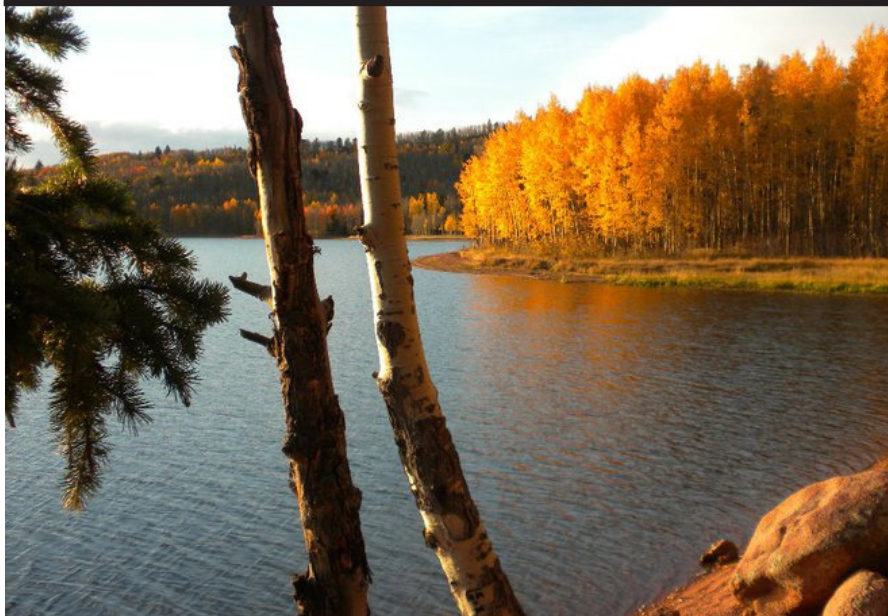


# Looking to our Future – Pikes Peak Region 2030

March 2012



## Acknowledgements

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**Paula Miller**, Pikes Peak Library District  
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### *Task Groups*

In addition to the Consensus Committee, PPACG convened task groups for each goal area addressed in PPR 2030. These groups served as technical committees for the project, providing subject matter expertise and valuable input in preparing PPR 2030. More than 100 individuals representing Fort Carson, elected officials, local governments, educational institutions, the business community, and community-based organizations participated in the process throughout the development of PPR 2030. PPACG is grateful for the hard work and dedication of all who participated in this process. Below are some notable individuals who greatly contributed to task group discussions and development of PPR 2030.

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Additional information on these resource areas and stakeholders participating in the task groups, see PPACG's website: <http://www.ppacg.org/sustainability/aboutregplan>.

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Heather Bergman and Mikaela L.W. Gregg

***Prepared By:***

Pikes Peak Area Council of Governments

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**RESOLUTION BY  
THE PIKES PEAK REGIONAL SUSTAINABILITY PROJECT  
CONSENSUS COMMITTEE  
APPROVING "LOOKING TO OUR FUTURE –  
PIKES PEAK REGION 2030"**

**March 5, 2012**

**WHEREAS**, the Pikes Peak region continues to grow, and competing demands are made on our natural environment, government services, community relationships, educational systems, personal health and quality of life; and

**WHEREAS**, these conditions require a comprehensive, collaborative and regional framework by which our local governments, institutions, businesses, and individuals can coordinate, collaborate, and develop regional solutions to regional challenges; and

**WHEREAS**, the Consensus Committee, composed of community leaders from local governments, federal and state institutions, utilities, non-profit organizations and businesses representing the Pikes Peak Region guided the development of a regional collaboration on sustainability, "Looking to Our Future - Pikes Peak Region 2030," and;

**WHEREAS**, "Looking to Our Future – Pikes Peak Region 2030" was developed through a consensus-based process as a living strategy and vision for the future of the Pikes Peak Region; and

**WHEREAS**, volunteers, professionals, and community leaders from nearly 100 organizations donated thousands of hours to create this regional collaboration; and

**WHEREAS**, "Looking to Our Future – Pikes Peak Region 2030" does not create a mandate for any local government, institution, business, or individual; and

**WHEREAS**, in developing this regional collaboration, the participants recognized that respect for personal and property rights is a core value for our region; and

**WHEREAS**, "Looking to Our Future – Pikes Peak Region 2030" provides a framework by which our local governments, institutions, businesses, and individuals can coordinate, collaborate, and find regional solutions to regional challenges.

**THEREFORE, be it RESOLVED, that the Consensus Committee APPROVES "Looking to Our Future – Pikes Peak Region 2030" this 5<sup>th</sup> day of March 2012 at Colorado Springs, Colorado, and ENCOURAGES all members of the region to implement this vision.**

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The appendices include a list of ongoing local and regional sustainability efforts; reports of baseline data, current conditions, indicators, data gaps, and sub-strategy tables for each topic area; and documents outlining public comments and responses.	

## Executive Summary

*At its very core, sustainability is about each and every one of us - our relationship to ourselves, our mission, our community, and our environment. It reaches deeply into all corners of life on and off post, and beyond. Our goals demonstrate our responsibility and commitment to taking care of the total Army Family and neighbouring communities.*

- Col. Robert F. McLaughlin, Garrison Commander,  
Fort Carson Sustainability Report 2010

## Introduction

“Looking to Our Future – Pikes Peak Region 2030” (PPR 2030) was developed as a living strategy and vision of the future of the Pikes Peak Region. It is based on principles of sustainability. Sustainability is not a new concept for our region - the seeds of sustainability can be found in the Victory Gardens that grew in our community during World War II. In PPR 2030, sustainability is used as an invitation and tool for innovation in our region.

PPR 2030 does not create a mandate for any local government, institution, business, or individual. Rather, it is a nonbinding blueprint to achieve a sustainable future. What the intent of PPR 2030 is and is not is clarified in the Key Points summary of the document, which is shown in Appendix M. In developing PPR 2030, the participants recognized that respect for personal and property rights is a core value for our community. Thus, the intent of this document is to expand the choices and options for all citizens and our community, now and in the future.

PPR 2030 takes a regional approach because we recognize that our community works best when we work together. As a result, the document does not duplicate ongoing sustainability efforts. Instead, PPR 2030 provides a framework by which our local governments, institutions, businesses, and individuals can coordinate, collaborate, and find regional solutions to regional challenges.

## Sustainability

For the purpose of this project, sustainability is defined as: acting in a manner that improves our quality of life by balancing economic vitality, a healthy vibrant community, and mindful stewardship of natural resources and the environment for current and future generations.

## Background and Process

In a process called the Pikes Peak Regional Sustainability Project (PPRSP), the Pikes Peak Area Council of Governments (PPACG) spearheaded this cooperative effort with regional stakeholders and local governments to foster a regional dialogue on sustainability and to develop a long-term sustainability strategy for El Paso and Teller Counties. Volunteers, professionals, and community leaders from nearly 100 organizations donated thousands of hours to create “Looking to Our Future – Pikes Peak Region 2030” (PPR 2030).

Beginning in August 2010, a Consensus Committee made up of elected officials, representatives from military installations, and community leaders oversaw the process of developing stretch goals and high-level strategies to achieve those goals. Stretch goals push everyone to move beyond what is currently being done. They can only be achieved if substantially new ideas, approaches, and strategies are pursued. Stretch goals inspire and require creativity and innovation.

The high-level strategies provide a conceptual framework of how to accomplish each stretch goal. PPR 2030 does not identify specific action items or tasks – the intent is to identify those specific tasks in a subsequent collaborative planning phase.<sup>1</sup> However, PPR 2030 assesses and includes metrics for current conditions to establish benchmarks and measure progress.

PPR 2030 takes a comprehensive approach to sustainability – the intent is to ensure that decision-making processes take into account all of the interrelated items. Fundamentally it is about stakeholders, government, businesses, and communities collaborating for a better future for the Pikes Peak region.

### **Looking to Our Future – Pikes Peak Region 2030 Sections**

PPR 2030 is broken into multiple sections: agriculture, arts and culture, built and natural environment (including air quality and water quality), economic development, education, energy, health, materials management and procurement, transportation, and water quantity. Each section has its own narrative, goal statements, and strategies.

The sustainability aspects of each element are touched upon below (topics are listed alphabetically).

- 1. Agriculture:** Agriculture is an important and complex issue that affects and is affected by other areas including natural environment, water supply and quality, economy and transportation. PPR 2030 focuses on increasing food producers, both rural and urban, and preserving agriculture land and water resources.
- 2. Arts and Culture:** Arts and culture provide a richness and vitality to the region and greatly contribute to the region’s economy. PPR 2030 focuses on and builds upon the Cultural Plan of the Pikes Peak Region, which provides a framework for promoting the arts and increasing the public’s appreciation for the arts.
- 3. Built and Natural Environment:** Minimizing the impact that we have on our natural environment is critical to our quality of life. PPR 2030 focuses on complementing the built environment with the natural environment and enhancing lives of people by promoting community, accessibility, and commerce.

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<sup>1</sup> Task groups have already begun to identify strategies and action steps. The work the tasks groups have done on this is preliminary and is included in the appendix for each issue area.



- 4. Economic Development:** A sustainable economy creates jobs that allow employees to live a high quality of life. PPR 2030 focuses on creating a strong and diverse economy that supports and benefits from local sustainability.
- 5. Education:** Quality education is fundamental to a prosperous, vibrant, and healthy community and is a critical component to the success of all of the goals of PPR 2030.
- 6. Energy:** PPR 2030 focuses on decreasing overall energy use through conservation and energy efficiency and the production and consumption of renewable and/or sustainable energy.
- 7. Health:** While Colorado boasts some of the best statistics in the nation for a healthy population, the state and the region are not immune to health epidemics, with rising obesity rates and other negative health trends. PPR 2030 focuses on strategies that address access to health care, public education about healthy living, and promoting overall well-being.
- 8. Materials Management and Procurement:** The more efficiently we purchase and use materials, the less we throw away and the less we have to recycle, reuse, and repurchase. PPR 2030 focuses on reducing waste sent to landfills, household hazardous waste, and purchasing using tenets of reduce, reuse, and recycle.
- 9. Transportation:** Alternative transportation choices and overcoming automobile dependence are key elements of sustainability. PPR 2030 focuses on this by pursuing a multi-modal transportation system of roads, transit, bicycles, and pedestrian walkways that are sustainable, equitable, and affordable.
- 10. Water Quantity:** Providing water to accommodate the growing region located in a semi-arid climate now and into the future is and will continue to be a critical and complex issue. PPR 2030 focuses on consumption, landscaping, and water reuse.

## History of “Looking to Our Future – Pikes Peak Region 2030” (PPR 2030)

### Introduction

More than 645,000 people are proud to call the Pikes Peak region their home. Whether they are “native” to the area or are fortunate enough to have relocated here, most do not hesitate to take advantage of all the region has to offer: picturesque weather, plentiful recreational activities, the attractive cost of living, and the great outdoors. Whether there were born and raised here, or got here as quickly as they could, a common hope for all residents of the Pikes Peak region is that we are able sustain this favourable quality of life for years to come.

### History of the Pikes Peak Regional Sustainability Project

In 2002, Fort Carson, one of the largest Army installations in the country and a major employer in the Pikes Peak region, created an ambitious set of 25-year sustainability goals for the installation that included off-post community support. As a result of the installation’s sustainability plan and subsequent achievements in recycling, renewable energy, conservation and energy efficiency, Fort Carson has earned recognition locally and internationally as being a sustainability leader for military installations. Early this year, the Department of the Army designated Fort Carson as one of only two Army installations in the country to be a “net zero” installation for waste, water, and energy by 2020.

Other regional military installations in the Pikes Peak region are also in the forefront of installing and utilizing renewable energy technology and energy-efficient design and developing sustainability policies and initiatives. The US Air Force Academy recently installed a 6-mega-watt solar array in partnership with Colorado Springs Utilities.

As identified in the Pikes Peak Area Council of Government’s (PPACG) *Phase II Fort Carson Regional Growth Plan*, reaching some of Fort Carson’s sustainability goals or the other installations’ goals requires more collaborative off-post community support, assistance, and planning. This is particularly true of the areas that link with the civilian community – including transportation, renewable energy, recycling/waste, and energy-efficient building practices.

