

Preserving The Natural Environment

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BETTR Recycling

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El Paso County Environmental Division

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Our Environment

In Colorado, our natural environment is a cherished asset, an economic engine, for many a way of life, and for all of us, a source of identity and pride. For some, it's the reason we live here. We admire its beauty, use it for recreation, and its resources support our lives and economy. Our natural environment's health directly affects the plants, animals, and other species that depend on it, and that we depend on to survive, and ultimately determines our quality of life.

In 2010 and 2011, we watched global environmental catastrophes, including the BP oil well disaster and Japan's nuclear plant meltdown, and in response wrestled with the choices and impacts of meeting the needs of a growing population. We all share this planet and regardless of race, wealth, gender, age, sexual orientation, social status, political affiliation, or religious beliefs, living on Earth is one thing we all have in common. Thinking sustainably, we must consider how our decisions will impact future generations, and understand how to be stewards of resources. In order to make the Pikes Peak Region the best possible place to live, work, and play, today and in the future, we must all take the Hippocratic Oath; "Do no harm."

Our region has always been a popular destination, from early Indians to more recent inhabitants, and people continue to be attracted to our natural environment and quality of life. As the population of the Pikes Peak Region continues to grow, demand for natural resources will continue to rise. But our growth has direct environmental effects: changes in land use, air quality, water quality, livability, transportation, and waste are just a few of the concerns that face our community. Addressing environmental issues is complex, and can be depressing, confusing, and inspiring all at once. Understanding our choices, reducing our impacts, and improving our ecosystems can take teamwork, investment, education, and courage. We must be mindful of how we modify and use energy, air, water, and the landscape, and the effects on our planet and, consequently, our own, health.

Today, we are challenged. Data show that precipitation is changing, emissions are increasing, and temperatures are warming, a trend apparent worldwide, with 2010 tied for warmest year on record.¹ Both Ozone and E.coli concentrations have gotten worse, reversing positive trends. Human and animal health and safety are directly affected by pollution, with mercury an especially virulent biological threat.² Many species, including humans, cannot adapt at this pace of change, which presents the potential for political and social unrest to occur, often causing us to reexamine our ways. Therefore; we must plan and act differently for our future water, energy, and resource uses and sources, enabling the best of human innovation, creativity, and collaboration. These are problems that can be solved.

As a community, we've come a long way; we're learning more, and planning for the future. Locally, we are increasing our use of renewable energy, now 10% of our energy portfolio, evaluating biomass fuels in our power plants, partnering in progressive emissions technology development with Neumann Systems Group, and we've hosted a Global New Energy Summit

1 http://www.noanews.noaa.gov/stories2011/20110112_globalstats.html.

2 Arctic Mercury 2011 (Mercury in the Arctic) <http://www.amap.no/>.

with national leaders. We are increasing water efficiency with WaterSense products, landscape retrofits, and expanding supply through Southern Delivery System. We are building more efficient structures through EnergyStar, LEED, and WaterSense. We are treating wastewater better with UltraViolet light, and focusing on Fountain Creek as a Watershed. We are polluting more, but also recycling more, driving new markets and investment, including Bestway Disposal's construction of a Materials Recycling Center to sort recyclables right here in Colorado Springs. We continue protecting prime lands for habitat preservation, ecosystem services, future generations, and food production.

2011 Highlight

Local Food Options continue to expand in the Pikes Peak Region.

Building on our community's agricultural heritage, rural character, and values of independence and health, Colorado Springs is increasing its food security. Economic conditions, supporting science, nutritional needs, and food safety and scarcity are creating a robust network of community and backyard gardens, farmer's markets, community supported agriculture, and business programs that provide locally grown products, engage citizens, and create community. With strong business support, and unique partnerships, school children eat healthier food made in Colorado, new generations experience food production for the first time, and local restaurants find success through local food celebrations like Local Food Week. Through Pikes Peak Urban Gardens, we now have 11 Community Gardens that provide unique benefits, such as stimulating social interaction, encouraging self-reliance, neighborhood safety and beautification, providing nutritious food, resource conservation, reduced family food costs, recreation, exercise, therapy, education, preserving open space, income opportunities, economic development, and inter- and cross-generational connections.

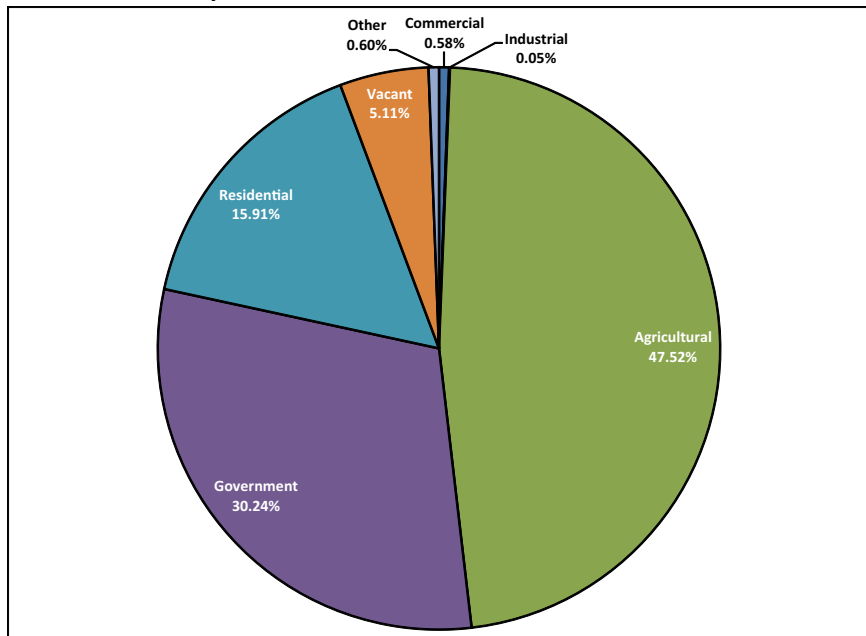
These collaborations support local and rural economies, promote the diversity and seasonality of local food and value-added products, create jobs, while helping the poor and malnourished. Partnerships with El Paso County, City of Colorado Springs Park and Recreation, and School District 11 integrate local food as an educational tool to improve children's health and awareness of Colorado products. Colorado College uses seasonal products and actively sources from local farmers. Farmer's Markets encourage small businesses and represent a unique cultural opportunity to celebrate diversity, health, and sustainability.

The economy will always affect and inspire these measurements, and while not all aspects of our natural environment are under our control, we realize as our future changes we will continue to stress our biological systems. We need to continuously consider how our lifestyles impact our environment, and adapt and pursue changes and efficiencies that can meet our needs in ways that ensure future generations have access to the same environmental benefits, and quality of life, that we enjoy today.

-Natural Resource-

Land Use

El Paso County Land Use



Source: El Paso County Information Technologies

These Charts illustrate the current land use in El Paso County (County) and the City of Colorado Springs (City). In the County chart the Agricultural category includes farmland, grazing, and irrigated land. The Government category includes various government entities: federal, state, county, and local political subdivisions. In the City chart the Other category includes cemeteries, golf courses, right-of-ways and undetermined areas.

Why is This Important?

