Nature Association.

Why We Are Measuring This

Boulder County is blessed with unparalleled natural surroundings. The county stretches from the eastern plains to the foothills to the mountains, encompassing a uniquely diverse array of species, ecosystems, life zones and landscapes. By attempting to measure the health of native species, we are looking not only at the welfare of the non-human residents of Boulder County, but at the quality of habitat that supports all life forms. In a larger sense, the status of wildlife is an indicator of our ability to successfully co-exist with other species.

It is extremely difficult to represent the highly complex and diverse ecosystems of Boulder County using only this sort of descriptive information, but at present, the state of the data doesn’t allow us to do much more.

What the Data Show

Some of the most charismatic, large mammalian species of the plains, foothills and mountains have been eradicated from Boulder County, primarily due to conflicts with humans. Habitat destruction and fragmentation caused by development and early bounty hunting are responsible for most mammalian extirpations.

Avian species are sensitive to changes in habitat as well. Birds native to the plains have been affected by loss of native prairie, the single largest habitat type lost in the county. Birds throughout the county have been affected by deterioration of critical stream-side (riparian) and wetlands habitat, habitat fragmentation due to roads and development, and increases in predators and aggressive competitors who benefit from urbanization (house cats, raccoons, starlings and cowbirds).

Linkages: Land Annexation (#17), Agricultural Land (#18), Per Capita Personal Income (#21)
**COUNTY-WIDE**

**Mammals**
- Gray wolf (E)
- Grizzly bear (E)
- River otter (E)

*Other species to keep an eye on county-wide: elk (ability to migrate between high and low elevations), all native fish.*

**Birds**
- Barrow’s goldeneye (E)
- Mountain plover (E)
- Northern goshawk (D)
- Willow flycatcher (D)

*Other species to watch in the mountains: bighorn sheep, boreal toad, northern leopard frog.*

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**MOUNTAINS**

**Mammals**
- Lynx (E)
- Bobcat (E)
- Wolverine (D)

**Birds**
- Barrow’s goldeneye (E)
- Mountain plover (E)
- Northern goshawk (D)
- Willow flycatcher (D)

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**PLAINS**

**Mammals**
- Bison (E)
- Black-footed ferret (E)
- Pronghorn antelope (E)
- Preble’s meadow jumping mouse (D)
- Merriam’s shrew (D)

**Birds**
- Sharp-tailed grouse (E)
- Long-billed curlew (E)
- American bittern (D)
- Burrowing owl (D)
- Red-headed woodpecker (D)
- Northern harrier (D)
- Swainson’s hawk (D)
- Loggerhead shrike (D)
- Northern bobwhite (D)
- Long-eared owl (D)
- Brown thrasher (D)

*Other species to monitor in the plains: prairie dog, ferruginous hawk. Prairie dogs are a keystone species which means that many other species depend on them within the food web, especially raptors (birds of prey such as the ferruginous hawk). Prairie dog colonies face a serious threat from development county-wide.*
15. WATERSHED WATER QUALITY

Indicator Description

Stream segments in the St. Vrain watershed whose water quality is impaired according to state standards. Boulder County lies in the St. Vrain River watershed, which is part of the larger South Platte River basin.

The data come from Colorado’s 1998 303(d) List, which is mandated by the Clean Water Act. Colorado’s 303(d) List, compiled by the Water Quality Control Division (WQCD) of the Colorado Department of Health and Environment, identifies water quality impairments to stream segments for every river basin in the state.

Why We Are Measuring This

Water is one of the fundamental elements of life, especially in a semi-arid region such as ours. The health and sustainability of Boulder County is inextricably linked to the quality of its watershed.

A watershed is the land area, determined by topography and hydrology, that drains water from high to low elevations. Our watershed includes lakes, rivers, estuaries, wetlands, streams, and surrounding landscapes. As water drains to the lowest point in a watershed, along the way it picks up all sorts of pollutants, such as soil particles, oil, pesticides and animal manure.

We chose the watershed approach to examining our water quality because it highlights the connection between the land, water and people. Water quality is impacted by population growth, urbanization and development and agricultural production.

What the Data Show

There are big differences in water quality depending on whether you are downstream or upstream. For example, the water quality in the Indian Peaks high country (upstream) is nearly pristine while waters flowing below water treatment plants (downstream) tend to be more impaired with pollutants. Since population density is greatest at lower elevations, or downstream, water quality worsens as altitude lessens. High country water pollution in this region is primarily the result of historic mining activity.

There are four stream segments within our watershed that are considered impaired according to the WQCD:

- Boulder Creek, from South Boulder Creek to Coal Creek
- Boulder Creek, from Coal Creek to St. Vrain Creek
- St. Vrain Creek, from Hygiene Road to South Platte River
  Primary problem: ammonia from municipal wastewater treatment plant, which has affected populations of native fish species and other aquatic organisms.
- Little James and Left Hand Creeks
  Primary Problem: acute impairment due to acidic pH and high concentrations of cadmium, iron, manganese and zinc resulting from old mining operations. These creek waters are under EPA assessment, and have been assigned a high priority by WQCD.