The *Phase II Fort Carson Regional Growth Plan* outlined Fort Carson’s sustainability efforts/challenges and other community sustainability initiatives and plans and recommended the development of a regional sustainability plan. The purpose of a regional sustainability plan is to serve as a first step for the region in becoming more collaborative, focused, and strategic in its long-term planning.

In the summer of 2009, a group of dedicated community stakeholders, PPACG staff, elected officials, and representatives from local governments, higher education institutions, and Fort Carson began to formulate an approach to leverage the various plans and efforts in the region related to sustainability. Initially called SNAPP (Sustainability Action Plan for the Pikes Peak region), the group researched national best practices for sustainable development and agreed to use the Fountain Creek Watershed Vision Task Force process as a model for sustainability

planning. The decision to move forward with a process marked the beginning of the Pikes Peak Regional Sustainability Process (PPRSP).

With Fort Carson's lead, the group distributed a Statement of Commitment for regional collaboration on sustainability and received over 30 signatures from community leaders, employers, businesses, and non-profits. The group of signatories on the letter was the basis for an advisory committee that approved the path forward for the development of a collaborative sustainability plan for El Paso and Teller Counties. In May 2010, the committee approved the goal topic areas and agreed that PPACG should be the fiscal agent and administrative agency for developing a sustainability plan. In August 2010, PPACG initiated development of stretch goals for the Pikes Peak Regional Sustainability Project.

A Consensus Committee was created to be the overseeing authority of the PPRSP and PPR 2030. This committee is very unique in that it achieves consent among community leaders and industry experts with very different backgrounds and perspectives. The Consensus Committee has played a vital role in formulating the focus areas and approving the goals and strategies.

Task group meetings were held with leading industry professionals, citizens, and community leaders. Over 30 facilitated task group meetings were held to refine the goals, identify current conditions, and develop strategies for PPR 2030. Issue specific task groups met many times to complete the work that came from task group meetings and to provide the technical expertise and feedback to the task groups regarding the development of strategies and goals and identification of metrics and indicators.

### **Public Comment**

A draft of PPR 2030 was officially completed on November 22, 2011. At this time, PPACG posted the draft document on its website for public review and comment. The official public comment period was held from November 22, 2011, through December 23, 2011. During this time, over 20 comments were received via email, letters to newspaper editors, direct correspondence, and PPACG's online feedback questionnaire. The draft PPR 2030 was also presented and discussed during a panel session at the Colorado Sustainability Conference on November 17, 2011, and a press conference held at the Pioneer's Museum on November 22, 2011. Public comments were reviewed by PPACG staff, the task groups, and the Consensus Committee and were then integrated into the final document. The appendices contain all the public comments received, including comments and priority rankings received as part of the online questionnaire and responses to the comments, which were grouped into similar categories.

### **Implementation**

PPR 2030 will enable the region to coordinate efforts, track progress, and focus energies on the highest-priority activities. Implementation will include 1) coordination with lead entities and potential partners listed in PPR 2030 to implement the high-level strategies, as well as additional outreach to key stakeholders and the public; 2) coordination with the Pikes Peak Quality of Life Indicators Project; and 3) transitioning the coordination of PPR 2030 to appropriate entities in

the region to measure results, monitor implementation, and update planning efforts as needed. More information about implementation can be found in the Conclusions and Next Steps section of the PPR 2030 document.

### **Invitation**

The Pikes Peak Regional Sustainability Project is entirely community-driven, having been created by a variety of community leaders, industry experts, businesses, employers, non-profits, and community members like you. PPR 2030 is the result of these tireless efforts and is still a work in progress. The future of PPR 2030 depends on the continued dedication of the community it will serve. We invite you to be a part of it! To join the process and help lead the region toward sustainability, please contact PPACG.

## Acronyms

*Note: A glossary of terms is available at the end of the document. See Table of Contents for page number.*

**ADA** – Americans with Disabilities Act  
**AIA** – American Institute of Architects  
**B2B** – Business to Business  
**BHE** – Black Hills Energy  
**BLM** – Bureau of Land Management  
**BMP** – Best Management Practices  
**BRFSS** – Behavioral Risk Factor Surveillance System  
**CAQCC** – Colorado Air Quality Control Commission  
**CDOT** – Colorado Department of Transportation  
**CDPHE** – Colorado Department of Public Health and the Environment  
**CHFA** – Colorado Housing and Finance Authority  
**CHP** – Combined Heat and Power  
**CNHP** – Colorado Natural Heritage Program  
**CNU** – Congress for New Urbanism  
**CONO** – Council of Neighbors and Organizations  
**Coop** – Electric Cooperative  
**COPPeR** – Cultural Plan of the Pikes Peak Region  
**CORHIO** – Colorado Regional Health Information Organization  
**COSEIA** – Colorado Solar Energy Industries Association  
**COC** – Chambers of Commerce  
**COS** – Colorado Springs  
**CO SW Council** – Colorado Stormwater Council  
**CS** – Colorado Springs  
**CSA** – Community Supported Agriculture  
**CSM** – Colorado School of Mines  
**CSU** – Colorado State University OR Colorado Springs Utilities  
**CUSP** – Coalition for the Upper South Platte  
**CWCB** – Colorado Water Conservation Board  
**CWI** – Colorado Water Institute  
**CWQCC** – Colorado Water Quality Control Commission  
**DR** – Demand Response  
**DER** – Distributed Energy Resources  
**DG** – Distributed Generation  
**DOD** – US Department of Defense  
**DOE** – US Department of Energy  
**DSM** – Demand-Side Management  
**ED** – Economic Development  
**EE** – Energy Efficiency  
**EPA** – US Environmental Protection Agency  
**EDC** – Economic Development Corporation(s)  
**EPC** – El Paso County

**EPCO** – El Paso County  
**EPCPH** – El Paso County Public Health  
**EV** – Electric Vehicle  
**FCEV** – Fuel Cell Electric Vehicle  
**FCWD** – Fountain Creek Watershed District  
**FoRT** – Future of Regional Transit  
**FTA** – Federal Transportation Authority  
**GEO** – Colorado Governor’s Energy Office  
**GIS** – Geographic Information System  
**GMP** – Gross Metropolitan Product  
**HBA** – Housing and Building Association  
**HEAP** – Housing Energy Assistance Program  
**HEV** – High Efficiency Vehicle  
**HOV** – High-Occupancy Vehicle  
**IBCC** – Interbasin Compact Committee  
**IGCC** – International Green Construction Code  
**IOU** – Investor-Owned Utility  
**IREA** – Intermountain Rural Electric Association  
**JARC** – Job Access Reverse Commute  
**KW** – Kilowatt  
**LEAP** – Low Income Energy Assistance Program  
**LEED** – Leadership in Energy and Environmental Design  
**LID** – Low Impact Development  
**MFI** – Median Family Income  
**MMT** – Mountain Metro Transit  
**MS** – Manitou Springs  
**MS4** – Municipal Stormwater Permit  
**MW** – Megawatt  
**Muni** – Municipal Utility  
**MVEA** – Mountain View Electric Association  
**NAICS** – North American Industry Classification System  
**NERC** – North American Electric Reliability Corporation  
**NOAA** – National Oceanic and Atmospheric Administration  
**NREL** – National Renewable Energy Laboratory  
**NRCS** – Natural Resources Conservation Service  
**OEDIT** – Office of Economic Development and International Trade (Colorado)  
**PHEV** – Plug-In Hybrid Electric Vehicles  
**PPA** – Power Purchase Agreement  
**PPACG** – Pikes Peak Area Council of Governments  
**PPCC** – Pikes Peak Community College  
**PPCF** – Pikes Peak Community Foundation  
**PPM** – Parts Per Million  
**PPP** – Public Private Partnership  
**PPR 2030** – “Looking to Our Future – Pikes Peak Region 2030”  
**PPRSP** – Pikes Peak Regional Sustainability Project  
**PPRTA** – Pikes Peak Rural Transportation Authority

**PPRWA** – Pikes Peak Rural Water Authority  
**PPUG** – Pikes Peak Urban Gardens  
**PUC** – Colorado Public Utilities Commission  
**QLI** – Quality of Life Indicator  
**RAQC** – Regional Air Quality Council  
**RBD** – Regional Building Department  
**RE** – Renewable Energy  
**REA** – Rural Electric Association  
**RES** – Renewable Energy Standard  
**RPS** – Renewable Portfolio Standard  
**SARE** – Sustainable Agriculture Research and Education Program  
**SBA** – Small Business Administration  
**SBDC** – Small Business Development Center  
**SCADA** - Supervisory Control and Data Acquisition  
**SDAT** – Sustainable Design Assessment Team  
**SNAP** – Supplemental Nutrition Assistance Program  
**SO2** – Sulfur Dioxide  
**T&E** – Threatened and Endangered  
**TBD** – To Be Determined  
**TEPP** – Tobacco Education and Prevention Partnership  
**TNC** – The Nature Conservancy  
**TOU** – Time of Use (different price for different times of day)  
**The Chamber and EDC** – The Greater Colorado Springs Chamber and EDC (Economic Development Corporation)  
**UCCS** – University of Colorado, Colorado Springs  
**ULI** – Urban Land Institute  
**USAF** – United States Air Force  
**USAFA** – United States Air Force Academy  
**USDA** – United States Department of Agriculture  
**USFS** – United States Forest Service  
**USGBC** – United States Green Building Council  
**USGS** – United State Geological Survey  
**V2G** – Vehicle to Grid  
**VMT** – Vehicle Miles Traveled

## Stretch Goals

PPR 2030 is organized by topic area. Each topic area includes a description of the issue area and the associated challenges, 20-year stretch goals, and a table of high-level strategies for achieving the goals. In order to show the “big picture” vision that motivates the work of everyone involved in PPR 2030 and undergirds the entire project, the stretch goals are listed below without the additional information provided in the remainder of the document.

### **Agriculture**

By 2030, regional farmers and producers have the opportunity to make their livelihoods in agriculture, while providing safe, quality food to the region’s consumers, protecting agricultural lands to the maximum extent possible, and contributing to the health and stability of their communities. Achieving this goal means:

1. Through water conservation and efficiencies, sufficient water resources are available to meet agricultural production in the region.
2. High-value agricultural land is protected to the maximum extent possible.
3. The number of regional farmers and food producers has increased by 100%.
4. More people in the region have the opportunity to grow and choose to grow their own food.

### **Arts and Culture**

By 2030, arts and culture are fully integrated into and contribute to the social and economic vitality of the region. Achieving this goal means:

1. The region offers a diverse and broad range of arts, cultural, and entertainment activities and events. These events contribute to the local economy.
2. The region’s arts scene draws innovative companies and attracts young creatives.
3. The Pikes Peak region will have fully implemented the 2010 Cultural Plan in order to increase economic vitality.

### **Built and Natural Environment**

By 2030, the built and natural environments complement one another and reflect our commitment to enhancing the lives of people; promoting community, culture, and commerce; and preserving and protecting the natural environment. Achieving this goal means:

#### ***Built Environment***

1. New construction, development, and redevelopment of all types and scales are built to incorporate:
  - a) Location efficiency between the areas where we live, work, play, learn, shop, and obtain basic services;
  - b) Multiple forms of accessible and integrated transportation including walking, bicycling, transit, and automobile;
  - c) Diversity of housing types and affordability;
  - d) Energy- and resource-efficient high-performance building;
  - e) Neighborhood access to a sustainable and comprehensive system of parks, open space, and trails; and
  - f) The strong link between the built and natural environment.



2. The region takes advantage of and maintains all existing infrastructure (utilities, roadways, sidewalks, trails, and parks).
3. The integration of housing, parks, commerce, arts and culture, and transportation creates a beautiful and functional public realm with great public spaces - promoting neighborhoods and community.

### ***Natural Environment***

4. Regional ecological health, including ecosystems; habitats; and threatened, endangered, imperiled and other species are protected, restored, and maintained.

### ***Air Quality***

5. Indoor and outdoor environmental quality is healthy for all, with air pollutant levels below State and local health thresholds.

### ***Water Quality***

6. Ground and surface water quality is better than designated water quality standards that are in place to protect classified uses (recreation, aquatic life, agriculture, water supply, and wetlands).