How an area dedicates and develops its land has a significant impact on environmental quality and natural resources. Failing to preserve natural spaces during periods of growth can affect wildlife, hydrology and biodiversity. For example, development can result in increased impervious surfaces, such as rooftops, roads, and parking lots. This reduces the amount of water that infiltrates through the ground and increases run-off into the creeks. Such changes in land use inevitably exact positive and negative impacts on the environment.

Land use in the Pikes Peak Region (Region) remains an important determinant of the nature and scope of environmental pressures. Tracking land use changes can aide in determining areas of high conservation value, regulating flooding and other natural hazards, as well as maintaining air and water quality. Land use and the natural environment remain inextricably linked; knowledge of changes in land use assists in formulating solutions for sustainable resource use and safeguarding the natural environment. The Land Protection Section speaks to particular efforts in retaining crucial landscapes and features in the Region.

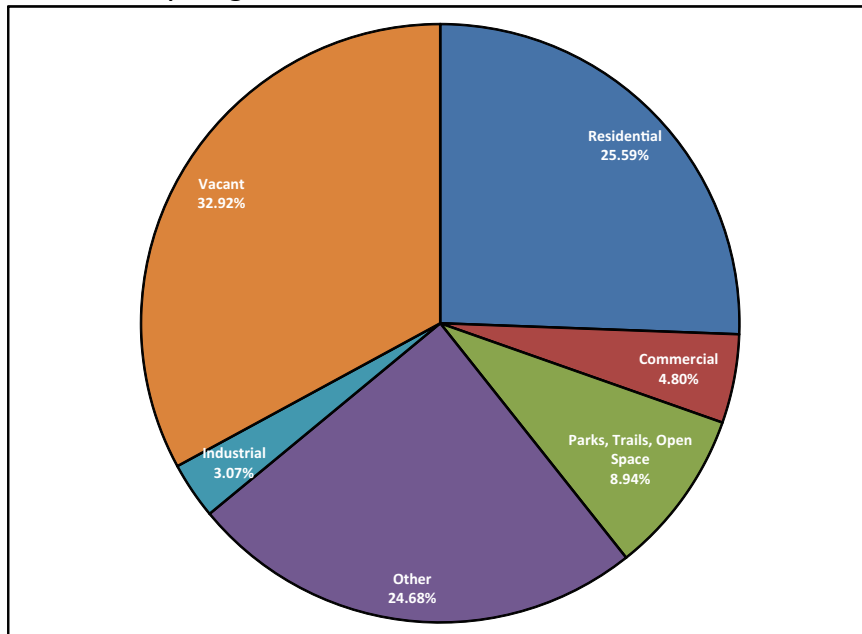
How are We Doing?

Though the Region does not have urban growth boundaries, the City and County both have open space plans to promote effective land use through parks, open space, and partnerships.¹

Potential for Action

While the County consists mostly of agricultural and government areas, the City is mostly residential, vacant and other land. The recent economic climate halted most development, though an increase in residential, commercial and industrial growth will likely occur when the economy rebounds. The substantial amount of vacant and agricultural land indicates the capacity for changing land use since those areas can convert to residential, commercial, industrial, or remain open spaces. The Region should integrate sustainable land use policy into future growth, ensuring that land use changes have limited negative impacts on environmental quality and natural resource systems. One such effort of mitigation, the City's comprehensive assessment for an integrated watershed approach, addresses the reduction of impervious surfaces through Low Impact Development methods. Additional solutions include enacting Smart Growth and Green Infrastructure policies that preserve and maintain environmental integrity while promoting healthy land use changes.

Colorado Springs Land Use

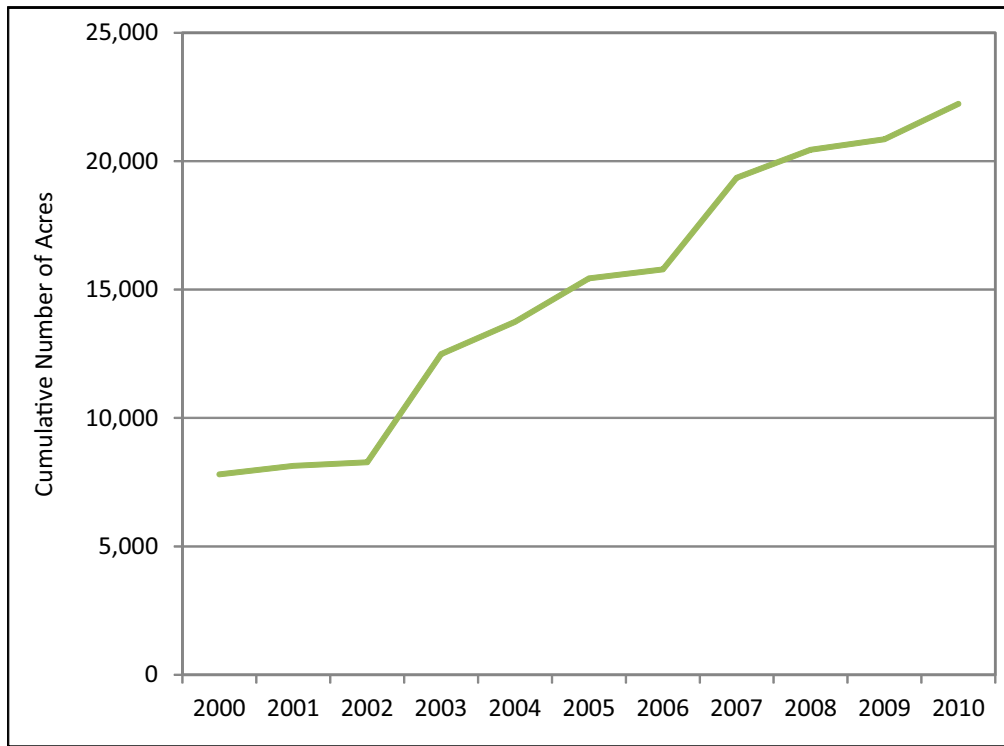


Source: City of Colorado Springs

1 See <http://www.springsgov.com/Page.aspx?NavID=3594> and <http://adm2.elpasoco.com/Planning/Policy-plan/page13.htm>.

PRESERVING THE NATURAL ENVIRONMENT

Land Protection



Source: Palmer Land Trust

This Chart shows the cumulative acreage of private and public conservation easements in El Paso and Teller Counties serviced by the most active land trusts and local government easement holders in the Pikes Peak Region.

Why is This Important?

The open spaces that surround Colorado Springs are amenities for human recreation and enjoyment as well as habitat for many native species of plants and animals. Governmental lands and parks make up a large part of the lands adjacent to Colorado Springs. These lands contribute to the views, open space, and biological habitat adjacent to Colorado Springs.

Similarly, private landowners are pursuing the preservation of their lands for many reasons and through many means. For example, ranchers and farmers are placing conservation easements on their lands to

ensure that those lands remain open for agricultural purposes and the lifestyles of ranching and food production rather than face the potential of development. These easements preserve scenic corridors that support tourism, protect critical watersheds and historical areas and provide income to our rural areas.