Overall, the Environmental Protection Agency rated the St. Vrain watershed “Better Quality-Low Vulnerability.” This is the best rating on their scale of watershed indicators.

Linkages: Land Annexation (#17), Agricultural Land (#18)
16. WATER IMPORTS FROM THE WESTERN SLOPE

Indicator Description

Acre-feet of water imported yearly into Boulder County through transbasin diversions from the Western Slope. The annual average was calculated using thirty-five years of data from 1962 to 1997.

How much water is in an acre-foot?
- 1 acre-foot = 326,000 gallons
- 1 acre-foot = enough water to cover an entire football field one foot deep
- 1 acre-foot = enough water to meet two urban families’ water needs for one whole year
- Boulder Reservoir contains about 12,000 acre-feet of water

Why We Are Measuring This

Most of the water consumed by Boulder County municipalities, industries, and agriculture comes to us through the Colorado-Big Thompson (C-BT) project, the largest transmountain diversion in the state, which has been serving the county’s water needs since 1957.

From an environmental standpoint, transbasin diversions are damaging uses of water. In Colorado, such diversions are almost always taken out at high elevations, removing good quality water from alpine or subalpine ecosystems, dewatering cold water fisheries, and causing a variety of adverse impacts throughout the basin.

For “importing” communities, such diversions are a measure of economic and environmental sustainability. Water appears to be an unlimited resource, but in fact, we are using more water than can be provided by our own watershed.

What the Data Show

An average of 67,000 acre-feet of water are imported annually from west of the Continental Divide.

About 75% of the water we import is used for agricultural purposes and the remaining 25% is used by municipal and industrial customers. This follows state-wide water use trends. When the C-BT project first came on-line in the late 50s, about 98% of the diverted water went to agricultural uses.

Today, the population of Boulder County is four times larger than it was back then, so a greater percentage of imported water now goes to municipal and industrial uses.

Linkages: Land Annexation (#17), Agricultural Land (#18)
17. LAND ANNEXATION

Indicator Description
Total square miles annexed by each municipality in Boulder County from 1984 to 1997. For those communities that don’t lie entirely within county lines, such as Broomfield, Erie, Superior and Longmont, these figures include only land annexed within Boulder County.

Annexation refers to the process by which cities acquire land for development and extension of city services, such as water, sewers, utilities, roads and schools.

Why We Are Measuring This
The amount of land annexed over time is a measure of a region’s growth and land-use. In other words, it is a measure of urbanization. The debate about growth and growth management is one of the predominant topics on Boulder County’s public agenda. Recently, the Boulder County Commissioners issued a newsletter called GrowthWatch which documents trends in population growth, projects population estimates out to 2010 and presents the impacts of this growth on housing, transportation and the schools.

What the Data Show
Total land area annexed in Boulder County since 1984 equals roughly 20 square miles, or about 13,000 acres. This represents a land area larger than Longmont and Niwot combined.

Longmont has annexed by far the most land over the past fifteen years, increasing its size by almost forty percent. The bulk of Superior’s acreage was annexed in 1987, with the addition of over 1,000 acres for the Rock Creek development. Longmont added large portions to itself in 1994, 1995 and 1997, while annexation in Boulder, Broomfield and Lafayette tapered off in those years.

Based on these trends, future projections can be made about growth and development in Boulder County. According to GrowthWatch, Boulder County is slated for continuing population growth, which will be accompanied by a great deal more development, requiring enormous investments in roads, water, sewer systems, schools and other infrastructure. Boulder County must face these questions as a region and as a community, because it has become clear that each municipality’s land-use decisions affect all of us.

One square mile = 640 acres. Over 13,000 acres have been annexed in the county since 1984.

Data source: Boulder County Land Use Department
18. AGRICULTURAL LAND

Indicator Description
Total acreage of Boulder County in farmland and rangeland from 1959 to 1992. A decrease in acreage generally represents conversion of agricultural land to other uses.

Data based upon the Census of Agriculture, until recently conducted every five years by the U.S. Census Bureau. Current administration of the Census of Agriculture is now housed within the U.S. Department of Agriculture.

Why We Are Measuring This
Agriculture has guided and shaped the history of Boulder County’s eastern communities in similar fashion to how mining influenced the western parts. The conversion of agricultural land to other uses, while providing such benefits of urbanization such as housing, shopping and roads, at the same time represents certain losses. Community heritage, open space and other recreational uses, wildlife values and aesthetics are traded off when agricultural land is paved for development.