## **Economic Development**

By 2030, the region will have a strong and diverse economy that supports and benefits from sustainability. Achieving this goal means:

1. Growing the prosperity of all demographic groups of the Pikes Peak region to sustain households and quality of life by increasing jobs, expanding the economic base, and increasing business profitability;
2. Diversifying the economy into multiple sectors to provide structural integrity, resilience, and innovation; and
3. Ensuring the region has a strong localized economy that reinvests in the region.

## **Education**

By 2030, comprehensive, affordable, life-long educational opportunities are available to all. Achieving this goal means:

1. All students have access to a 21st-Century K-12 education that prepares them for the future.
2. Affordable, high-quality, early childhood care and education are available to all residents of the region to ensure school readiness.
3. Regional higher education and professional and technical skills training are increasingly available and accessible to residents of the region.

## **Energy**

By 2030, the region has made considerable progress toward 100 % sustainable energy usage. Achieving this goal means:

1. 50% of energy consumed in the region is renewable and/or sustainable, maximizing the amount of renewable energy produced in the region from a 2010 baseline.
2. Energy use in the region is reduced by 20% from a 2010 baseline (despite growth in population or commercial expansion).

## **Health**

By 2030, the region's population is healthy, long-lived, and has a good quality of life. Achieving this goal means:

1. By 2030, the Pikes Peak region ranks in the top 10 for the United States for individual and population health and well-being.
2. By 2030, health and wellness care is accessible and affordable for every resident.

## **Materials Management and Procurement**

By 2030, the region has made significant progress toward a zero-waste future. Achieving this goal means:

1. There is a 70% reduction in solid waste sent to landfills.
2. Household hazardous waste is minimized, managed, and properly disposed of, as reflected in a substantial increase in drops to regional hazardous household waste facilities.
3. Individual, business, and government purchasing is guided by the tenets of reduce, reuse, recycle. All businesses and public institutions have developed and are choosing to follow sustainable procurement guidelines.

## **Transportation**

By 2030, the region has a sustainable, equitable, and affordable multi-modal transportation system (roads, transit, bicycles, and pedestrian walkways) that efficiently and safely moves people and goods. Achieving this goal means:

1. The region financially sustains building and maintaining roadway and bridge infrastructure, transit service, bike trails, pedestrian sidewalks, and hiking trails, and supports human service transportation needs.
2. There is increased accessibility, integration, and connectivity between where we live, work, play, learn, shop, and obtain basic services.
3. Half of all transportation-related fuels purchased in the region are renewable and/or sustainable and transportation-related fossil fuel use is reduced by 40% from a 2010 baseline.
4. All transportation infrastructures are constructed, maintained, and operated using sustainable practices.
5. There is decreased reliance on single-occupancy-vehicle modes of travel with public transit's share of trips increasing above 3%.

## **Water Quantity**

By 2030, the region's water use is met by currently-owned water supply and is as efficient as possible through application of best management practices. Achieving this goal means:

1. The region utilizes 100% of its reusable water supplies, including but not limited to non-potable water, exchange programs, and transmountain water.
2. Residential water use is at or below 80 gallons per person per day; 80% of commercial and industrial users in the region employ best management practices.
3. Landscaping for each intended use is resource-efficient.

## Agriculture

Good food is critical to human well-being. Locally grown and sustainably produced food adds not only to human health, but increases jobs, stabilizes communities, and reduces our dependence on external regions for our food supply. In addition to providing for the production of food, urban and rural agriculture (including open grazing lands and forests) also provide critical services for a healthy environment, such as the retention of soils, the natural filtration of waterborne contaminants, groundwater recharge of our aquifers, the slowing and reduction of flood waters, and significant habitat for wildlife.

### Agriculture Task Group\*

Jane Ard-Smith, Sierra Club  
Taryn Bailey, LiveWell Colorado Springs  
Mary Barber, Sustainable Fort Carson  
Ferris Frost (chair), Frost Livestock Company

By 2030 Colorado's population is expected to nearly double.<sup>2</sup> If past trends persist, most of those people will settle along the Front Range and will face a water deficit of 7 million gallons per year.<sup>3</sup> Agriculture uses 87% of Colorado's water<sup>4</sup>--consistent with other states in the West--thus making agriculture the first and primary source of water for growing municipalities. Current practices of development and legal requirements of water transfers have already resulted in significant loss of agricultural land and water. It is estimated that Colorado will lose roughly 200,000 acres of farmland by 2030<sup>5</sup> unless something is done.

Additionally, obesity rates and related illnesses like diabetes, heart attack, and stroke are at epidemic proportions,<sup>6</sup> especially among the young and populations of lower socioeconomic status.<sup>7</sup> These conditions can be partially addressed by working to improve eating habits and increasing the population's access to healthy foods. Therefore, it is necessary to take steps now to address impacts the anticipated population increase will have on the land and water the region depends on to provide healthy food. We must work to increase local food production by supporting local farmers and ranchers, keeping them producing on the land, and reducing transportation costs and vulnerabilities to food supply disruptions. In doing so, our region can restore and maintain sustainable agricultural land that will create a vibrant, local, food distribution system so that all our people have access to healthy foods far into the future. Preserving agricultural lands and production contributes greatly to local well-being and the Colorado way of life, and it will do so for as long as we protect those lands and those ecosystem services upon which we all depend.

\* Many stakeholders participated in the development of PPR 2030. This list represents the individuals who led the development of the Agricultural section. A full list of participants can be found on page ii-iii.

<sup>2</sup> Colorado Department of Local Affairs, 2010 Census Data, Estimates and Projections, 2010. (From 4,338,000 to 7,058,000); SWSI I Water Supply Quantity and Quality Appendix; SWSI II, 2010.

<sup>3</sup> Arkansas Basin Consumptive Use Water Needs Assessment:2030, 2008 update, Arkansas Basin Roundtable, July 2008.

(<http://cwcb.state.co.us/water-management/basin-roundtables/Documents/Arkansas/ArkWaterNeedsAssessmentSummary2008.pdf>)

<sup>4</sup> Fountain Creek Watershed District (FCWD) Strategic Plan: Section X: Agriculture Current Conditions, page 92. ([http://www.fountain-crk.org/Strategic%20Plan/MAR09%20PLAN/mar09strategic\\_plan.pdf](http://www.fountain-crk.org/Strategic%20Plan/MAR09%20PLAN/mar09strategic_plan.pdf))

<sup>5</sup> Environment Colorado; Losing Ground: Colorado's Vanishing Agricultural Landscape, 2002.

<sup>6</sup> Understanding Obesity, ObesityinAmerica.org; and, Centers for Disease Control and Prevention: US Obesity trends, 2010.

(<http://www.cdc.gov/obesity/data/trends.html>)

<sup>7</sup> Childhood Obesity: Statistics and Trends, 2011(<http://www.stop-childhood-obesity.com/childhood-obesity-statistics.html>)

The agricultural goals and strategies in PPR 2030 seek to:

- 1) Adopt alternative means to preserve and conserve agricultural water, especially allowing for increased irrigation efficiency and temporary water transfers from agricultural to urban uses. These projects and policies are now being pursued at the highest levels throughout the state.
- 2) Preserve high-value food-producing land wherever it is. As an extremely scarce resource in this region, high-value agricultural land not only produces food but also provides flood attenuation, water filtration, wildlife habitat, and open space, all of which contribute to a healthier population and sustainability over the long term.
- 3) Help farmers and ranchers stay on the land by supporting their efforts to sustainably produce good, healthy food and market it by increasing numbers of farmers' markets, introducing it to local school lunch programs, and connecting with local restaurants, among other options.
- 4) Make certain that the region's residents have access to healthy, affordable, local food; have the opportunity to grow it themselves through community and backyard gardens; and are supplied with specific educational programs on nutrition and healthy food choices. We have already seen in the past few years a phenomenal increase in the demand for local, fresh produce. Now we need to make certain it gets inside the "food deserts" where fresh vegetables and fruits are not available within walking distance of urban, high-density, or lower-income populations.

### **Strategy Table Overview**

The following table outlines the high-level strategies recommended for the agricultural goals. Please note that the lead entity(s) and potential partners were proposed by the task groups and may require refinement as PPR 2030 is implemented. For additional information such as baseline data and current conditions, please see Appendix B. The appendix also provides a strategy table that outlines more detailed proposed sub-strategies to facilitate implementation of the goals. While the high-level strategy table in the main document and the strategy table in the appendix correlate and address the same agricultural goals, as a part of the strategy development process, they may not match in structure. The strategy table in the appendix served as the foundation from which the task group revised and modified strategies to develop the high-level strategy tables outlined in the main document (below).

## Agriculture Strategy Table

<p><b>GOAL 1:</b> By 2030, regional farmers and producers have the opportunity to make their livelihoods in agriculture, while providing safe, quality food to the region’s consumers, protecting agricultural lands to the maximum extent possible, and contributing to the health and stability of their communities. Achieving this goal means:</p> <ul style="list-style-type: none"> <li>a) Through water conservation and efficiencies, sufficient water resources are available to meet agricultural production in the region.</li> <li>b) High-value agricultural land is protected to the maximum extent possible.</li> <li>c) The number of regional farmers and food producers has increased by 100%.</li> <li>d) More people in the region have the opportunity to grow and choose to grow their own food.</li> </ul>					<p><b>GOAL METRIC(S):</b> Number of farmers and ranchers in the region, number of back yard and community gardens, number of acre-feet water used for agriculture</p>
<p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>• Economic and social factors lead to the sale of agricultural lands and water rights</li> <li>• Current economics do not favor food production</li> <li>• The region cannot produce all the food it needs</li> <li>• Access to and availability of healthy, local foods is limited</li> <li>• Change from agricultural to urban land use negatively affects high-value ecosystems and environmental stewardship</li> <li>• Permanent water transfers dry up agricultural land (buy-and-dry)</li> <li>• Water right laws impede improvements in agricultural irrigation efficiencies and water conservation</li> <li>• Urban development impacts water quality and quantity from flooding, sedimentation, and erosion</li> </ul>					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.1	<p><b>Support and encourage the economic viability of small and medium farms and ranches.</b> Example sub-strategies include: increasing income from food production, promoting alternative sources of income, and establishing and promoting programs for beginning farmers and ranchers.</p>	National Sustainable Agriculture Coalition: Western SARE (Sustainable Agriculture Research and Education)	USDA, Peak to Plains Alliance, landowners	Financial institutions, Colorado State University Extension Service, grantors	Number of small and medium farms and ranches in the region
1.2	<p><b>Improve regional food systems</b> so that locally grown food gets to local consumers, especially low-income consumers. For example, identify food deserts and encourage healthy food groceries, gardens, and other options and increase consumer accessibility to sustainably produced foods.</p>	No	Peak to Plains Alliance, CSAs, appropriate governments	USDA, PPUG, Colorado Springs Utilities, grocery stores, food banks, farmers markets	Number of people with access to locally grown food

**GOAL 1:** By 2030, regional farmers and producers have the opportunity to make their livelihoods in agriculture, while providing safe, quality food to the region’s consumers, protecting agricultural lands to the maximum extent possible, and contributing to the health and stability of their communities. Achieving this goal means:

- a) Through water conservation and efficiencies, sufficient water resources are available to meet agricultural production in the region.
- b) High-value agricultural land is protected to the maximum extent possible.
- c) The number of regional farmers and food producers has increased by 100%.
- d) More people in the region have the opportunity to grow and choose to grow their own food.

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.3	<b>Promote farming practices and agricultural research</b> to help conserve and protect our soil, water, wildlife habitat, and energy resources.	(TBD)	Federal agencies Western SARE, NRCS, local governments	USDA, Colorado Springs Utilities, landowners, conservation land trusts, US Forest Service (USFS)	Number of acres with management plans; number of acres reserved, restored, protected
1.4	<b>Encourage regional collaboration and cooperation</b> among land use, transportation, and water use planning entities in order to incentivize development models that preserve agricultural lands.	No	Municipal and county planning agencies, PPACG	FCWD	Number of collaborative planning efforts
1.5	<b>Promote urban agriculture</b> and its benefits by educating people about how to produce their own food or how to access locally grown food. For example: Women, Infants, Children (WIC)/Supplemental Nutrition Assistance Program (SNAP) & Health Department participation and support of local food markets.	No	PPUG, PPCF	CSU Extension Service, Care and Share	Presence of an organized effort to educate and the number of classes and urban community gardens
1.6	<b>Promote programs that preserve</b> prime and unique agricultural land and protect as much as possible other high-value agricultural lands.	No	Local governments, federal agencies	NRCS, USDA, conservation land trusts, landowners	Number of acres of prime agricultural lands conserved
1.7	<b>Promote programs that teach</b> people where their food comes from and how their food choices impact their health.	No	LiveWell Colorado Springs and partners, PPUG, PPCF, county health departments, county extension services	School Districts K-12, Universities, Care and Share	Number of programs and classes

**GOAL 1:** By 2030, regional farmers and producers have the opportunity to make their livelihoods in agriculture, while providing safe, quality food to the region’s consumers, protecting agricultural lands to the maximum extent possible, and contributing to the health and stability of their communities. Achieving this goal means:

- a) Through water conservation and efficiencies, sufficient water resources are available to meet agricultural production in the region.
- b) High-value agricultural land is protected to the maximum extent possible.
- c) The number of regional farmers and food producers has increased by 100%.
- d) More people in the region have the opportunity to grow and choose to grow their own food.