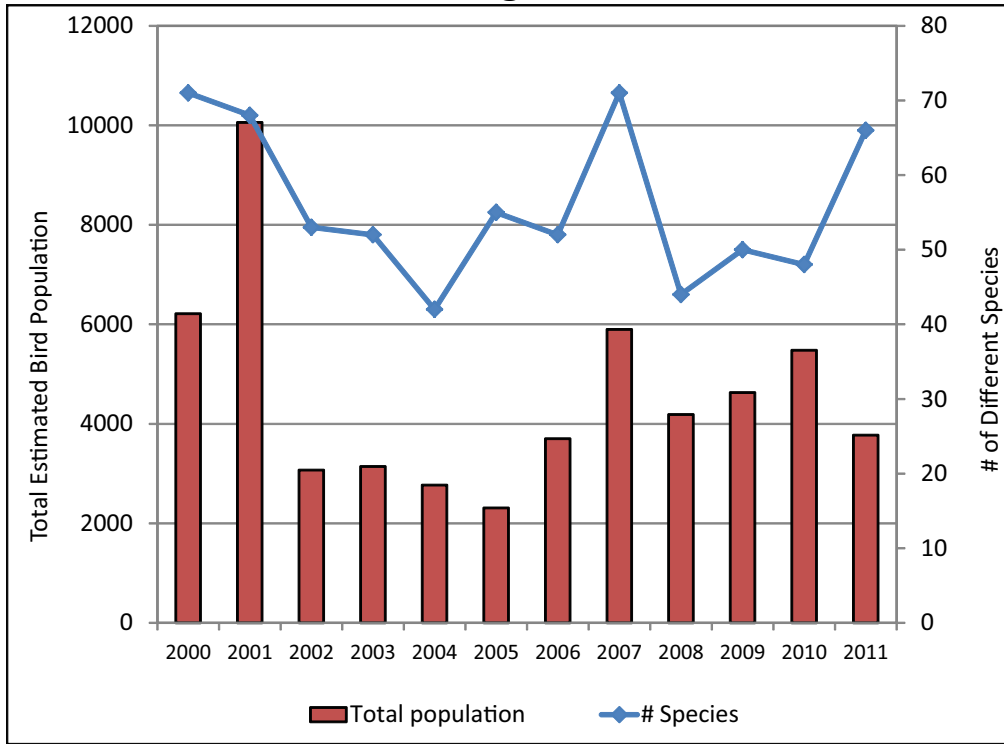
How are We Doing?

There is an active land preservation movement in the Pikes Peak Region. The Palmer Land Trust, The Trails and Open Space Coalition, Colorado Open Lands, El Paso County Environmental Division, Trust for Public Lands, the Nature Conservancy, Colorado Cattlemen's Association and other groups are instrumental in maintaining open space and functioning agricultural lands for generations to come. Additionally their efforts in neighboring counties will have a long and lasting impact to ensure that food can be produced locally and wildlife has critical habitat.

Potential for Action

We hope to see private landowners find continued support in their efforts to protect their lands and to preserve the agricultural heritage and local food base of the region.

Birds in the Pikes Peak Region



This Chart gives an indication of total number of birds and the corresponding species count attained by volunteers during the annual Backyard Bird Count.

Why is This Important?
Colorado Springs hosts many birds, some as permanent residents and some which briefly use our environment as a refueling (food) stop during an extensive migration. The birds present in the annual bird count represent a broad assortment of species and niches that include small insectivorous and seed eating songbirds as well as the majestic raptors near the top of food chains. The fact that we find them proximal to our cityscape indicates the availability of food and habitat

How are We Doing?
Assessing the number of birds provides us with baseline data on how well birds, as one

Source: Great Backyard Bird Count

important wildlife group, are doing. In the case of resident birds, this data gives us insight into the amount of naturally productive habitat, tree canopy and open space we provide.

When looking at migratory species, we need to take an ecosystem view for the role of the Colorado Springs habitat. Many of these songbird species, some weighing barely more than a quarter (\$0.25) or two, may travel several hundred miles between stops. As a result we need to continue to look at our effect on the larger ecosystem, especially the upkeep of streamside corridors and the preservation of diverse native habitats in all of southeastern Colorado. A primary consideration of properties approved for Conservation Easements in Land Protection includes existing habitat, ecosystem support and species diversity. These preserved properties help ensure these crucial and limited food sources in addition to bioremediation and stormwater benefits and social values.

Potential for Action

Maintaining urban habitat through well designed urban forests and open space is important to all wildlife, with birds serving as indicator species for the ecosystem as a whole. Strategic planning plays a critical role in making a livable city for humans and wildlife while sustainable development helps us understand our total impact on larger ecosystems.

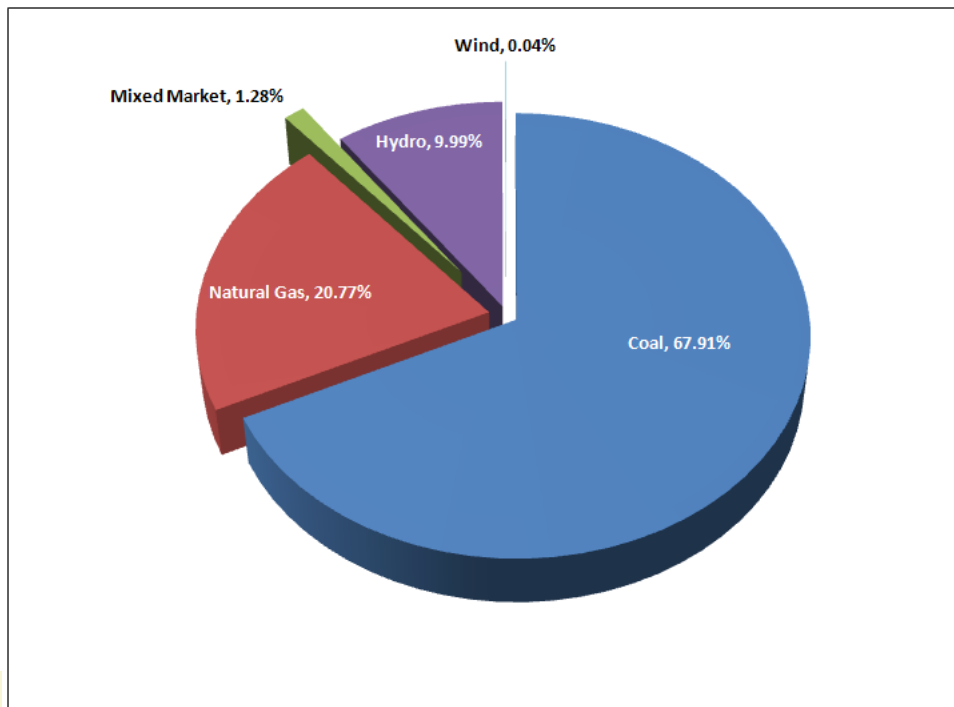
The 2011 survey indicates our population values the natural environment, and our support of City and County Trails, Parks and Open Space provide critical services to animal and human stakeholders through interaction and appreciation of nature and preservation of habitat, food sources, and waterways.



Photograph by Claud B.

-Resource Use-

2010 Electric Portfolio by Fuel Type



Source: Colorado Springs Utilities

These Charts show the fossil fuel versus renewable sources of energy used to produce electricity for Colorado Springs Utilities customers and the percent of our energy supply coming from renewable energy sources. Renewable energy includes solar, wind, biomass and hydropower.