What the Data Show
As of 1992 (1997 data are not yet available), 157,000 acres or roughly 30% of Boulder County could be classified as in agricultural production (either farm or range).

The agricultural land trend in Boulder County shows a 45% decrease in farmland and rangeland from 1959 to 1992. During the same period state-wide, 12% of Colorado’s agricultural lands were converted to other uses. Most of the conversion of agricultural land in Boulder County occurred prior to 1982.

The increase in agricultural land from 1974-1982 is difficult to explain and is probably due largely to methodological flaws in the data collection process.

Approximately 30% of Boulder County’s land base is in agricultural production.
**19. VEHICLE MILES TRAVELED (VMT)**

**Indicator Description**
Any time you take your car to the market, drop the kids off at school, or go to the movies, the number of miles traveled in your vehicle is your personal VMT. VMT for Boulder County is aggregated annually by the Boulder County Transportation Department. VMT includes miles traveled by public transit vehicles.

**Why We Are Measuring This**
VMT is primarily an indicator of automobile use. The prevalence of single-occupancy vehicles is largely responsible for a wide range of unsustainable trends at the local level that also have global implications. Suburban sprawl, degradation of air quality, more and more pavement, habitat fragmentation and destruction and human health problems, not to mention global environmental change, are all negative trends that are closely related to our dependence on automobiles.

**What the Data Show**
VMT has steadily increased in Boulder County since 1990. From 1990 to 1996, VMT increased by almost 38%. Population and vehicle registrations both increased by 14% over the same time, which means that VMT has grown almost three times faster than the number of people and cars.

Since the car is associated with so many negative impacts and since the public is being exhorted to drive less, there must be viable transportation alternatives for people to choose from instead of driving. Future indicators should be developed which measure alternative transportation accessibility and usage in Boulder County.

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**19a - Vehicle Miles Traveled, Boulder County**

**19b - Vehicle Registrations and Population Growth, Boulder County**

20. RECYCLING

Indicator Description

Estimated percent of municipal solid waste stream currently being recycled. Municipal solid waste consists of waste from households, offices and stores and does not include industrial or agricultural waste, nor does it account for discarded hazardous materials or toxics.

Why We Are Measuring This

Recycling is a measure of efficiency. Efficient use of materials is a key component of a sustainable community, because the more resources that can be recycled, reused or reduced at the source, the less we are forced to consume diminishing raw or virgin materials.

Recycling also means less volume at landfills. Boulder County does not have its own landfill, so all of our waste is currently exported outside the county, which contradicts sustainable behavior. As part of the solution to address this problem, voters approved the creation of the Boulder County Recycling and Composting Authority to oversee a new solid waste, recycling and composting facility to serve the county.

What the Data Show

Boulder County recycles roughly 17% of its solid waste stream. This number is the best estimate according to Eco-Cycle, the local recycling and recovery center serving Boulder County, and the Boulder Energy Conservation Center. When Eco-Cycle first started operations here twenty-two years ago, the percentage of the waste stream being diverted from landfills was probably close to zero.

The national average recycling rate is roughly 25%, so we are well below this standard. However, Boulder County does have the highest recycling rate for any county in the state of Colorado. A few years ago, Governor Romer set a statewide recycling benchmark of 50% diversion rate by the year 2000. Experts estimate that about this much household solid waste is easily recyclable.

Linkages: Per Capita Personal Income (#21)
Boulder County prospers in a “high quality” economy that is socially and environmentally responsible; supports small and family-owned businesses; sustains agricultural productivity; encourages commerce locally among citizens and neighborhoods, while competing in the global marketplace; seeks to resolve conflicts between market-driven and regulatory policies; offers diverse job opportunities to all citizens; and allows a healthy balance between the worlds of work and family.

Citizens of all generations find affordable, diverse and mixed-use housing throughout the county. Home ownership is accessible to those who desire it, and all citizens are enabled to work near their homes. Intelligent growth planning integrates open space, while meeting the demands for housing and encouraging small business services in neighborhoods.
21 PER CAPITA PERSONAL INCOME

Indicator Description

Annual per capita personal income (PCPI) county-wide from 1986-1995.* These estimates are prepared by the Regional Economic Measurement Division of the Bureau of Economic Analysis. PCPI is a nominal figure, meaning it has not been adjusted for inflation. Data for 1995 are the most recent available.

*Personal income is calculated as the sum of wage and salary disbursements, other labor income, proprietors' income, rental income, personal dividend income, personal interest income, and transfer payments to persons, less personal contributions for social insurance. Does not include the self-employed.

Why We Are Measuring This

Per capita personal income is a standard economic indicator of an area’s economic health. It is also used widely by economists and policy makers as a proxy measure of social progress. We generally assume that if per capita income is growing at an appropriate rate, then this bodes well for a community, state or nation.