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.8	<b>Ensure that farmers and ranchers have adequate water supplies</b> to keep their agricultural lands in production. For example, the region should pursue legal changes that allow for increased efficiencies and alternative transfers.	No	CWCB, CWI, IBCC	Water rights owners, landowners, ranchers and farmers	Changes to water law, increase in alternative programs (e.g., Super Ditch, water leasing)
1.9	<b>Promote programs and practices</b> to ensure that the water used for agricultural production is of sufficient quality.	No	CDPHE, CO Department of Agriculture, USGS	USDA, National Organic Certification Program, regional agencies monitoring quality	Baseline for water quality, number of new programs to address water quality
1.10	<b>Gather data, establish baselines, and track trends</b> that support and measure strategies chosen to implement the goals.	No	PPACG, municipal and county governments	State agencies (CWCB, CWI, IBCC, CDPHE) federal agencies, NOAA, USGS	Baseline data for all areas: water quality, water transfers, climate, urbanization, flooding

## Additional Strategies Relevant to Agriculture

The following table outlines strategies from other topic areas that potentially intersect with agricultural issues and strategies. The correlation between these topics was identified by the task groups and outlined in an overarching strategy matrix that can be found on page 92.

<b>Other Topic-Area Strategies Intersecting with Agriculture</b>		
<i>Topic Area</i>	<i>Strategy</i>	<i>Strategy Table Page Number</i>
<b>Built Environment</b>	1.7 – Support/promote local food production	23
<b>Air Quality</b>	1.2 – Track baseline information-outdoor air quality	33
	1.3 – Greenhouse gas inventory and strategies	
	1.5 – Develop outdoor outreach plan	
	1.6 – Ozone non-attainment designation	
<b>Water Quality</b>	1.1 – Understand baseline conditions	36
	1.2 – Water quality impairment	
	1.3 – Develop outreach plan	
	1.4 – Develop strategies	
	1.5 – Update and implement regulations	
	1.6 – Implement Strategic Plan	
	1.7 – Protect and maintain existing water quality	
<b>Economic Development</b>	2.1 – Stimulate new ways of addressing challenges	42
	2.2 – Support and promote goals and plans	
	2.3 – Support and promote industry clusters	
	2.4 – Support the growth of local businesses	
	3.2 – Encourage promotional campaigns	
	3.4 – Foster and encourage educational opportunities	
	3.6 – Support local sustainable industry development	
<b>Energy</b>	2.2 – Create public outreach and education strategies – energy efficiency	54
<b>Health</b>	1.2 – Promote safe and healthy behaviors	61
<b>Water Quantity</b>	1.1 – Develop nonpotable policies	84
	1.2 – Install infrastructure	
	1.3 – Regional Cooperation	
	1.4 – Identify and implement emerging uses	
	1.5 – Encourage low-impact development	
	1.6 – Develop specific education plan	
	2.1 – Implement conservation BMPs	
	2.2 – Development plans	
	2.3 – Educate on water importance	
	2.4 – Fix state water law	
	3.1 – Develop water budget/tiered rate	
	3.2 – Stormwater as irrigation	
	3.3 – Replace large turf areas	
	3.4 – Develop policies addressing specifics	
	3.5 – Support/ implement regional stormwater plans	



## Arts and Culture

### The Importance of Arts and Culture in the Pikes Peak region

Arts and culture play an important role in the welfare of the community in the Pikes Peak region. Both from a quality of life perspective as well as from a direct business impact, it is important to understand the specific value we get from art and culture in order to ensure it can continue.

Quality of Life (QLI) indicator survey data from 2011 shows that 82% of respondents agreed that arts and culture improve their quality of life. In addition, over 68% of respondents said they or a member of their family participated in arts or cultural activities at least once a month. These activities are valued and utilized by our community. QLI survey data show ample opportunities for residents and visitors to enjoy arts and cultural activities in our region. These include free to paid events, and range across the arts and cultural media: theatre, music, dance, galleries, film, museums, cultural events, and festivals. As noted in the 2011 QLI Report, “Knowing there is a strong correlation between arts and culture and quality of life, we need to continue to provide arts and cultural opportunities to individuals and families. Specifically, we need to educate people on what is available and develop ways to make those experiences more accessible.”

#### Arts and Culture Task Group\*

Ralph Holloway, Woodland Park Arts Association  
Laura Long, Cultural Office of the Pikes Peak Region  
Steve Mack (chair), Cultural Office of the Pikes Peak Region  
John Wilson

From an education perspective, participation in the arts is important. Arts involvement has been proven to raise test scores among students. For example, raising high school student art education from six months to four years increases SAT scores by one hundred points. That results in better educated students who are better prepared for the workplace and more desired as prospective employees.

It is also important to understand the economic and business impact that the arts and culture have on our region. A strong arts and cultural environment can act as a magnet for a community, attracting businesses to relocate here with engaging activities and events. Competition is intense as cities nationally and internationally pump money into their arts sectors to make their communities more attractive to business investments. This impacts both direct business investment as well as luring young professionals to relocate to a “hip” city, with plenty of arts and cultural activities available outside of work. This is particularly important for the Pikes Peak region, which is aging faster than the national average. Strengthening the arts and culture sector locally will be important to lure creative industries young professionals (“young creatives”) as well as businesses to our region, thereby supporting and strengthening the local economy.

In addition to making a community attractive for business investment, the arts sector has a significant direct impact in the local economy. Those businesses categorized as “creative

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\*Many stakeholders participated in the development of PPR 2030. This list represents the individuals who led the development of the Arts and Culture section. A full list of participants can be found on page ii-iii.

industries” make up the fifth-largest sector of the Colorado economy.<sup>9</sup> Jobs within these industries vary from writers to artists to architects, providing high-paying jobs that support businesses across other sectors of the economy. Supporting the arts means growing jobs and supporting the local economy. Spending locally on the arts means that expenditures stay local. The Arts and Economic Prosperity III report found that the non-profit arts industry generated \$94.7 million in economic impact on our region. Entertainment dollars spent in our local arts sector stay in our region, rather than going to outside municipalities.

Our tourism industry in the Pikes Peak region depends on arts and cultural activities, drawing visitors from across the US and internationally. QLI data shows our attractions continue to perform well in spite of the down economy. We need to ensure a continual, solid offering of cultural and arts opportunities for visitors.

### **Goals and Strategies for Strengthening Arts and Culture in the Pikes Peak region**

It is with this understanding of the value that arts and culture provide that the Cultural Office of the Pikes Peak region (COPPeR) is taking a lead role to advocate and strengthen the arts. COPPeR is involved in the regional sustainability planning process to benefit the region.

In 2010, COPPeR produced its Cultural Plan, which documents the current state of arts and culture of the Pikes Peak region. The vision of PPR 2030 is to develop, enliven, enhance, and promote arts, culture, and the creative industries in the Pikes Peak region to benefit residents, visitors, the cultural sector, and the business sector. The Cultural Plan identifies specific actions to achieve goals that promote programs, partnerships, and increased community engagement in the arts. COPPeR is primarily targeting artists and the arts community (arts-focused organizations, businesses, and individuals), and is developing means to track and measure public participation in cultural programs.

The arts and culture goals in PPR 2030 are firmly rooted in the Cultural Plan, building on the investment COPPeR has made in its own plan.

#### The arts and culture goals are:

1. The region offers a diverse and broad range of arts, cultural, and entertainment activities and events. These events contribute to the local economy.
2. The region’s arts scene draws innovative companies and attracts young creatives.
3. The Pikes Peak region will have fully implemented the 2010 Cultural Plan in order to increase economic vitality.

The strategies to achieve these goals are taken directly from the Cultural Plan. The Cultural Plan itself contains 5 goals, 13 objectives, and 72 action steps. COPPeR will track the progress of the Cultural Plan over the next decade, using community involvement throughout the process.

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<sup>9</sup> The Arts and Economic Prosperity Report III

## **Strategy Table Overview**

The following strategy table outlines the high-level strategies recommended for the arts and culture goals. Please note that the lead entity(s) and potential partners were proposed by the task groups and may require refinement as PPR 2030 is implemented. For additional information such as baseline data and current conditions, please see Appendix C. The appendix also provides a strategy table that outlines more detailed proposed sub-strategies to facilitate implementation of the goals. While the high-level strategy table in the main document and the strategy table in the appendix correlate and address the same arts and culture goals, as a part of the strategy development process, they may not match in structure. The strategy table in the appendix served as the foundation from which the task group revised and modified strategies to develop the high-level strategy tables outlined in the main document (below).

## Arts and Culture Strategy Table

<b>GOAL 1:</b> By 2030, arts and culture are fully integrated into and contributed to the social and economic vitality of the region. Achieving this goal means: 1. The region offers a diverse and broad range of arts, cultural, and entertainment activities and events. These events contribute to the local economy.				<b>GOAL METRIC(S):</b> • Arts and Economic Prosperity Studies • Cultural Vitality Index	
<b>Challenges:</b> Limited resources for implementing strategies and funding initiatives					
#	High-Level Strategies	In an Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.1	<b>Engage a larger segment of the community</b> to participate in arts activities.	Cultural Plan	COPPeR	(TBD)	(TBD)
1.2	<b>Use COPPeR as a Cultural Representative:</b> COPPeR to act in role of Cultural Representative for the region, to provide information, training, and consultative support to artists, elected officials and the community.	Cultural Plan	COPPeR	(TBD)	(TBD)
1.3	<b>Track metrics</b> important to grow arts in the Pikes Peak region.	Cultural Plan	COPPeR	(TBD)	(TBD)

<b>GOAL 2:</b> By 2030, arts and culture are fully integrated into and contributed to the social and economic vitality of the region. Achieving this goal means: 2. The region's arts scene draws innovative companies and attracts young creatives.				<b>GOAL METRIC(S):</b> • Quality of Life Indicators • Arts and Economic Prosperity Studies	
<b>Challenges:</b> Limited resources for developing and implementing strategies					
#	High-Level Strategies	In an Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
2.1	<b>Provide information</b> about creative industries for elected officials.	Cultural Plan	COPPeR	(TBD)	(TBD)
2.2	<b>Promote creative industry job creation:</b> Undertake tasks to further promotion of creative industry job creation in the Pikes Peak region.	Cultural Plan	COPPeR	(TBD)	(TBD)
2.3	<b>Encourage more civic engagement</b> by community members and artists to support the arts.	Cultural Plan	COPPeR	(TBD)	(TBD)

<p><b>GOAL 3:</b> By 2030, arts and culture are fully integrated into and contributed to the social and economic vitality of the region. Achieving this goal means:</p> <p>3. The Pikes Peak region will have fully implemented the 2010 Cultural Plan in order to increase economic vitality.</p>		<p><b>GOAL METRIC(S):</b></p> <ul style="list-style-type: none"> <li>• COPPeR Assessment of Cultural Plan</li> <li>• Arts and Economic Prosperity Studies</li> </ul>			
<p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>• Limited resources for implementing strategies</li> <li>• Expectation to grow funding for the arts will be difficult, as well as to find infrastructure investment</li> <li>• Recruiting volunteers for task forces to track and measure progress of Cultural Plan</li> </ul>					
#	High-Level Strategies	In an Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
3.1	<b>Develop task forces</b> for each of the five main sections to progress the Cultural Plan.	Cultural Plan	COPPeR	(TBD)	(TBD)

## Additional Strategies Relevant to Arts and Culture

The following table outlines strategies from other topic areas that potentially intersect with arts and culture issues and strategies. The correlation between these topics was identified by the task groups and outlined in an overarching strategy matrix that can be found on page 92.