Why is This Important?

By using diverse, sustainable sources to produce electricity, utility companies ensure a reliable supply while reducing greenhouse gases released by the burning of fossil fuels. A diverse energy mix also helps utility companies stabilize prices charged to customers – if utility companies are heavily dependent on one energy source, they are more vulnerable to market and regulatory changes.

How are We Doing?

In 2010, coal and natural gas accounted for a decreasing percentage of our electricity

supply. While we are still heavily dependent on fossil fuels, we are using over 10% of renewable and additional renewable supply is under development. A solar array at the Air Force Academy will soon contribute an additional 6 MW of power, and exciting woody biomass and emissions projects are underway.

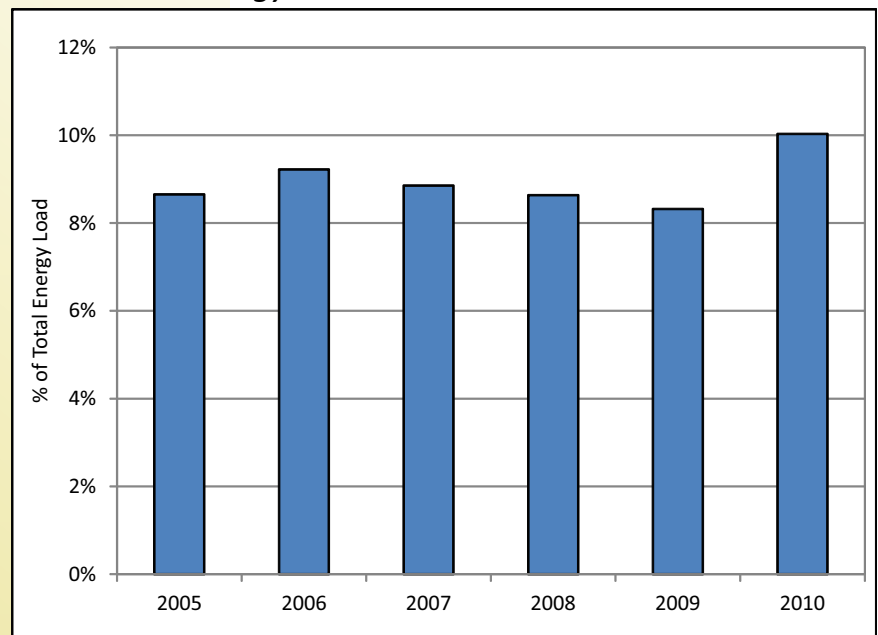
The percentage of renewable energy used to produce our electricity increased slightly from last year. The majority of our renewable energy comes from hydropower. The percentage of wind energy in our portfolio mix actually decreased from last year.

Potential for Action

Colorado Springs Utilities is revising its Electric Integrated Resource Plan (EIRP) in 2011. This plan predicts the expected electricity requirements and identifies possible resources to meet those requirements. In addition to the EIRP, a region-wide sustainability planning process (PPRSP) and regional sustainable energy plan (PRISTINE energy plan) present opportunities for local utilities and the community to wisely define the future investment in energy sources and energy efficiency. Those efforts that could be effective in our community could be adapted and implemented. Although perhaps outside the timeframe of this report, the Department of Energy has started the Sunshot initiative,¹ the goal of which is to reduce the cost of solar energy by approximately 75% before 2020. This comprehensive approach includes – panels, balance of system, labor. If this initiative is successful, it may provide substantial opportunity to renewable energy portfolio options.

¹ <http://www1.eere.energy.gov/solar/sunshot/index.html>.
Photograph by Claud B.

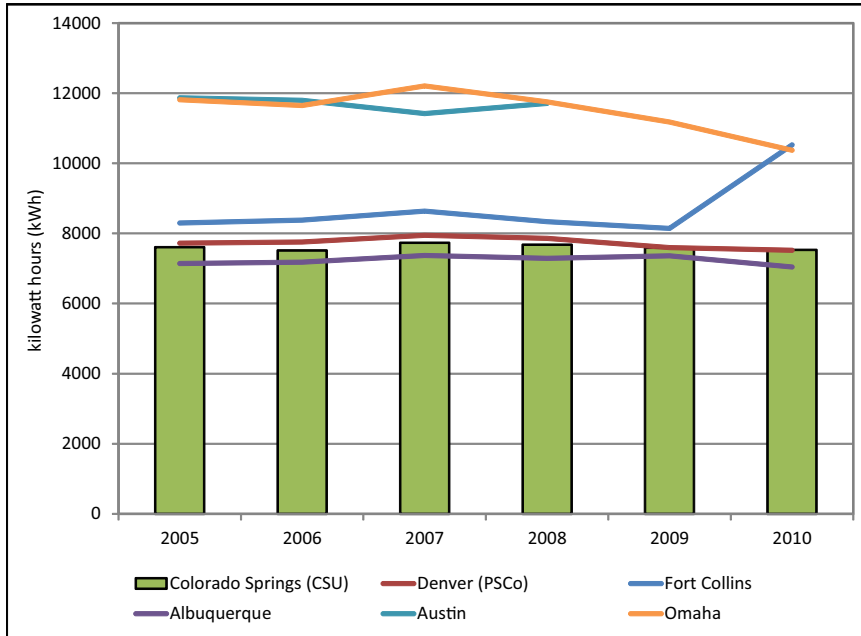
Renewable Energy



Source: Colorado Springs Utilities

Energy

Electricity Usage Per Capita City Utility Company Comparison



These Charts show the kilowatt hours of electricity and the cubic feet of natural gas burned per household by the residential customers of Colorado Springs Utilities and comparison cities. Denver and Fort Collins are separate in Electricity but combined in Natural Gas.

Why is This Important?

Looking at energy consumption over time shows the trends in energy use. By reducing our energy usage per capita, supplies go further, which prevents us from having to purchase or create additional resources.

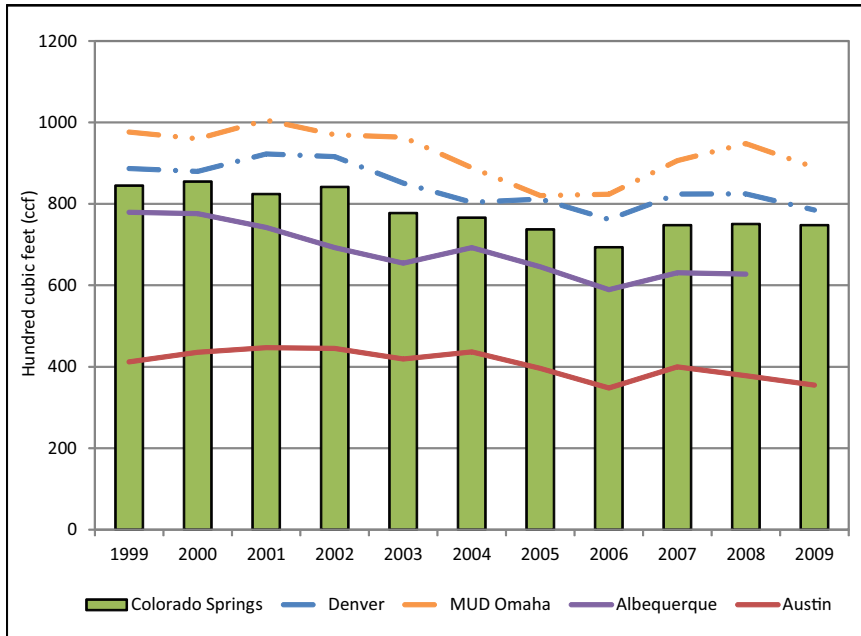
How are We Doing?