For this first report, we felt it was important to portray this type of information so the community can compare itself to a national standard. However, the direct correlation between increased per capita income and enhanced quality of life has been the subject of debate among a new school of progressive economists. They reason that this tradition has fostered overconsumptive behaviors and patterns, which ultimately create negative impacts on the physical environment and therefore affect ecological health, which is an essential foundation of a healthy economy and a healthy community.

What the Data Show

PCPI in Boulder County has risen steadily over the past ten years, increasing annually by an average of 5.4%. Inflation, measured by annual change in the Consumer Price Index (CPI), averaged 3.5% over this same period. This means that per capita income in Boulder County is rising faster than the rate of inflation.

In 1995, Boulder County PCPI — $27,978 — was the sixth highest in the state. Average Colorado PCPI in 1995 was $23,958 while the national average was $23,196. As a percentage of the national average, PCPI in Boulder County equaled 112% in 1986 and 121% in 1995.

Linkages: Housing Affordability (#27), Employment By Major Industry (#22), Land Annexation (#17) and Extirpated Species (#14)

Data source: Bureau of Economic Analysis, REIS County Summary
22. EMPLOYMENT BY MAJOR INDUSTRY

Indicator Description
Annual average number of jobs, full-time plus part-time, in Boulder County, by major industry based on the Standard Industrial Classification (SIC) code. SIC codes correspond with the major industries that comprise local, state and the national economies. For example, construction, mining and retail trade correspond to three of the SIC codes. Data exclude self-employed persons, domestic service workers, agricultural products workers, and most government employees. Data come from the Bureau of Economic Analysis’ Regional Economic Information System.

Why We Are Measuring This
The first step in creating a healthy and sustainable economy is to gain an overall understanding of the local economic context. Employment By Major Industry indicators show basic trends in the concentration of jobs and types of employment by sector in Boulder County. The distribution of labor among the various sectors is a measure of our economic diversity. A diverse economy is preferable, so residents are not forced to rely on only a few sources of income and jobs.

What the Data Show
The BEA data show that the number of jobs in the service sector has grown dramatically - an 80% increase — in Boulder County since 1986. Note that throughout the entire period surveyed, the services sector has provided the largest number of jobs. Wholesale trade has nearly doubled in size, while construction has increased by 50%. The latter likely reflects the ongoing development in the county.

Trends in the number of jobs in manufacturing, government and retail trade have stayed relatively flat over the past ten years and are very similar to one another. The average number of jobs in each of these sectors is roughly 30,000 per year.

Farm employment, agriculture and mining represent very small numbers of jobs in Boulder County.

Linkages: Average Wage by Major Industry (#23), Land Annexation (#17)

The service sector has grown by 80% over the past ten years.
23. AVERAGE WAGE BY MAJOR INDUSTRY

Indicator Description

Annual average wage by major industry, based on SIC code, from 1989 to 1996. Data come from a series entitled Colorado Employment and Wages, published each year by the Colorado Department of Labor and Employment.

Why We Are Measuring This

This information provides us with a scale of pay by which to compare various occupations in Boulder County.

What the Data Show

The highest paying jobs in Boulder County are in mining, manufacturing, wholesale trade and transportation/public utilities/communications. With the exception of manufacturing, these high-paying sectors do not account for very many jobs in Boulder County.

The lowest paying jobs are in agriculture and retail trade. The average annual wage in services is fairly high, but this figure include legal, business, engineering and medical services which raise the average quite a bit. If these professional services are taken out, the average annual service wage falls closer to $17,000.

Linkages: Housing Affordability (#27), Per Capita Personal Income (#21), Employment by Major Industry, (#22)

Data source: Colorado Employment & Wages, Colorado Department of Labor and Employment
24. LOAN VOLUME FOR SMALL BUSINESSES

Indicator Description
Loan volume, measured in number of loans and loan amounts, made by the Small Business Administration (SBA) to businesses in Boulder County. The definition of a small business varies by industry, but the SBA generally considers a business small if it employs less than 100 people or generates less than $5 million in sales.

Why We Are Measuring This
Loan volume is one, although imperfect, measure of support for small businesses, which was identified by community participants in the BCHCI process as an important value to maintain.

Some caveats about this data:
- The volume of loans made by the SBA represents only a fraction of total lending to small businesses in Boulder County.
- Lending by the SBA is impacted by external forces (e.g., downturns in the global and national economy, federal budgetary processes), making it hard to discern and analyze trends.

What the Data Show
Boulder County small businesses have received an average of $13 million per year from the SBA. The average number of loans made per year from 1989-1997 was 59.

SBA-approved loans have increased quite a bit since 1989, hitting a high in 1995 of almost $26 million, representing 119 loans.