<b>Other Topic-Area Strategies Intersecting with Arts and Culture</b>		
<i>Topic Area</i>	<i>Strategy</i>	<i>Strategy Table Page Number</i>
<b>Agriculture</b>	1.1 Support and encourage the economic viability of small and medium farms and ranches.	6
	1.7 Promote programs that teach.	
<b>Built Environment</b>	1.1 Provide public education and outreach	23
<b>Economic Development</b>	1.1 Focus economic development programs on industry clusters	42
	1.2 Attract and retain industries	
	2.2 Support and promote goals and plans	
	2.3 Support the promote industry clusters	
	3.4 Foster and encourage educational opportunities	
	3.6 Support local sustainable industry development	
<b>Energy</b>	2.2 Create public outreach and education strategies re: energy efficiency	54
<b>Materials Management and Procurement</b>	2.2 Education and outreach	67
<b>Transportation</b>	1.1 Public education and outreach	74
<b>Water Quantity</b>	1.3 Regional cooperation	84

## Built and Natural Environment (Including Air Quality and Water Quality)

### Built Environment

The built environment in the Pikes Peak region is fundamentally important, because it is where most of us spend most of our time. And, when we spend time outside, the built environment continues to have a profound impact on how we live.

Sustainability of the built environment is essential because most of our energy use

occurs inside buildings, goes into their construction, or is directly related to transporting us within and around them. The built environment provides the physical structure for our economic engine. The interior and exterior design of buildings and their relative spatial arrangement influence human health, quality of life, and enjoyment of built environment aesthetics. The sustainability of our natural environment improves when we incorporate green building design and construction techniques and spatially arrange buildings to support green infrastructure and minimize acute and cumulative negative environmental impacts. Also, thoughtful arrangement of the built environment can strengthen local government fiscal sustainability and private sector economic prosperity. In the past several decades, we have chosen to increasingly segregate land uses. This separation is unsustainable because it not only maximizes the amount of land used for development and divides natural habitat and open spaces, it also divides residential communities from the businesses, retail centers, schools, and other services they visit every day.

Although this sprawling land use pattern has occurred in response to individual market desires, it is expensive to publicly and privately maintain, requires large amounts of energy, increases adverse health and social consequences, and results in a high level of dependence on single-passenger motor vehicles, which further exacerbates these problems. Furthermore, current patterns of development do not always consider potential negative fiscal and cultural effects on other areas or future generations. Our built environment often does not support the needs of the young, seniors, and disabled citizens, and does not include attributes that encourage young adults to remain and invest in our community. Going forward, there will be a demand for us to adapt our built environment to accommodate ongoing socioeconomic changes, increases in energy costs and modes of use, new health initiatives, transportation alternatives to the single-passenger motor vehicle, and to more sustainably manage public and private costs.

Changing and adapting the built environment in the Pikes Peak region is challenging because we have a built environment “inheritance” constructed over 140 years that is expensive and requires time to change, resulting in only a few percent of new construction or major renovation annually. For example, El Paso County has over 250,000 residential dwelling units of which about 5,000 are new in a typical year.<sup>10</sup> Changing the course of future development is challenging, because

#### Built Environment Task Group\*

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\* Many stakeholders participated in the development of PPR 2030. This list represents the individuals who led the development of the Built Environment section. A full list of participants can be found on page ii-iii.

<sup>10</sup> 2010 U.S. Census

existing land use entitlements, expectations associated with past zoning and other regulatory decisions, and private and public investments and commitments all combine to perpetuate past trends. Over 125,000 future dwelling units have some form of zoning or subdivision entitlement that will locate them in green field areas, and they are not currently planned to support local-scale land use diversity, location efficiency, density, neighborhood connectivity, and/or alternative transportation modes.<sup>11</sup> Moreover, existing land use conditions and other factors will make it difficult to increase mass transit to support higher density neighborhoods or more urban development. New land use planning approaches, priorities, and policies, along with less glamorous but still vital retrofits and adaptations, together will measurably contribute to regional sustainability. As these changes are proposed and implemented, we must address the ongoing challenges of negative public perception, resistance to change, and a lack of understanding of the importance of a sustainable built environment.

The creation and maintenance of an openly accessible regional land use database is an important first step in tracking progress and achieving regional sustainability. Equally important are coordination and alignment of land use policy and goals among local governments in the region. This should include support for downtown municipal areas and other key activity centers connected to the entire region by corridors that support mass transit and that are integrated with a green infrastructure network. Priorities should be established for infill and redevelopment areas, along with adoption of the regulatory changes and incentives needed to support them. Existing infrastructure and utility capacity should be maximized. Healthier and more energy-efficient buildings should be required by code in some cases and encouraged by public policy and incentives in others. Public policy and regulations should be modified to encourage a locally diverse mix of housing types and affordability ranges throughout the region. Walkability and local street connections in new development and redevelopment will increase transportation energy and time efficiency and help advance human health and well-being. Broad-based outreach, education, and public participation are essential to cultivate support for these changes.

The overarching goals for the built environment are to promote higher levels of regional and neighborhood-scale location efficiency, energy efficiency, and healthy design inside of buildings, and a built environment that includes access to alternative modes of transportation and the enhancement or creation of unique, special, and accessible places. A built environment revitalized for sustainability can result in a beautiful and functional public realm that will enhance commerce, arts and culture, and promote neighborhoods and community.

## **Natural Environment**

A healthy regional natural environment supports not only healthy native plants and animals, but also is the foundation for human health, economic prosperity, and cultural vitality. The Pikes Peak region's diverse natural environment has attracted a great variety of species, including humans, since prehistoric times; it has lured residents, tourists, and economic enterprise; and it continues to stand out as a healthy and beautiful place to live, work, and play. Humans and the natural environment together have shaped the unique character of the Pikes Peak region, but not always in ways that are ecologically sound or environmentally sustainable. In order to

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<sup>11</sup> City of Colorado Springs Comprehensive Planning Division. General estimate compiled from City of Colorado Springs, El Paso County, and City of Fountain data.



perpetuate our natural legacy and its benefits to our economic vitality and quality of life, we must find ways to protect the natural attributes that have persisted, restore those parts of our natural environment that have suffered degradation, and maintain the natural composition, structure, and functions that support a sustainable synergy between the many interdependent natural and human components of the environmental system.

Protecting, restoring, and maintaining any system requires a big-picture, whole-systems approach that addresses all the parts and processes of the system, and employs long-term thinking and embraces the complexity of interactions between parts of the system. Systems approaches require visionary leadership, multidisciplinary thinking, stakeholder support, and readily accessible information about the system. Like physicians, ecological planners and managers should endeavor to "do no harm" by utilizing state-of-the-art ecological and sustainability concepts, methods, and tools.

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Jane Ard-Smith, Sierra Club
Helen Dyer, Coalition for the Upper South Platte
Brian Milbachler, US Air Force Academy
Ferris Frost, Frost Livestock Company
Bob Fant, Peterson Air Force Base

Whole-systems thinking implies that we not only integrate multiple perspectives, but also think about what has and has not worked in the past, what is likely to work in the future, and how we can adaptively design an environmental policy and management trajectory that approaches greater sustainability of our natural environment and the goods and services that it provides. For example, the "wildland-urban interface" (WUI), where the built human environment intersects natural ecosystems of forest, shrublands, grasslands, and natural waterway corridors in the Pikes Peak region, has been mostly haphazardly developed, creating conflicts in the form of wildfire hazards, erosion, siltation, and the introduction of noxious alien species, among other impacts. Mitigating these unintended consequences is difficult and expensive. Haphazard development also harms the natural system's provision of goods and services such as timber, agricultural soils, recreational destinations, aesthetic amenities, air purification, water supply and filtration, noise abatement, erosion control, species diversity, and microclimatic controls. When we use a whole-systems approach to developing the WUI, we can learn from the mistakes of the past to anticipate future problems, consider how all the parts of the system work together synergistically in space and time, and avert many short- and long-term conflicts, hazards, and irreversible impacts.

The natural environment in the Pikes Peak region has been the subject of several ecological and environmental studies and plans, such as those produced by the Fountain Creek Watershed Flood Control and Greenway District, Fort Carson, and the United States Air Force Academy.<sup>12</sup> These studies describe certain species, habitats, and ecosystems of the region; issues and conflicts; and

\* Many stakeholders participated in the development of PPR 2030. This list represents the individuals who led the development of the Natural Environment section. A full list of participants can be found on page ii-iii.

<sup>12</sup> See tables in Appendix D

proposed actions for protecting, restoring, and maintaining those system parts and processes. The Colorado Natural Heritage Program has done extensive surveys of the region and has documented numerous threatened and endangered species and habitats.<sup>13</sup> By using and building on this existing information, environmental planners can begin to synthesize actionable sustainability plans that include humans as part of the system and that focus not only on parts of the system that are rare or most threatened, but also on maintaining the more common and stable components to avoid their becoming threatened. Currently, however, much of our regional environmental data resides in disparate locations, often with incompatible structures and limited accessibility. Centralizing these data into a regional environmental database will help to efficiently determine what natural environmental system parts and processes are known, which are unknown, and their status.

Finally, few of these steps can be adequately addressed without both political will and financial support. Environmental sustainability planning and implementation requires specific expertise and time that often eclipses the best of volunteer intentions. Our financial investments in environmental sustainability reflect our commitment to the survival and quality of life of our descendants and all life on Earth.

## Air Quality

Both indoor and outdoor air quality are important quality of life concerns that influence whether people move to the Pikes Peak region. The region currently meets the federal standards for all pollutants that are required to be monitored. Although federal standards<sup>14</sup> based on protection of public health and welfare are being met, there are still occurrences when air quality concentrations are not safe and trigger warnings. These concentrations of some pollutants can cause health problems (even though they do not exceed standards), especially for the elderly and those who have asthma.

<p style="text-align: center;"><b>Air Quality Task Group*</b></p> <hr/> <p style="text-align: center;">Mary Barber, Sustainable Fort Carson Tom Gonzales, El Paso County Public Health Joe Jenkins, Black Hills Energy Rich Muzzy (chair), PPACG</p>
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Outdoor air quality in El Paso County is currently monitored for ozone, carbon monoxide, and particulate matter. Monitoring for lead, sulfur dioxide, or nitrogen dioxide is not currently being performed in the Pikes Peak area. There are four monitoring sites in the Colorado Springs metro area; these sites are located at Colorado College, the US Air Force Academy, Manitou Springs, and Highway 24/8<sup>th</sup> Street. Regional monitoring is not required in Teller County because the county does not meet the US Environmental Protection Agency's (EPA) population threshold, although source-specific monitoring is required by Cripple Creek and Victor Gold Mining Company for particulate matter.

Unregulated pollutants such as mercury and greenhouse gases are of increasing concern in the region. To determine potential implications, data collection, analysis, and environmental studies

\* Many stakeholders participated in the development of PPR 2030. This list represents the individuals who led the development of the Air Quality section. A full list of participants can be found on page ii-iii.

<sup>13</sup> See Appendix D

<sup>14</sup> Colorado Department of Public Health and Environment

of these pollutant sources and potential impacts will be necessary. Greenhouse gas monitoring was implemented by the EPA beginning in 2010. Although a regional inventory still needs to be conducted, local inventories have been conducted by the City of Colorado Springs, Manitou Springs, Fort Carson, Colorado Springs Utilities, and Colorado College. All of these efforts will provide a substantial amount of information on greenhouse gas emissions from a broad range of local sources such as utilities, manufacturing, and combustion sources.

For indoor air quality, there are no regulations directly addressing non-occupational indoor air quality in Colorado. Indoor air quality standards are in place for asbestos, lead, and radon. There is little data in non-industrial settings because measurements are usually taken only when health symptoms arise or there are signs of poor ventilation and specific sources or pollutants. Indoor air quality concerns often occur because buildings are considered too hot or cold; occupants have symptoms like headaches or nausea while in the building; or building-related illness arises from exposure to materials or conditions in a building that led to long-term or serious health effects.