Colorado Springs Utilities consumers have been fairly consistent in their energy usage, with a slightly downward trend. This trend is also reflected in the comparison cities. Recent economic changes may also have contributed to reduced demand. It is important to note that the climate of a region can affect the type of energy used. In colder areas, more natural gas is used to provide heating, while in warmer areas; more electricity is used for cooling and air conditioning. In the last ten years, energy usage per consumer (Kwh) has been about the same, though as plug loads increase, efficiency measures have offset much of that growth. Efficiency is often the least expensive form of supply, and technology and behavior combine to maximize use of existing resources.

Potential for Action

Survey information shows that consumers are primarily interested in conserving electricity to save money, with a smaller percentage of people being interested in conservation efforts for environmental concerns.¹ Highlighting the monetary benefits of conserving electricity and natural gas could be one way to increase conservation and efficiency. Advances in codes, design and construction such as the US Green Building Council's LEED Certification, NAHB, and Department of Energy's EnergyStar homes contribute to conservation and efficiency and can be found in the Built Environment section of this publication.

Natural Gas Per Capita Usage City Comparison

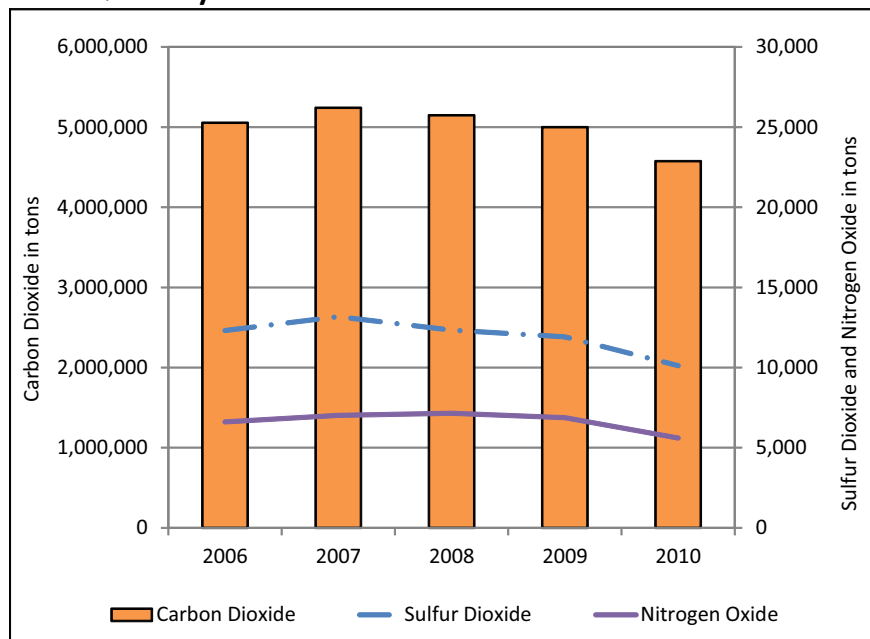


Source for both charts: U.S. Department of Energy Information Administration

EnergyStar certified products in the marketplace continue to expand and improve efficiency in appliances and consumer goods, and commercial and home energy retrofits have made existing buildings less expensive to run and more comfortable to use. Demand Side Management efforts such as rebates and retrofits from many sources help reduce energy consumption through retrofits using highly efficient products and systems. These programs have proven popular with businesses and consumers given choice and options and facilitate the adoption of reduced demand technology.

1 2011 QLI Community Survey.

Air Quality - Emissions



Source: EPA Clean Markets Database

The first chart shows Carbon Dioxide (CO₂), Sulfur Dioxide (SO₂), and Nitrogen Oxide (NO_x) from Colorado Springs Utilities electricity generation. Other sources of CO₂ include transportation, industrial, and residential.

The second chart shows mercury (Hg) landfill and stack air emissions.

Why is This Important?

CO₂ is a principal greenhouse gas contributing to climate change. SO₂ and NO_x emissions can aggravate an individual's respiratory tract, impair pulmonary functions, and increase risk of asthma attacks. SO₂ and NO_x are the major precursors to acid rain, which is associated with the acidification of soils, lakes, and streams.

Mercury acts as a neurotoxin, interfering with the brain and nervous system, and can accumulate in food systems. Mercury can harm children's developing brains, including effects on memory, attention, language, and fine motor and visual spatial skills. Other toxic metals such as arsenic, chromium and nickel can cause cancer. Mercury and many of the

other toxic pollutants also damage the environment and pollute our nation's lakes, streams, and fish.¹

How are We Doing?

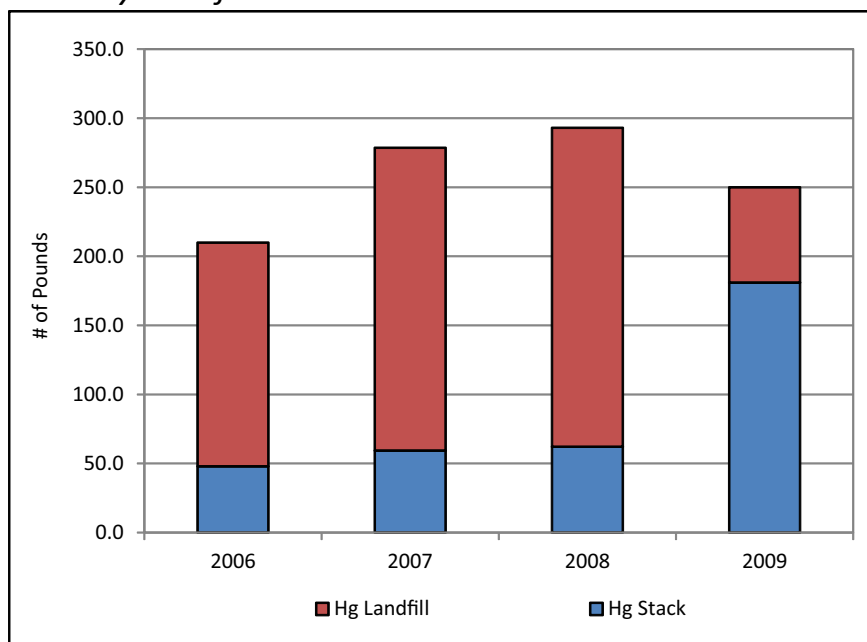
2010 concentrations of CO₂, SO₂ and NO_x from Springs Utilities generation decreased slightly from the previous years, due to slightly decreased energy production to a slight increase in consumer numbers. Air and landfill emissions have shown an increasing trend, although Mercury emissions data are incomplete for 2009 Nixon landfill amounts. While the region no longer has monitoring stations for SO₂ and NO_x, monitoring results from 2007 indicate that the region is below the standard for both pollutants. Currently, EPA has no limits on Mercury emissions from power plants.