Data source: Small Business Administration
Indicator Description

Average monthly lease rate, in dollars per square foot of commercial building space, which has been defined as commercially or industrially zoned buildings 4,000 square feet or larger. Commercial space is categorized as Office, Retail or Industrial.

Data for the City of Boulder go back to April, 1994, and represent annual averages. Figures for the rest of the Boulder County communities begin in 1998 and represent a three-month average (January, February, March). Boulder County lease rates are based upon data from Lafayette, Louisville, Longmont, Broomfield, Lyons and Erie, and exclude the City of Boulder.

These data are collected by Sallie Taylor of Irwin & Hendrick, Ltd., a commercial real estate company in Boulder.

Why We Are Measuring This

Lease rates for commercial space are one indicator of the cost of doing business in Boulder County. The ability to attract and to hold businesses is a key factor in the success of our local economy. Knowing the relative costs of doing business in Boulder County can help identify patterns in how businesses choose to locate themselves among our various communities.

What the Data Show

Erie appears to be the least expensive place to lease commercial space in Boulder County, while the city of Boulder’s lease rates are considerably higher than the rest of the county’s. Excluding Boulder, communities are clustered together around the range of $6-8 dollars per square foot.

Over the past five years, commercial building space in the city of Boulder has ranged from just under $11 to almost $13 a square foot. Leasing office or retail space costs twice as much as industrial space in Boulder County.
26. BUSINESSES INVOLVED WITH POLLUTION PREVENTION

Indicator Description
Boulder County businesses which are participating in pollution prevention (P2) through the Partners for Clean Environment (PACE) program.

PACE is a voluntary, non-regulatory program which offers free pollution prevention education and technical assistance to small and medium-sized Boulder County businesses. It is a cooperative effort between the city of Boulder, Boulder County Health Department, the Boulder Energy Conservation Center and the Boulder Chamber of Commerce. PACE outreach is targeted toward industries that have a high environmental impact: auto body, auto repair and print shops. The program identifies a series of industry-specific pollution prevention criteria and grants either partial or full certification for businesses depending on whether they are implementing either a portion or all of the listed activities.

Why We Are Measuring This
One of the most efficient ways to handle pollution is not to create it in the first place, which is the focus of pollution prevention programs. Pollution prevention is an approach to waste management based on using alternative materials and practices to minimize waste at the source and reduce hazardous materials.

The benefits of P2 for companies, customers and the community include:
• Reduced costs for raw materials
• Reduced costs of waste disposal
• Improved worker health and safety
• Reduced risks and liability

The prevalence of P2 involvement among companies in Boulder County is a measure of sustainable business practices.

What the Data Show
Since its inception in 1995, the number of businesses involved in the PACE program has grown each year. PACE has begun to expand its outreach to the manufacturing business.

According to a recent progress report, PACE estimates that “1997 participating businesses are reducing air emissions (volatile organic compounds, VOCs) by over 11 tons/year, hazardous waste by over 3,700 gallons/year and solid waste by 25 tons/year.” Although a step in the right direction, these reductions represent a small fraction of the total amount of air emissions, hazardous waste and solid waste produced in Boulder County each year.

Linkages: Air Quality (#13), Water Quality (#15)
27. HOUSING AFFORDABILITY

Indicator Description

- Median sale price of a single-family home in Boulder County compared with median family income from 1990-1996. Based on data from the Boulder County Assessor’s Office and the U.S. Department of Housing and Urban Development (HUD).


Why We Are Measuring This

Shelter is a fundamental human need. The dearth of affordable housing is one of Boulder County’s most pressing issues. Whether or not housing is affordable is directly correlated with income and wages. If housing cost increases outpace income and wage increases, affordability declines as greater portions of income must go toward housing. This leaves less discretionary income for families and individuals. High housing costs tend to create exclusionary communities, as lower income people are forced to move out.

Affordable housing is a significant part of the overall debate about growth management, land-use, and other economic decisions in Boulder County. Ideally, people should be able to afford to live in the same communities where they work. If employees are forced to move away from their jobs to find affordable housing, a whole host of interrelated, negative trends becomes apparent, such as increased commute times, greater traffic congestion, air pollution and other environmental concerns, and suburban sprawl, to name a few. Surging housing costs are also a factor influencing homelessness.

What the Data Show

Housing prices are increasing faster than incomes and wages in Boulder County. Housing costs are also rising faster here than in the rest of the nation. The supply of moderately priced rental units in the county has diminished greatly in just five years.

Though the number of jobs in some of the higher-paying sectors, such as construction and wholesale trade, has been increasing in Boulder County, these sectors do not represent all that many people. The trend toward creating more higher-paying jobs is one that needs to be reflected in other sectors, if incomes are to match housing prices.

The fast pace of rising housing costs will be most burdensome on those working in the lower-end retail and service jobs.