Facilities and land use (urban and transportation infrastructure) affect air quality. In PPR 2030, the energy, built environment, and transportation goals align closely with desired air quality outcomes. Less directly, the economic development, procurement, and waste goals also align with the air quality goal. By being proactive in implementing projects and activities in support of all of the goals in PPR 2030, we may potentially avoid more costly regulation, minimize health impacts and costs from air pollution, preserve our scenic views and tourism industry, and improve the overall quality of life in the region, nation, and around the planet. Converting from petroleum transportation fuels to less-polluting alternatives will greatly reduce harmful tailpipe emissions. Fewer miles of transportation (and utility) infrastructure will reduce total costs while also reducing particulates and chemicals from road sanding operations and maintenance activities.

Our air needs to be healthy for all groups, including people who are more susceptible to respiratory infection, such as the elderly, the young, and those with pre-existing conditions such as asthma. Examples of progress in the region include Colorado Springs Utilities using advanced carbon capture systems to reduce emissions from coal-fired power plants, Black Hills Energy moving away from coal as the primary fuel and building a new wind farm just south of Pueblo County, increased reliance on wind and solar as energy sources by the City of Fountain and military installations in the region, and public outreach and education programs being implemented by the El Paso County Public Health Department (such as Radon Awareness Month). These are all steps that will help improve air quality and, through implementation of the strategies contained in PPR 2030, help us reach the goal stated in PPR 2030 that indoor and outdoor environmental quality is healthy for all, with air pollutant levels below state and local health thresholds.

## Water Quality

Having good water quality is very important to human health, to fish, and to quality of life. It makes water usable for wildlife and habitat preservation,

recreation, drinking water supply, crop irrigation, and industry. Water quality is affected by the activities of people, by wild and domestic animals, and by natural causes. This section focuses on water quality impacts to surface water and groundwater and not municipal drinking water.

There are several stream segments listed as impaired for E. coli and selenium, and these segments are closely watched for high amounts of sediment that can degrade water quality and aquatic habitat. Projects in the future must look at the potential effects to these segments in order to comply with federally regulated standards and not add to the problem of more pollution in these waterways, which can have direct, indirect, and cumulative impacts on the environment. Without mitigation strategies, the effect of pollutant loading over time may cause water quality degradation and loss of ecosystem health and diversity.

There are also unregulated pollutants such as salinity and suspended solids, nutrients, and emerging contaminants (such as pharmaceutical drugs, personal care products, caffeine, and other man-made chemicals that can be found in our drinking water). The Colorado Water Quality Control Commission (CWQCC) preliminarily approved interim values for nutrients and a new nutrient control regulation (Regulation 85) in March 2012. This will eventually lead to new water quality standards that the region must meet for total phosphorous (TP), total nitrogen (TN), and chlorophyll for rivers and streams, lakes, and reservoirs. It will also result in stricter permit limits for total inorganic nitrogen (TIN) for larger wastewater treatment plants. The specific language will be finalized on May 14, 2012. With new water quality standards, stormwater discharges and other non-point sources for pollutants will likely be subject to policies and regulations aimed at protecting classified uses (recreation, aquatic life, agriculture, water supply, and wetlands) and improving existing water quality.

Numeric standards for groundwater are different than surface water and are based on classifications of Domestic Use-Quality, Agriculture Use-Quality, Surface Water Quality Protection, Potentially Usable Quality, and Limited Use and Quality. Standards are established to protect these classified uses. An “Interim Narrative Standard” is used for all groundwater for which standards have not already been assigned in the state. Potential groundwater quality concerns include contamination from oil and natural gas drilling in the south-central part of El Paso County and possible spills and chemicals being injected into the ground to release the trapped gas or oil.

Maintaining existing water quality to comply with current and future water quality standards is essential to the health of a community, since water quality degradation can have short- and long-term environmental, social, and economic impacts. Through careful water quality monitoring, determining potential areas of concern and impacts, and establishing maintenance procedures or best management practices, potential water quality problems might be avoided. The strategies

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developed in PPR 2030 require taking a larger regional perspective, looking at past trends and current activities, and considering how future activities might affect the region. Through these activities, it will be possible to meet the goal that ground and surface water quality is better than designated water quality standards and classified uses (recreation, aquatic life, agriculture, drinking water supply, and wetlands).

### **Strategy Table Overview**

The following strategy table outlines the high-level strategies recommended for the built and natural environment, air quality, and water quality goals. Please note that the lead entity(s) and potential partners were proposed by the task groups and may require refinement as PPR 2030 is implemented. For additional information such as baseline data and current conditions, please see Appendix D. The appendix also provides a strategy table that outlines more detailed proposed sub-strategies to facilitate implementation of the goals. While the high-level strategy table in the main document and the strategy table in the appendix correlate and address the same built and natural environment, air quality, and water quality goals, as a part of the strategy development process, they may not match in structure. The strategy table in the appendix served as the foundation from which the task group revised and modified strategies to develop the high-level strategy tables outlined in the main document (below).

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\* Many stakeholders participated in the development of PPR 2030. This list represents the individuals who led the development of the Water Quality section. A full list of participants can be found on page ii-iii.

## Built and Natural Environment Strategy Tables (Including Air Quality and Water Quality)

### Built Environment

<p><b>GOALS:</b> By 2030, the built and natural environments complement one another and reflect our commitment to enhancing the lives of people; promoting community, culture, and commerce; and preserving and protecting the natural environment. Achieving this goal means:</p> <ol style="list-style-type: none"> <li>1. New construction, development, and redevelopment of all types and scales are built to incorporate:             <ol style="list-style-type: none"> <li>a) Location efficiency between the areas where we live, work, play, learn, shop, and obtain basic services;</li> <li>b) Multiple forms of accessible and integrated transportation including walking, bicycling, transit, and automobile;</li> <li>c) Diversity of housing types and affordability;</li> <li>d) Energy- and resource-efficient high-performance building;</li> <li>e) Neighborhood access to a sustainable and comprehensive system of parks, open space, and trails; and</li> <li>f) The strong link between the built and natural environment.</li> </ol> </li> <li>2. The region takes advantage of and maintains all existing infrastructure (utilities, roadways, sidewalks, trails, and parks).</li> <li>3. The integration of housing, parks, commerce, arts and culture, and transportation creates a beautiful and functional public realm with great public spaces - promoting neighborhoods and community.</li> </ol>					<p><b>GOAL METRIC(S):</b> (TBD)</p>
<p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>• Existing developments are too far from basic needs and services to reach by walking/non-motorized transportation modes;</li> <li>• Regulatory barriers for more density</li> <li>• Financial constraints/costs</li> <li>• Lack of new business models that take advantage of the tremendous economic opportunities of sustainable urbanism</li> <li>• Lack of popular vision / imagination re: potential for alternatives to automobile oriented built environment</li> </ul>					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.1	<b>Provide public education and outreach</b> regarding the value of sustainable built environments to community, culture, and commerce.	Numerous plans: AIA SDAT, USGBC programs, etc.	PPACG, Catamount, AIA, and other professional and community organizations	Numerous agencies, professional and community orgs, K-12 ed., higher ed.,	(TBD)
1.2	<b>Plan and design new and existing projects</b> in the built environment to support alternative transportation including walking, biking, and transit.	Local, State, and national programs	Local, State, and federal governments	Various advocacy groups	(TBD)
1.3	<b>Integrate green infrastructure</b> in the built environment.	Regional govt. public works	Regional govt. public works	Various advocacy groups	(TBD)

**GOALS:** By 2030, the built and natural environments complement one another and reflect our commitment to enhancing the lives of people; promoting community, culture, and commerce; and preserving and protecting the natural environment. Achieving this goal means:

1. New construction, development, and redevelopment of all types and scales are built to incorporate:
  - a) Location efficiency between the areas where we live, work, play, learn, shop, and obtain basic services;
  - b) Multiple forms of accessible and integrated transportation including walking, bicycling, transit, and automobile;
  - c) Diversity of housing types and affordability;
  - d) Energy- and resource-efficient high-performance building;
  - e) Neighborhood access to a sustainable and comprehensive system of parks, open space, and trails; and
  - f) The strong link between the built and natural environment.
2. The region takes advantage of and maintains all existing infrastructure (utilities, roadways, sidewalks, trails, and parks).
3. The integration of housing, parks, commerce, arts and culture, and transportation creates a beautiful and functional public realm with great public spaces - promoting neighborhoods and community.

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.4	<b>Maintain existing public infrastructure</b> (roads, bridges, utilities, stormwater management, parks, trails, etc.)	Regional govt. public works	Regional govt. public works	Various advocacy groups	(TBD)
1.5	<b>Adapt public regulation and process</b> to promote mixed-use infill development and provide complete neighborhoods.	Form-based codes, code scrub	Public/private partnership w/planning depts. and business and development community	RBD, AIA, CNU, ULI, HBA	(TBD)
1.6	<b>Create financial strategies and economic development incentives</b> to promote mixed-use infill development and provide complete neighborhoods.	None	EDC / business and development community	Planning depts., AIA, and other community and professional organizations	(TBD)
1.7	<b>Support</b> built environments that <b>promote local food production</b> and distribution.	Urban cg	Pikes Peak Urban Gardens	(TBD)	(TBD)
1.8	<b>Foster public / private partnerships</b> to provide new, diverse, and affordable housing types and increased residential densities.	(TBD)	Business and development community and planning depts.	HBA, AIA, Ft Carson	(TBD)
1.9	<b>Adopt enhanced green building and energy codes.</b>	IGCC, 2009 International Energy Code	RBD	AIA, USGBC, HBA	(TBD)
1.10	<b>Continue grant and rebate programs</b> for green building strategies.	GEO and federal programs	GEO	CSU	(TBD)

**GOALS:** By 2030, the built and natural environments complement one another and reflect our commitment to enhancing the lives of people; promoting community, culture, and commerce; and preserving and protecting the natural environment. Achieving this goal means:

1. New construction, development, and redevelopment of all types and scales are built to incorporate:
  - a) Location efficiency between the areas where we live, work, play, learn, shop, and obtain basic services;
  - b) Multiple forms of accessible and integrated transportation including walking, bicycling, transit, and automobile;
  - c) Diversity of housing types and affordability;
  - d) Energy- and resource-efficient high-performance building;
  - e) Neighborhood access to a sustainable and comprehensive system of parks, open space, and trails; and
  - f) The strong link between the built and natural environment.
2. The region takes advantage of and maintains all existing infrastructure (utilities, roadways, sidewalks, trails, and parks).
3. The integration of housing, parks, commerce, arts and culture, and transportation creates a beautiful and functional public realm with great public spaces - promoting neighborhoods and community.

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.11	<b>Develop an accessible, unified regional geographic information system</b> to measure and support planning and design of a sustainable built environment.	City of Colorado Springs, El Paso County	PPACG?	All regional govt. entities w/GIS capabilities	(TBD)
1.12	<b>Develop coordinated regional land use regulations</b> and comprehensive plans among jurisdictions.	(TBD)	COS, EPCO,	RBD, planning departments	(TBD)



## Additional Strategies Relevant to the Built Environment

The following table outlines strategies from other topic areas that potentially intersect with built environment issues and strategies. The correlation between these topics was identified by the task groups and outlined in an overarching strategy matrix that can be found on page 92.