Potential for Action

Potential strategies to reduce emissions include, but are not limited to: 1) Installation of pollution control equipment (called "scrubbers") to reduce emissions; 2) Encourage the use of cleaner fuels, such as natural gas, solar and wind power; 3) Continue to use low-sulfur coal; and 4) Conserve energy at work, home and other places. Strategies to control CO₂ include switching from coal to natural gas, wind, solar, and hydro. See Energy Sources for how those technologies have been integrated into the Colorado Springs Utilities fuel portfolio.

The December 2009 Endangerment finding by the EPA for carbon dioxide set the federal government on the path toward regulating emissions from power plants, factories, automobiles and other major sources. In the future there might be federal and state regulations regarding carbon dioxide. A March 2011 EPA proposal to limit Mercury emissions may impact future production options and technology upgrades.

Mercury Landfill and Emissions

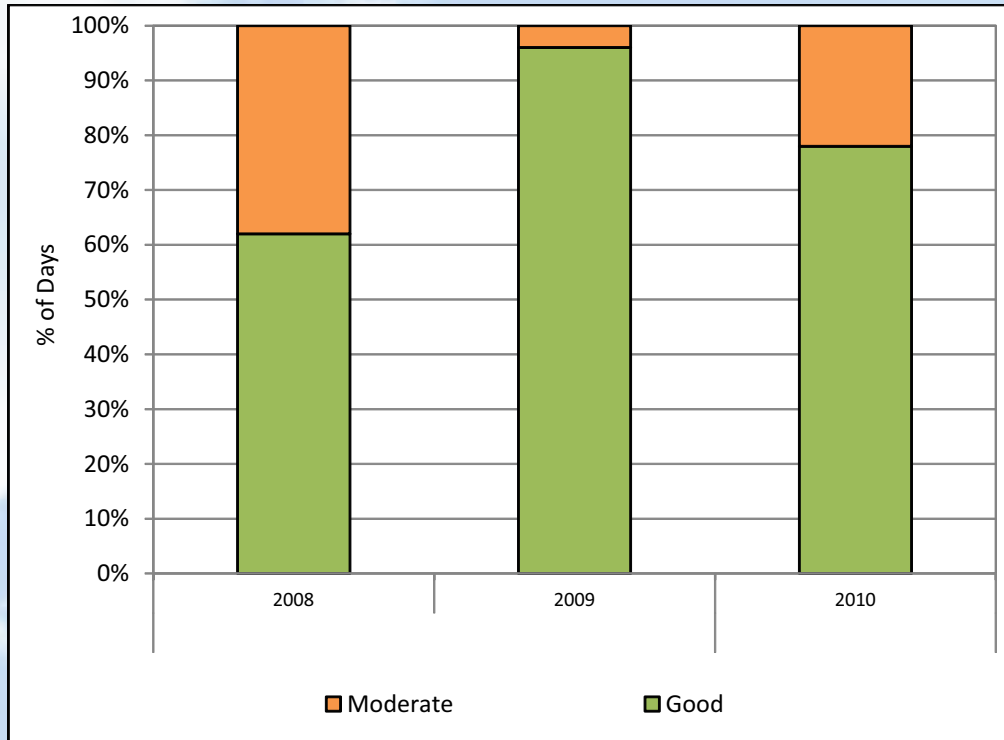


Source: EPA Toxics Release Inventory Program

1 <http://www.epa.gov/airquality/powerplanttoxics/>.

Air Quality - Ozone

Ozone Concentration Classifications



Source: Colorado Department of Public Health & Environment - Air Pollution Control Division

This Chart shows ozone concentration classifications based on the EPA air quality index reporting system. The graph reflects only the ozone concentrations measured during the ozone season - June 1 through August 31.

Why is This Important?

The Pikes Peak Region is currently monitored for carbon monoxide, ozone, and two types of particulate matter, and until 2008 it was monitored for sulfur dioxide, nitrogen dioxide and lead. Monitoring is conducted to determine the region's compliance with state and federal air quality standards (PPACG, 2008). These standards are designed to protect public health and welfare by determining the specific concentration levels of a pollutant allowed in the air. The region currently meets the air quality standards for all six of these air quality pollutants.

Ground level ozone is the most problematic air quality pollutant of concern in the region. Ozone monitoring stations are located at the USAFA and Manitou Springs (established in 2005). Ozone levels are usually the highest in the summer, especially on sunny days with no wind.

Ozone (smog) is not emitted directly as a pollutant notwithstanding its general "brown cloud" appearance. Indeed, biogenic sources, i.e. naturally occurring emissions from vegetation, make up the largest component of ozone. Other sources include motor vehicles, gasoline vapors, power plants, chemical plants, refineries, factories, consumer and commercial products, in addition to other industrial sources. High concentrations of ozone can 1) make people more susceptible to respiratory infection, 2) result in lung inflammation, and 3) aggravate pre-existing respiratory diseases, such as asthma. Other health effects include a decrease in lung function and an increase in respiratory conditions such as chest pain and coughs.

How are We Doing?

Ozone concentrations appear to have stabilized and have even improved over the past 5 years. In March 2008, the Environmental Protection Agency (EPA) created a more stringent ozone standard. The chart indicates the number of good and moderate days for the 0.075 ppm existing 8-hour standard. El Paso County is the only county along the central and northern Front Range that remains in compliance with the 0.075 ppm ozone standard.

The EPA intends to set a new final primary and secondary standard for ozone. For the primary standard, EPA is proposing to adopt a more stringent 8-hour standard between 0.060 to 0.070 parts per million (ppm) and a separate cumulative secondary standard within the range of 7-15 ppm-hours. The Pikes Peak Region may not comply with these new standards.