Linkages: Employment by Major Industry (#22), Average Wage by Major Industry (#23), Homelessness and Basic Needs (#5), Vehicle Miles Traveled (#19)

Data sources: Boulder Daily Camera; Boulder County Assessor’s Office; HUD

Data sources: Apartment Association of Metro Denver; HUD

Income vs. housing cost increases, 1990-1996
- Median housing prices = +65%
- Median family income = +34%
Knowledge is the most powerful enabling force of individuals and the community. Through knowledge we develop responsibility to ourselves, our families, our community, as well as the skills needed to fulfill these responsibilities. Citizens of all ages have convenient access to lifelong learning opportunities.

Art and culture are embraced in diverse forms by the whole community where the creative expression of artists is encouraged. Highly visible in both public and private spaces, art is valued as essential to the educational, spiritual and personal growth of all citizens.

Leadership emerges from an active and informed citizenry. Effective, on-going dialogue between citizens and public servants ensures that decisions in government reflect the will of the people. The community promotes the highest level of civility and respect in public discourse. Neighborhoods and local government work together to achieve goals for regional sustainability.
28. HIGH-SCHOOL GRADUATION RATE

Indicator Description
The number of students in grades 9-12 who graduated from high school as a percentage of those who were enrolled. Data are for the two school districts in Boulder County, Boulder Valley School District (BVSD) and St. Vrain Valley School District (SVVSD). Male/female and racial/ethnic group graduation rates are broken out from the total figures. Data were gathered from the school districts and the Colorado Department of Education.

Why We Are Measuring This
Schools are the foundation upon which young people build their futures. High school graduation is a prerequisite if our young people are to realize their fullest potential as productive, successful members of the community. The graduation rate is a standard measure of the success of the educational system.

Noting the differences between the genders and the various racial groups can help focus or prioritize efforts toward improving graduation rates.

What the Data Show
In both school districts, the total graduation rate has remained stable over the past six years, averaging about 83% (chart 28a). Both BVSD and SVVSD females tend to show slightly higher graduation rates than their male counterparts (charts 28b and 28c).

Hispanic students comprise the second largest population in both school districts and tend to show lower graduation rates than their peers.

There are very few Native American and African American students in Boulder County, so while the graduation trends for these groups look erratic, this is because the size of these populations is so small that one student’s outcome can disproportionately affect the group’s overall graduation rate (see charts 28d and 28e, next page).

Trends among Asian American and white students appear to be consistent with the overall graduation rates in BVSD and SVVSD, with about 83-86% of these students graduating (see charts 28d and 28e, next page).
29. HIGH SCHOOL DROPOUT RATE

Indicator Description
Percentage of students in grades 9-12 who dropped out of school. Figures do not include expelled students.

Breakdowns are given for BVSD and SVVSD males/females and racial/ethnic groups. Data sources were the Colorado Department of Education and the school districts.

Why We Are Measuring This
As with the graduation rate, dropout rates are indicators of the health of our educational system. Dropout and graduation rates are flip sides of the same coin. It is critical for the community to know which students are most at-risk for dropping out, so prevention programs can be properly designed and implemented.

What the Data Show
Over the past six years, the dropout rate in the Boulder Valley School District has showed a slight decrease, while the St. Vrain Valley School District has seen an increase of almost 40% (chart 29a, facing page).

Mirroring the graduation rate trend, the female dropout rate is lower than the male in both school districts (charts 29b and 29c, facing page).

The caveat regarding small populations of certain racial groups, mentioned with respect to the High School Graduation Rate indicator (#28), applies here as well. Small numbers of Native American, African American and Asian American students mean that trend lines can be exaggerated by the outcomes of only one or two of these students (charts 29d and 29e, facing page).

Hispanic students in both school districts tend to dropout at higher rates than other groups. Asian American and white students seem to be least likely to dropout. The Native American dropout rate in the St. Vrain district shows an encouraging improvement (charts 29d and 29e, facing page).
29a - Percent Dropout Rate, Grade 9-12, in BVSD and SVVSD

29b - Percent Dropout Rate, Grade 9-12, in BVSD, by Gender

29c - Percent Dropout Rate, Grade 9-12, in SVVSD, by Gender

29d - Percent Dropout Rate, Grade 9-12, in BVSD, by Race

29e - Percent Dropout Rate, Grade 9-12, in SVVSD, by Race

Data sources: Colorado Department of Education, Boulder Valley School District, St. Vrain Valley School District
30. ACADEMIC ACHIEVEMENT SCORES

Indicator Description
Average composite score of students taking the American College Testing (ACT) exam. The ACT tests high school students in English, math, reading and scientific reasoning. It is usually taken by those students who wish to go to college. Students must bear the cost of the test. In 1997, 48% of BVSD students and 57% of SVVSD students took the ACT exam.