<b>Other Topic-Area Strategies Intersecting with the Built Environment</b>		
<i>Topic Area</i>	<i>Strategy</i>	<i>Strategy Table Page Number</i>
<b>Agriculture</b>	1.4 Encourage regional collaboration and cooperation	6
<b>Arts and Culture</b>	2.3 Encourage more civic engagement	13
<b>Natural Environment</b>	1.1 Establish a systems paradigm	27
<b>Air Quality</b>	1.1 Voluntary indoor certification process	33
	1.4 Develop indoor outreach plan	
<b>Water Quality</b>	1.1 Understand baseline conditions	36
	1.2 Water quality impairment	
	1.3 Develop outreach plan	
	1.4 Develop strategies	
	1.5 Update and implement regulations	
	1.6 Implement Strategic Plan	
<b>Economic Development</b>	2.4 Support the growth of local businesses	42
	3.5 Identify and remove regulatory and financial barriers	
	3.6 Support local sustainable industry development	
<b>Energy</b>	1.1 Incentivize renewable/sustainable energy	54
	1.4 Develop and encourage adoption of local/regional policy and regulatory strategies – re: renewable energy	
	2.1 Incentivize for demand-side management	
<b>Materials Management and Procurement</b>	1.5 Incentivize construction and demolition recycling	67
	1.7 Require recycling areas for multifamily and commercial	
	3.2 Establish a baseline measure for sustainable procurement practices	
	3.3 Form collaborations	
<b>Transportation</b>	1.3 Public funding of alternative transportation	74
	1.4 Financial strategies and economic development incentives	
<b>Water Quantity</b>	1.1 Develop nonpotable policies	84
	1.2 Install infrastructure	
	1.3 Regional Cooperation	
	1.4 Identify and implement emerging uses	
	1.5 Encourage low-impact development	
	1.6 Develop specific education plan	
	2.1 Implement conservation BMPs	
	2.4 Fix state water law	
	3.1 Develop water budget/tiered rate	
	3.2 Stormwater as irrigation	
	3.3 Replace large turf areas	
	3.4 Develop policies addressing specifics	
	3.5 Support/ implement regional stormwater plans	

## Natural Environment

<p><b>GOAL:</b> By 2030, the built and natural environments complement one another and reflect our commitment to enhancing the lives of people; promoting community, culture, and commerce; and preserving and protecting the natural environment. Achieving this goal means:</p> <p>4. Regional ecological health, including ecosystems; habitats; and threatened, endangered, imperiled and other species are protected, restored, and maintained.</p>					<p><b>GOAL METRIC(S):</b> (TBD)</p>
<p><b>Challenges:</b> (TBD)</p>					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.1	<p><b>Establish a systems paradigm:</b> Utilize a whole-systems, "big picture," environmental philosophy and approach to vision and policy development, planning, and implementation actions that protect, restore, and maintain regional ecological health.</p>	<p>Fort Carson Sustainability Plan Scholarly ecological and sustainability publications, models Green Infrastructure Sustainable Sites Initiative Smart growth papers Conservation development papers Others TBD</p>	<p>Consortium to be determined (see Appendix D) Top picks: USFS: Pike-San Isabel BLM: Front Range District Colorado Springs: Environmental Sustainability Department, Utilities, Stormwater Department El Paso County Consortium to be determined (see Appendix D) Bear Creek Nature Center, Garden of the Gods Interpretive Program, Fountain Creek Nature Center, Xeriscape Gardens, Shooks Run Agroforestry Project, D20 School in the Woods, possible future Sustainability Center, possible future Sustainability Festival, others TBD) Others TBD</p>	<p>Same as lead entity list.</p>	<p>Number of unintended or avoidable indirect environmental effects observed and measured. Number of environmental policy, planning, and management efforts involving multiple partners. Number and kinds of environmental education programs; variety of audiences addressed; variety of learning styles addressed; frequency and duration of programs; others TBD. Others TBD</p>

<b>GOAL:</b> By 2030, the built and natural environments complement one another and reflect our commitment to enhancing the lives of people; promoting community, culture, and commerce; and preserving and protecting the natural environment. Achieving this goal means:					
4. Regional ecological health, including ecosystems; habitats; and threatened, endangered, imperiled and other species are protected, restored, and maintained.					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.2	<b>Create a regional database:</b> Collate quality data into a database of regional biotic and abiotic environmental attributes that is accessible, fully documented, and indexed according to data management conventions.	Southwest Regional Gap Analysis Project Scholarly texts and papers Others TBD	Consortium to be determined (see Appendix D) (Federal, State, county, and municipal land management agencies; universities; private consultants. Others TBD)	Same as lead entity list.	(TBD)
1.3	<b>Ascertain baseline conditions, components and processes:</b> Identify and inventory the quantity and quality of existing regional environmental system components and processes,	(See footnote) <sup>16</sup>	Consortium to be determined (see Appendix D) (Federal, State, County, and municipal land management agencies; universities; private consultants. Others TBD)	Same as lead entity list.	Richness, equitability, number, composition, and relative abundance of State and federal listed species Changes in State and federally-listed species lists

<sup>16</sup>Strategy 1.3; In an Existing Plan?

Specific to region:

Colorado Springs Utilities (Peak to Prairie Landscape Symposium information), Peak to Prairie Conservation Plan, Colorado Springs Comprehensive Land Use Plan, Southern Delivery System documents, Southeast Teller County Planning Initiative, Fort Carson Integrated Natural Resources Management Plan, USAFA Integrated Natural Resources Management Plan, Preble's Meadow Jumping Mouse management plans, Other threatened and endangered species management plans, Pike and San Isabel national Forests and Cimarron and Comanche National Grasslands Land and Resources, Management documents, maps, publications, geospatial data, El Paso County Policy Plan, Section 6.0: Growth and Land Use, Teller County Community Wildfire Protection Plan, Teller County Source Water Assessment Report, Teller County Multi-Hazard Mitigation Plan, Environmental Assessment for Fountain Creek Stabilization and Erosion Control Project, Woodland Park, Teller County, Colorado Steiner Frederick R. 2000. The living landscape: an ecological approach to landscape planning. McGraw-Hill Professional. (Teller Co./City of Woodland Park, Colorado Growth Management Plan case study)

Colorado Wildlife Action Plan, Central Shortgrass Prairie Ecoregional Assessment and Partnership Initiative. Nature Conservancy, draft of October 20, 2008. Southwest Regional Gap Analysis Project Federal Recovery Plan, Southern Rocky Mountains: An Ecoregional Assessment and Conservation Blueprint. Multi-Agency Conservation Plan and Agreement, Community Wildfire Protection Plan for the Woodland Park Healthy Forest Initiative: A Demonstration Project for the Front Range Roundtable 2010

Peak-to-Prairie Conservation Plan Peak to Plains. Southern Rockies Ecosystem Project; Fountain Creek Watershed Strategic Plan; Fort Carson INRMP (Integrated Natural Resources Mgmt. Plan) and Specific Species Management Plans; AFA INRMP) and Specific Species Management Plans; local land use comprehensive plans (county and municipal); TNC? CNHP?; State Wildlife Action Plan?; other academic research projects? Pikes Peak Sustainable Indicator Project, The Nature Conservancy Central Shortgrass, Prairie Ecoregional Assessment, Colorado Wildlife Action Plan, Pikes Peak Sustainable Indicator Project, USDA Invasive Species List, Colorado State Noxious Weed List. Colorado State University Southwest, Regional Gap Analysis Project, Colorado Wildlife Action Plan, Southern Rockies Wildland Fire Module  
Others TBD

General, but applicable to region:

Green Infrastructure, Sustainable Sites Initiative, Conservation development projects and studies, Scholarly ecological and sustainability publications, models. Other municipal, county, regional sustainability and resource management plans. Partners in Flight North American Landbird Conservation Plan. Regional lists of pests. The Millennium Ecosystem Assessment, TNC Conservation Gateway, Scholarly papers, websites, and resources  
Others TBD

**GOAL:** By 2030, the built and natural environments complement one another and reflect our commitment to enhancing the lives of people; promoting community, culture, and commerce; and preserving and protecting the natural environment. Achieving this goal means:

4. Regional ecological health, including ecosystems; habitats; and threatened, endangered, imperiled and other species are protected, restored, and maintained.

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
	including, but not limited to, biodiversity indicators, native species, currently and potentially invasive species, habitats, ecosystem goods and services, biotic levels of organization, abiotic components and processes, and other components and processes that are known or designated as threatened or endangered, imperiled, both common and rare, critical, keystone, or otherwise important to the natural environmental system.				Acres of developed vs. undeveloped land Acres of lands under conservation development (such as conservation easements, cluster developments, master planned communities) vs. 35- acre-type developments Acres of critical and/or essential habitat lost annually for any reason(natural or anthropogenic causes) Cost of losing wetlands (water quality). Wetland quantity and quality (acres, types, context, services provided) Air quality/carbon sequestration
1.4	<b>Design a plan:</b> Synthesize information and data regarding regional natural environmental system components and processes into a whole-systems environmental management plan that employs state-of-the-art ecological and sustainability concepts, methods, tools, and data.	Southern Rockies Ecosystem Project El Paso County Policy Plan, Section 6.0 Growth and Land Use), Issue 6.6 (Promote Intergovernmental Land Use Cooperation): Colorado Wildlife Action Plan Colorado Ownership, Management, and Protection project (COMaP) Central Shortgrass Prairie Ecoregional Assessment and	Consortium to be determined (see Appendix D)  (Federal, State, county, and municipal land management agencies; universities; private consultants. Others TBD)	Same as lead entity list.	(TBD)

**GOAL:** By 2030, the built and natural environments complement one another and reflect our commitment to enhancing the lives of people; promoting community, culture, and commerce; and preserving and protecting the natural environment. Achieving this goal means:  
 4. Regional ecological health, including ecosystems; habitats; and threatened, endangered, imperiled and other species are protected, restored, and maintained.

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
		Partnership Initiative. Colorado Shortgrass Prairie Initiative – Conservation Partnership Methodology  <u>General, but applicable to region:</u> Needs revision: green infrastructure; Sustainable Sites Initiative; smart growth; conservation development) Others TBD			
1.5	<b>Apply adaptive management practices:</b> Adaptively manage the regional natural environmental system.	Same as # 2 and 3	Consortium to be determined (see Appendix D)  (Federal, State, County, and municipal land management agencies; universities; private consultants. Others TBD)	Same as lead entity list.	Changes in ecological indicators (e.g., biodiversity, species assemblages, presence/absence and numbers of T&E species and invasive species, water quality, air quality, soil fertility, hydrology, meteorological measurements of regional microclimates
1.6	<b>Obtain funding:</b> Identify and cultivate funding sources to support ongoing and future planning and implementation actions.	Consortium to be determined (see Appendix D); financial institutions; green banking; granting organizations; others TBD	PPACG	Consortium to be determined (see Appendix D)  (Federal, State, County, and municipal land	(TBD)

**GOAL:** By 2030, the built and natural environments complement one another and reflect our commitment to enhancing the lives of people; promoting community, culture, and commerce; and preserving and protecting the natural environment. Achieving this goal means:

4. Regional ecological health, including ecosystems; habitats; and threatened, endangered, imperiled and other species are protected, restored, and maintained.

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
				management agencies; universities; private consultants. Others TBD)	

## Additional Strategies Relevant to the Natural Environment

The following table outlines strategies from other topic areas that potentially intersect with natural environment issues and strategies. The correlation between these topics was identified by the task groups and outlined in an overarching strategy matrix that can be found on page 92.