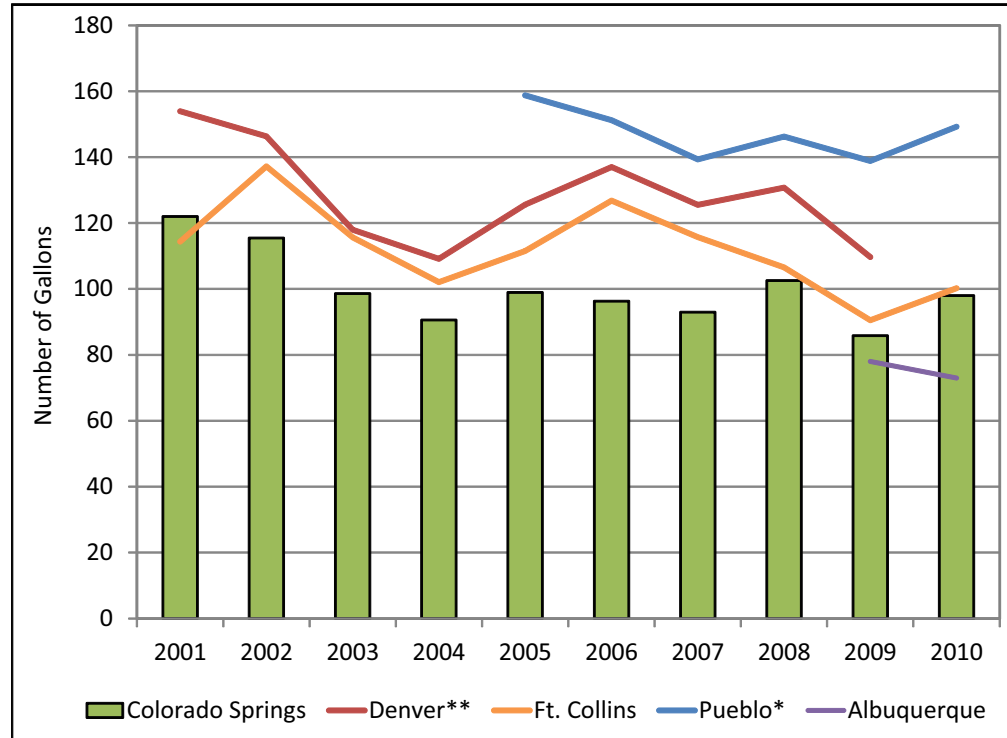
Potential for Action

Strategies to reduce ozone concentrations can be voluntary or regulatory as part of Federal or State legislation. Voluntary programs currently are being implemented to reduce ozone concentrations. Through public outreach and education these programs prevail upon consumer participation. For example, consumers are discouraged from overfilling gas tanks, while encouraged to reduce the amount of car driving and to car pool, and to avoid using gasoline powered lawn-care equipment. Regulatory strategies will be considered if the region violates the state and federal standard and could include anti-vehicle idling measures, using lower Reid Vapor Pressure gasoline; Stage II Vapor Recovery Systems, Motor Vehicle inspection/maintenance programs, employer trip reduction programs, and additional state regulations.

Photograph courtesy of Shutterstock.com

Water Service and Use

Single Family Household Water Usage Gallons Per Capita City Comparison



*Pueblo estimates single-family residential population by taking the total estimate residential population less the number of multi-family residential units multiplied by 2.

** No data available for 2010.

Source: Colorado Springs Utilities

This Chart shows daily single family residential water consumption per capita (GPCD) from 2001 through 2010 in Colorado Springs and four other benchmark communities. Data was not available for all communities in all years.

Why is This Important?

El Paso County is home to more than 600,000 residents, approximately 250,000 housing units, and more than 16,000 businesses.¹ Considering the population of the County is projected to grow to more than 1 million over the next 50 years, the importance of a reliable water supply and efficient use to help meet the growing needs of the Pike’s Peak Region cannot be overstated. El Paso County is “high and dry” with elevations ranging from 5,095 feet on the southern border at Black Squirrel Creek to 14,110 feet on the summit of Pikes Peak and average precipitation in Colorado Springs of about

17 inches per year. This semi-arid climate further intensifies the need for more efficient use of water resources, particularly given the uncertainties of water supply, drought, climate change and population growth.

There are 25 individual water districts or “providers” in El Paso County, including Colorado Springs Utilities, which provides approximately 80% of the water used domestically. Additionally, there are approximately 22,000 private residential wells in the County. While Colorado Springs Utilities’ water supply portfolio is made up primarily of renewable surface water sources, much of the remaining water use in the County is from ground water sources, some of which are non-renewable in nature, as they receive only minimal recharge to replace the water which is currently being pumped out of these aquifer systems.

How are We Doing?

The chart above indicates that Colorado Springs and each of the benchmark communities have seen reduced demands since 2001, though these demands may be leveling off slightly. Water use per capita per day is a common measure of changing water demands, but it may be misleading when comparing communities and evaluating conservation and efficiency. Weather, demographics, economics, and water pricing are primary determinants of municipal water demands which must be considered when making such comparisons. Different water providers also classify customers and calculate use per person per day differently. Use per person per day normalized for changes in weather, water price, and economic conditions is best utilized to monitor increases or reductions which may be permanent in nature, i.e. conservation. Normalizing for weather alone, Colorado Springs residential users reduced consumption by about 16% since 2001.

Potential for Action

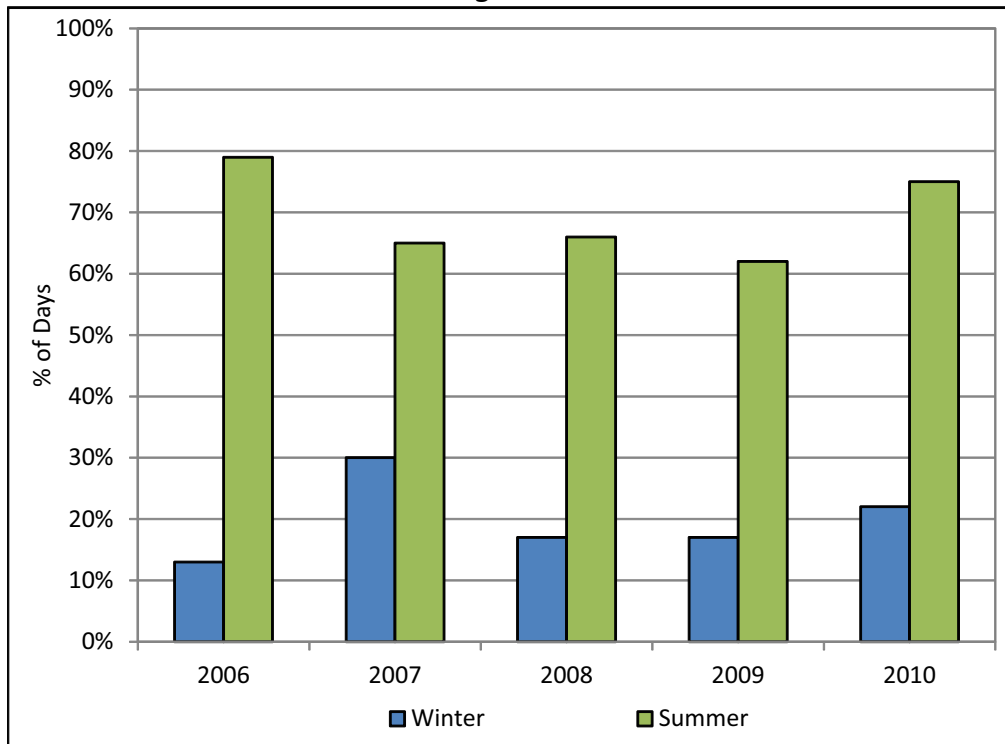
Clearly, securing water to meet the region’s growing water demands is essential to ensure a high quality of life in our region. In addition to ensuring efficient use of the resource, this is best done by developing a diverse portfolio of reliable supply options which meet the needs of multiple providers well into the future. Water supply projects which meet these criteria, such as the Southern Delivery System, are critical to meeting the future needs of the region. It is also important for water providers to consider and implement water conservation and efficiency measures strategically to meet growing demands, minimize the loss of non-renewable resources, and mitigate other possible environmental concerns.

1 U.S. Census Bureau.

Photograph courtesy of Shutterstock.com

Water Quality

E. Coli Concentrations Exceeding EPA Standards in Fountain Creek Watershed



Source: United States Geological Survey (USGS) Monitoring Stations

This Chart shows the percentage of time that the E. coli (*Escherichia coli*) bacteria levels have exceeded the Environmental Protection Agency (EPA) standards used in Colorado at monitoring stations along the Fountain and Monument Creeks and tributaries during Winter (November through April) and Summer (May through October) months.

Why is This Important?