Why We Are Measuring This
Achievement scores such as the ACT are considered by universities to be an indicator of a high school student's potential to succeed scholastically in a post-secondary academic setting. Most accredited colleges and universities require students to take either the ACT or the Scholastic Aptitude Test (SAT).

The ACT, like all standardized tests, can probably be challenged on several grounds as a true measure of academic success. However, we've included it here because it is commonly used as an indicator in the educational community and provides a baseline from which to begin discussion about the status of education in Boulder County.

What the Data Show
Students in the BVSD are testing well above the national and state averages. Students in the SVVSD are testing higher than the national average while closely following the state's trend. Over the past three years, St. Vrain has seen an increase in the composite scores of its students compared to the rest of Colorado.
31. **PUPIL-TEACHER RATIO**

**Indicator Description**
The number of students enrolled divided by the selected classroom teachers. Selected teachers excludes those who teach special education, music, art, physical education and driver education.

**Why We Are Measuring This**
Class size is thought to be related to the quality of the learning experience. With fewer students per class, teachers are able to give more attention to each student. We chose to look at the ratio of pupils to selected teachers rather than to all full-time teachers to get a better sense of class size for academic subjects.

**What the Data Show**
The smaller the ratio, the fewer students per teacher there are. Though the trend lines might suggest that a significant disparity exists between St. Vrain and Boulder Valley School Districts, both have averaged around 25 students per teacher over the past ten years. In 1996-97, both school districts showed the same pupil-teacher ratio of 26.4.

![Graph showing pupil-teacher ratio in BVSD and SVVSD between 1987-88 and 1996-97.](data:sources:ColoradoDepartmentofEducation)
32. ATTENDANCE AT BOULDER COUNTY ARTS EVENTS

Indicator Description

Yearly attendance at selected arts events.

- **Longmont Symphony** (93-97) Concert season is from October to May. These figures include only paid attendance (people who actually went to the show) and do not include attendance at the Symphony’s free events, such as the July 4th concerts.

- **Colorado Shakespeare Festival** (91-97) Figures are for number of tickets sold, doesn’t indicate how many people actually attended. The Colorado Shakespeare Festival stages three productions each season.

- **Colorado Dance Festival** (96-97) Paid attendance. The Festival includes performances, classes, post-performance discussions and lectures.

- **Peanut Butter Players** (94-97) Annual attendance at productions staged by the children’s theater group.

Why We Are Measuring This

The arts are a primary outlet of human expression. Through music, dance and theater, people come together to enrich themselves by participating in the artistic experience. A community which pursues artistic endeavors is presumably one which has access to the arts as well as interest in taking advantage of such opportunities.

What the Data Show

Though there are numerous arts events in the community from which to choose, we decided to track only a few for this first report. The selected events represent some artistic diversity (e.g., music, theater and dance) but are by no means representative of the arts as a whole in Boulder County.

There are no national or state averages available with which to compare Boulder County arts attendance, so it remains up to us as a community to determine the meaning of these numbers.

Annual attendance at the Longmont Symphony (32a) has increased since 1993 by about 13%. Average annual attendance for the past five years has been about 6,200.

The Colorado Shakespeare Festival (32b) has seen an average annual attendance of almost 38,000 people. Over the past seven years, attendance has averaged about 70% of capacity.

The Colorado Dance Festival (32c) only had data available for the past two years, which shows a significant increase of 4,000 people from 1996 to 1997.

Attendance at the various Peanut Butter Players (32d) productions has remained between 4,000-5,000 over the past four years. 1997 attendance records showed an increase over the previous three years.
33. VOTER TURNOUT

Indicator Description
Percentage of registered voters who turned out to vote in municipal elections, since 1979. Municipal elections are held in odd-numbered years.

Why We Are Measuring This
Voter turnout is commonly used as an indicator of civic health. Voting is one of our fundamental freedoms and the cornerstone of democratic institutions. Voter turnout rates for municipal elections give us a sense of mainstream political participation in the community.

The primary consequence of voter apathy is that power to influence public policy gets concentrated in the hands of certain groups at the expense of others in the community.

What the Data Show
The trend indicates that there has been virtually no change in the percentage of registered voters going to the polls in off-year elections since 1979. Voter turnout has remained below 40% for the past twenty years. In recent years, Boulder County’s turnout rates have been only slightly higher than statewide averages.

34. LIBRARY CIRCULATION

Indicator Description
Per capita number of materials (printed and non-printed) circulated by all Boulder County public libraries. Includes the public libraries in Boulder, Longmont, Louisville, Lafayette, the Eisenhower Public Library in Broomfield and the Depot Library in Lyons. Data come from the Colorado Department of Education, which annually tracks several state-wide library measures.

Why We Are Measuring This
Information is the new currency of our society; those who have access to it and who know how to apply it are “richer” than those who don’t. As repositories of information, libraries are critical community resources. Yet, libraries are more than simple warehouses of information; they are vital centers of civic education and community involvement.

What the Data Show
The number of materials circulated per capita in Boulder County hasn’t changed appreciably over the past seven years. The average person checks out roughly twelve library resources per year.

Growing communities like Lafayette, Lyons and Louisville show significant increases in circulated materials from 1990-1996. Libraries in Longmont and Broomfield lent 30% more materials in 1996 than in 1990, while Boulder’s per capita circulation trend has remained essentially flat.
1. Low Birth Weight
Boulder County Health Department.

2. Teen Birth Rate
Boulder County Health Department.

3. Prescription Drug Misuse by Elders
Boulder County Older Adult Health & Lifestyle Survey,
Boulder County Aging Services Division, J une 1997.

4. Domestic Violence with Children Present
The Status of Children in Boulder County in the 1990s,
Boulder County Movement for Children, 1995,

5. Homelessness and Basic Needs
Boulder Shelter for the Homeless; Emergency Family Assistance Associa tion.

6. Weekly Child Care Costs
City of Boulder, Department of Housing & Human Services,
Division of Children, Youth & Families.

7. Prenatal Care
Boulder County Health Department.

8. Top Reason for Emergency Room Visits
Boulder County Health Department; Avista Hospital;
Boulder Community Hospital; Longmont United Hospital.

9. Routine Check-ups
Behavioral Risk Factor Surveillance System,
Health Statistics Section, Colorado Department of Public Health and Environment,

10. Teen Alcohol and Tobacco Use
American Drug and Alcohol Survey, Rocky Mountain Outpost,
Boulder Community Hospital; Longmont United Hospital.

11. General Crime Statistics
Crime in Colorado Annual Report, Colorado Bureau of Investigation,
1990-1996.

12. Traffic Accidents
Boulder County Transportation Department.

13. Air Quality
Aerometric Information Retrieval System (AIRs),
Air Pollution Control Division, Colorado Department of Public Health and Environment.

14. Exterminated and Declining Species
Rare and Imperiled Animals, Plants, and Plant Communities,
Colorado Natural Heritage Program; Animal Species of Concern in Boulder County (1994),
Avian Species of Concern in Boulder County (1993),
Boulder County Parks and Open Space Department; Boulder County Nature Association.

15. Watershed Water Quality

16. Water Imports from the Western Slope
Northern Colorado Water Conservancy District; Environmental Defense Fund.

17. Land Annexation
GrowthWatch, Issue No. 1, Summer 1997, Boulder County Land and Space Department.

18. Agricultural Land
1992 Census of Agriculture, US Census Bureau; Resource Analysis Section, Colorado Department of Agriculture.

19. Vehicle Miles Traveled
Boulder County Transportation Department; Business Barometer, Boulder Chamber of Commerce (motor vehicle registrations).

20. Recycling
Eco-Cycle; Boulder Energy Conservation Center.

21. Per Capita Personal Income

22. Employment by Major Industry

23. Average Wage by Major Industry

24. Loan Volume for Small Businesses
Small Business Administration, Denver office.

25. Average Lease Rates for Commercial Space
Sallie L. Taylor, Irwin & Hendrick, Ltd., Boulder, CO.


27. Housing Affordability
Boulder County Assessment Office; Boulder Daily Camera; Apartment Association of Metro Denver; US Department of Housing and Urban Development, Rocky Mountain-Denver office.

28. High-School Graduation Rate
Research Evaluation Unit, Colorado Department of Education; Boulder Valley School District; St. Vrain Valley School District.

29. High-School Dropout Rate
Research Evaluation Unit, Colorado Department of Education; Boulder Valley School District; St. Vrain Valley School District.

30. Academic Achievement Scores
Research Evaluation Unit, Colorado Department of Education; Boulder Valley School District; St. Vrain Valley School District.

31. Pupil-Teacher Ratio
Research Evaluation Unit, Colorado Department of Education.

32. Attendance at Boulder County Arts Events
Longmont Symphony; Colorado Shakespeare Festival; Colorado Dance Festival; Peanut Butter Players.

33. Voter Turnout
Elections Division, Boulder County Clerk and Recorder.

34. Library Circulation

35. Business Barometer
Boulder Chamber of Commerce; Eco-Cycle; Boulder Energy Conservation Center.

36. Economic Development
Partners for a Clean Environment (PACE) Progress Report, December 1997, Boulder County Health Department, City of Boulder.

37. Housing Affordability
Boulder County Assessment Office; Boulder Daily Camera; Apartment Association of Metro Denver; US Department of Housing and Urban Development, Rocky Mountain-Denver office.

38. Academic Achievement Scores
Research Evaluation Unit, Colorado Department of Education.

39. Pupil-Teacher Ratio
Research Evaluation Unit, Colorado Department of Education.

40. Library Circulation
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