Water quality is important to human health and to the natural environment. It is affected by the activities of people, wild and domestic animals, and natural causes. Specific stream standards exist for most water quality parameters. The United States Geological Survey monitors many different types of water quality parameters. E. coli was selected as an indicator because of the potential

human-health effects associated with its high concentrations and because it is used to determine whether or not water is safe for recreation.

Bacteria are very small, single-celled life-forms. Some types of bacteria can cause illness. The amount of two bacterial types, fecal coliforms and E. coli, present in surface waters are monitored because they are disease causing organisms and could cause swimming-associated gastrointestinal illnesses. The standard for most stream segments in Colorado are 126 E. coli bacteria per 100 milliliters of water. Sources of bacteria could include raw sewage spills, storm runoff from urban areas, wildlife (deer, elk, geese), livestock (cattle, horses, pigs, poultry), and runoff from farms, ranches, and open areas.¹

Pathogenic microorganisms that can cause human disease may be present where levels of bacteria are high. As a result, it might be unsafe to swim or wade through Fountain Creek when these levels are high e.g. following a heavy rainstorm. Other water quality concerns to Fountain and Monument Creeks include Selenium and Nutrients.

How are We Doing?

Bacteria levels in streams appear to be directly related to flows and water temperature. When flows are high, such as after a summer storm, higher bacteria levels are found in Fountain Creek. During low flow winter months, E. coli concentrations are usually below the EPA standard. High E. coli concentrations have caused almost all of Fountain and Monument Creeks and several tributaries to these creeks to be listed as water quality impaired for E. coli.

Potential for Action

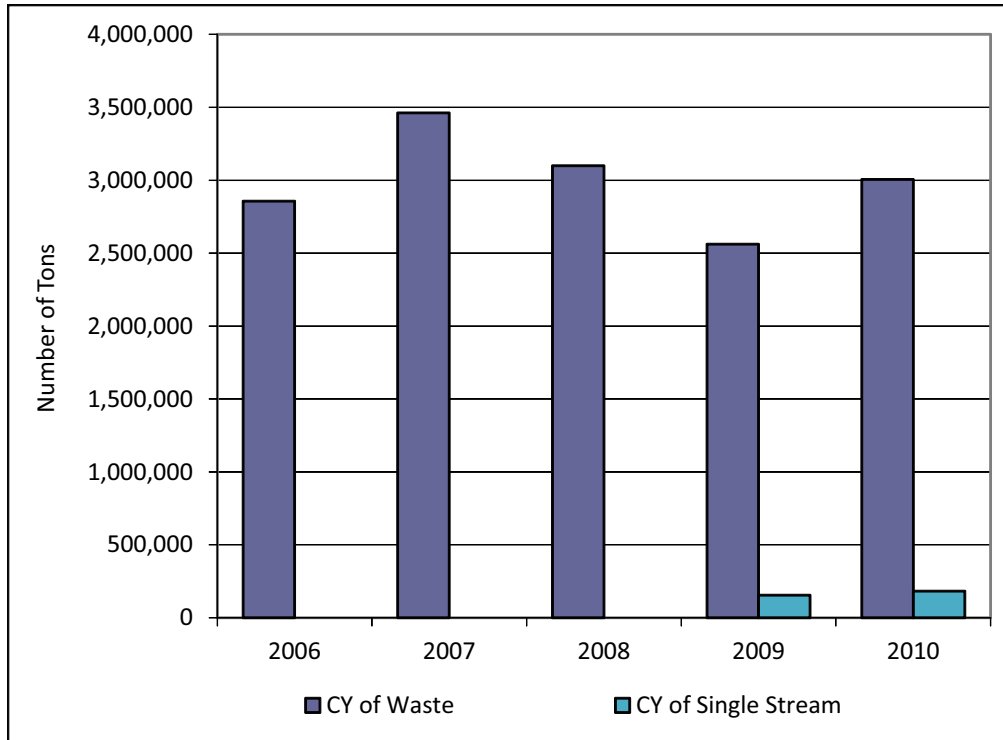
Two separate studies have been conducted on different stretches of Fountain Creek through the use of microbial source tracking methods (using DNA from E. coli bacteria) to determine whether E. coli sources are from people or animals. A study completed in 2009 on Upper Fountain Creek by the USGS identified birds as a probable source of fecal contamination and not human activities. Results for a study completed in 2010 on the mainstream of Fountain Creek by Colorado State University-Pueblo were inconclusive. Strategies to reduce concentrations will depend on the type of water quality contamination and specific sources that are identified and could include regulations and policies or public outreach and education. More information regarding E. coli can be found at: <http://www.epa.gov/safewater/contaminants/ecoli.html>. Low Impact Development techniques, mentioned in Land Use, can have beneficial effects on water quality, including reductions in E.coli and other pollutants, through bioremediation using plants and soil systems that treat and improve water quality.²

1 Fountain Creek Vision Task Force, 2009, and <http://www.fountain-crk.org/>.

2 <http://water.epa.gov/polwaste/nps/urban/index.cfm>.

-Resource Reuse-

★ Landfill Quantities/Diversion Data Landfill/Waste versus Single-Stream Recycling



Source: Colorado Department of Public Health and Environment

These Charts show the cubic yards of waste deposited annually into El Paso County's three local landfills and the amount of single stream recycling that is collected per year.

Why is This Important?

The items we dispose of were made by extracting resources from the environment. Packaging materials are made from metals mined from the ground, plastics are manufactured from petroleum, and paper and cardboard are derived from trees. When these materials enter a landfill, many of them never decompose and those that do take many years. Many of these items can be recycled or composted. Reducing, reusing and recycling waste supports the earth and our environment and can often be less expensive than using raw materials.

How are We Doing?

We continue to utilize our landfills. Since 2008, all four major trash haulers have implemented single-stream collection of recyclables available to the majority of the county. This new measure contributes to the reduction of waste sent to the landfills. Education on the process is critical to the success and continued increased participation. Additionally, within the next year El Paso County will have its first Materials Recovery Facility (MRF) owned and operated by a local hauling company. This will be a commingled stream MRF; the process will provide 10-12 new jobs. Residences can all choose to implement "single-stream recycling" as a way of life and a method of reducing wastes sent to the landfill. Most work happens at the local level and it is very important to encourage and empower our residents to take positive environmental action. Large scale cooperation and increased opportunities for recycling assure continued success. The City of Colorado Springs launched a 'Green Corners' campaign in April 2011 to provide single stream recycling options in the core of downtown.

Potential for Action

Recycling presents multiple economic development opportunities. The Pikes Peak Sustainability Materials Recovery Committee, El Paso County Environmental Division, the Recycling Coalition, the City of Colorado Springs Green Team and other groups are working toward developing a strategic action plan to encourage and expand recycling and green procurement in the Pikes Peak region. This will include an analysis of existing recycling efforts, collection of baseline data, specific improvement targets, and strategic objectives to realize success.

In August of 2010, at the EcoFestival the Recycling Coalition of Colorado Springs spearheaded an audit of 359 pounds of residential trash. Of the sample, 292 pounds was recoverable and/or recyclable. Readers can find out more about recycling at El Paso County's Environmental Division webpage under www.elpasoco.com search "Environmental Division."



Photo courtesy of El Paso County Environmental Division