<b>Other Topic-Area Strategies Intersecting with the Natural Environment</b>		
<i>Topic Area</i>	<i>Strategy</i>	<i>Strategy Table Page Number</i>
<b>Agriculture</b>	1.3 Promote farming practices and agricultural research	6
	1.4 Encourage regional collaboration and cooperation	
	1.6 Promote programs that preserve	
	1.8 Ensure that farmers and ranchers have adequate water supplies	
	1.9 Promote programs and practices	
<b>Built Environment</b>	1.4 Maintain existing public infrastructure	23
	1.12 Develop coordinated regional land use regulations	
<b>Air Quality</b>	1.2 Track baseline information-outdoor air quality	33
	1.3 Greenhouse gas inventory and strategies	
	1.5 Develop outdoor outreach plan	
	1.6 Ozone non-attainment designation	
<b>Water Quality</b>	1.1 Understand baseline conditions	36
	1.3 Develop outreach plan	
	1.4 Develop strategies	
	1.5 Update and implement regulations	
	1.6 Implement Strategic Plan	
<b>Economic Development</b>	3.4 Foster and encourage educational opportunities	42
	3.6 Support local sustainable industry development	
<b>Materials Management and Procurement</b>	1.1 Provide recycling at government facilities	67
<b>Water Quantity</b>	1.1 Develop nonpotable policies	84
	1.2 Install infrastructure	
	1.3 Regional Cooperation	
	1.4 Identify and implement emerging uses	
	1.5 Encourage low-impact development	
	2.1 Implement conservation BMPs	
	2.2 Development plans	
	2.3 Educate on water importance	
	2.4 Fix state water law	
	3.1 Develop water budget/tiered rate	
	3.2 Stormwater as irrigation	
	3.3 Replace large turf areas	
	3.4 Develop policies addressing specifics	
	3.5 Support/ implement regional stormwater plans	

## Air Quality

<p><b>GOAL:</b> By 2030, the built and natural environments complement one another and reflect our commitment to enhancing the lives of people; promoting community, culture, and commerce; and preserving and protecting the natural environment. Achieving this goal means:</p> <p>5. Indoor and outdoor environmental air quality is healthy for all, with air pollutant levels below State and local health thresholds.</p>					<p><b>GOAL METRIC(S):</b> (TBD)</p>
<p><b>Challenges:</b> Funding for implementation; developing a comprehensive stakeholder group and engaging specific stakeholders to implement strategies; determining appropriate values/standards for indoor air quality; obtaining information for Teller County</p>					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.1	<p><b>Voluntary indoor certification process:</b> Develop a voluntary clean indoor air quality certification process.</p>	Business models do exist in other areas	(TBD)	(TBD)	Realtors, USGBC, home inspectors, organizations conducting energy audits, Code enforcement
1.2	<p><b>Track baseline information--outdoor air quality:</b> Track baseline information and list what regulations and policies are currently in place. This includes regulated and unregulated contaminants of concern, hazardous air pollutants, greenhouse gases (primarily carbon dioxide, methane, and sulfur dioxide), and mercury.</p>	None	PPACG, El Paso County Health Department	(TBD)	Track annual changes in the: 1) Toxics Release - <a href="http://www.epa.gov/tri/">http://www.epa.gov/tri/</a> ; 2) EPA National Enforcement Investigations (NEI) <a href="http://neibrowser.epa.gov/eis-public-web/home.html">http://neibrowser.epa.gov/eis-public-web/home.html</a> ; and 3) CDPHE's <a href="http://www.colorado.gov/airquality/">Emissions Inventory</a> <a href="http://www.colorado.gov/airquality/">http://www.colorado.gov/airquality/</a>
1.3	<p><b>Greenhouse gas inventory and strategies:</b> Develop a regional greenhouse gas emissions inventory and develop strategies to reduce greenhouse gases.</p>	(CSU, City of CS and MS have inventories complete)	(TBD)	Cities, counties, utilities; State and federal mgmt. agencies	(TBD)
1.4	<p><b>Develop indoor outreach plan:</b> Develop a public outreach and education program that targets public and private organizations, homeowners, and groups to provide information on indoor air pollution, sources of pollutants, and corrective action alternatives. Specific contaminants of concern include: asbestos, lead, radon, methamphetamine, formaldehydes, mold, and pesticides.</p>	None	El Paso County Health Department, PPACG, Regional Building Department (RBD); El Paso County Health Dept.	Realtors, HBA, home owners associations, USGBC, homeowner groups, mortgage companies, schools, hardware stores, shooting range, insurance adjusters	Hits on website; distribution of information/pamphlets; number of stakeholders.  Number of pamphlets distributed



**GOAL:** By 2030, the built and natural environments complement one another and reflect our commitment to enhancing the lives of people; promoting community, culture, and commerce; and preserving and protecting the natural environment. Achieving this goal means:

5. Indoor and outdoor environmental air quality is healthy for all, with air pollutant levels below State and local health thresholds.

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.5	<b>Develop outdoor outreach plan:</b> Develop a public outreach and education program that targets public and private organizations, homeowners, and groups to provide information on outdoor air pollution, sources of pollutants, and corrective action alternatives. The six EPA “criteria” air quality pollutants are lead, carbon monoxide, nitrogen dioxide, sulfur dioxide, ozone, particulate matter 2.5 and particulate matter 10.	None	PPACG, El Paso County Health Department	Utilities, El Paso County Health Department, CDPHE, gasoline distributors, car manufacturers, landscapers	Hits on website; distribution of information/pamphlets; number of stakeholders. Additional metrics include: 1) CDPHE’s air quality website: <a href="http://www.colorado.gov/airquality/">http://www.colorado.gov/airquality/</a> ; 2) EPA’s AirData website: <a href="http://www.epa.gov/airdata/">http://www.epa.gov/airdata/</a> ; 3) EPA’s AirTrends website: <a href="http://www.epa.gov/airtrends/index.html">http://www.epa.gov/airtrends/index.html</a>
1.6	<b>Ozone non-attainment designation:</b> Address possible ozone non-attainment designation: 1) develop a stakeholders’ list of interested parties; 2) develop a list of potential source types for ozone precursor emissions and potential strategies to reduce ozone concentrations; 3) conduct modeling to determine most effective ozone reduction strategies.	Denver Metro Area/RAQC (a maintenance plan will be required if non-attainment designated)	PPACG	PPACG	Percent reduction in ozone concentrations; modeling of source areas; values from ozone monitoring stations.

## Additional Strategies Relevant to Air Quality

The following table outlines strategies from other topic areas that potentially intersect with air quality issues and strategies. The correlation between these topics was identified by the task groups and outlined in an overarching strategy matrix that can be found on page 92.

<b>Other Topic-Area Strategies Intersecting with Air Quality</b>		
<i>Topic Area</i>	<i>Strategy</i>	<i>Strategy Table Page Number</i>
<b>Built Environment</b>	1.2 Plan and design new and existing projects	23
	1.4 Maintain existing public infrastructure	
<b>Natural Environment</b>	1.1 Establish a systems paradigm	27
<b>Economic Development</b>	2.1 Stimulate new ways of addressing challenges	42
	2.2 Support and promote goals and plans	
	2.3 Support the promote industry clusters	
	3.4 Foster and encourage educational opportunities	
	3.6 Support local sustainable industry development	
<b>Energy</b>	1.5 Encourage the development of electric vehicle policies and programs	54
	2.4 Facilitate the adoption of high-efficiency and grid-enabled vehicles and supportive infrastructure	
<b>Transportation</b>	1.2 Public funding of alternative transportation	74
	1.3 Public funding for the maintenance of existing public infrastructure	
	2.2 Facilitate multi-mobility alternatives	
	3.2 Seek, support, and expand interregional alternative transportation modes	
	5.3 Enhance non-motorized transportation	

## Water Quality

<p><b>GOAL:</b> By 2030, the built and natural environments complement one another and reflect our commitment to enhancing the lives of people; promoting community, culture, and commerce; and preserving and protecting the natural environment. Achieving this goal means:</p> <p>6. Ground and surface water quality is better than designated water quality standards that are in place to protect classified uses (recreation, aquatic life, agriculture, water supply, and wetlands).</p>				<p><b>GOAL METRIC(S):</b> The number of stream segments water quality standards as measured over time and exceedances of applicable drinking water/groundwater standards.</p>	
<p><b>Challenges:</b> Different government philosophies; funding; lack of data; lack of cooperation and accountability; unregulated activities; confidentiality issues; unfunded mandates</p>					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.1	<p><b>Understand baseline conditions:</b> Better understand surface and groundwater water quality baseline conditions, to include a comprehensive groundwater database in El Paso and Teller Counties.</p>	<p>Fountain Creek Watershed Strategic Plan; 305B Report: EPC Groundwater Quality Study; 303d list, PPACG Water Quality Management Plan, Statewide Water Quality Management Plan</p>	<p>City of Colorado Springs, Colorado Springs Utilities</p>	<p>State and federal agencies; cities and counties; Colorado Data Sharing Network and USGS; special districts</p>	<p>Data representative of existing conditions</p>
1.2	<p><b>Assess water quality impairment:</b> Determine potential factors that influence water quality impairment.</p>	<p>Fountain Creek Watershed Strategic Plan</p>	<p>Fountain Creek Watershed District; cities and counties; publicly owned treatment works</p>	<p>(TBD)</p>	<p>(TBD)</p>
1.3	<p><b>Develop outreach plan:</b> Develop public outreach and education program for water quality.</p>	<p>MS4 permits for stormwater issues; CSU</p>	<p>MS4 Permits</p>	<p>CDPHE; CO Rural Water Association; CO SW Council; CO Wastewater Council</p>	<p>(TBD)</p>

**GOAL:** By 2030, the built and natural environments complement one another and reflect our commitment to enhancing the lives of people; promoting community, culture, and commerce; and preserving and protecting the natural environment. Achieving this goal means:

6. Ground and surface water quality is better than designated water quality standards that are in place to protect classified uses (recreation, aquatic life, agriculture, water supply, and wetlands).

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.4	<b>Develop strategies:</b> Develop and implement applicable strategies to restore water quality impacted stream segments and groundwater with exceedances.	Fountain Creek Watershed Strategic Plan, PPACG Water Quality Management Plan, Statewide Water Quality Management Plan	(TBD)	(TBD)	Number of incidents tracked, survey of interested residents
1.5	<b>Update and implement regulations:</b> Update and implement regulations, criteria, and policies, as applicable in each jurisdiction, related to stormwater management, water quality, development, and overall land use with the purpose of improving water quality, reducing erosion and flooding.	Fountain Creek Watershed Strategic Plan; Drainage Criteria Manual	Cities and counties; special districts	Cities/towns/counties	How many permits issued and cities/counties that adopt policies.
1.6	<b>Implement strategic plan:</b> Implement the Fountain Creek Watershed Strategic Plan.	Fountain Creek Watershed Strategic Plan, PPACG Water Quality Management Plan, Statewide Water Quality Management Plan	Fountain Creek Watershed District	(TBD)	(TBD)
1.7	<b>Protect and maintain existing water quality:</b> Protect and maintain existing water quality in areas that are currently meeting and are expected to meet future standards.	Fountain Creek Watershed Strategic Plan, PPACG Water Quality Management Plan, Statewide Water Quality Management Plan	Cities and counties; special districts; PPACG	(TBD)	Additional segments not meeting classified uses.

## Additional Strategies Relevant to Water Quality

The following table outlines strategies from other topic areas that potentially intersect with water quality issues and strategies. The correlation between these topics was identified by the task groups and outlined in an overarching strategy matrix that can be found on page 92.

<b>Other Topic-Area Strategies Intersecting with Water Quality</b>		
<i>Topic Area</i>	<i>Strategy</i>	<i>Strategy Table Page Number</i>
<b>Agriculture</b>	1.3 Promote farming practices and agricultural research	6
	1.8 Ensure that farmers and ranchers have adequate water supplies	
	1.9 Promote programs and practices	
<b>Built Environment</b>	1.10 Continue grant and rebate programs	23
	1.12 Develop coordinated regional land use regulations	
<b>Natural Environment</b>	1.1 Establish a systems paradigm	27
	1.3 Ascertain baseline conditions, components and processes	
	1.4 Design a plan	
<b>Air Quality</b>	1.2 Track baseline information-outdoor air quality	33
	1.3 Greenhouse gas inventory and strategies	
	1.5 Develop outdoor outreach plan	
	1.6 Ozone non-attainment designation	
<b>Economic Development</b>	2.1 Stimulate new ways of addressing challenges	42
	2.2 Support and promote goals and plans	
	2.3 Support and promote industry clusters	
	3.4 Foster and encourage educational opportunities	
	3.6 Support local sustainable industry development	
<b>Water Quantity</b>	1.1 Develop nonpotable policies	84
	1.2 Install infrastructure	
	1.3 Regional Cooperation	
	1.4 Identify and implement emerging uses	
	1.5 Encourage low-impact development	
	1.6 Develop specific education plan	
	2.1 Implement conservation BMPs	
	2.2 Development plans	
	2.3 Educate on water importance	
	2.4 Fix state water law	
	3.1 Develop water budget/tiered rate	
	3.2 Stormwater as irrigation	
	3.3 Replace large turf areas	
	3.4 Develop policies addressing specifics	
	3.5 Support/ implement regional stormwater plans	

## Economic Development

Sustainable regions recognize that the people, planet, and profit equation makes good business sense. Sustainable economic development expands opportunities for business growth with the overarching intent to: support thriving business-friendly environment; seek to avoid negative impacts to the environment and waste; curtail inefficiencies and costs; and promote procedures to ensure that there are sufficient resources to meet the needs of current and future generations.

### Economic Development Task Group\*

Felicia Barbera, Pikes Peak Workforce Center  
John Dunker, Colorado Springs Economic Development Corp.  
Bill Fisher, American Institute of Architects  
Heather Kelley, Sustainable Transformations  
Beth Kosley (chair), Woodland Park Economic Development  
Ray Krueger, Green Cities Coalition  
John Wilson

In essence, sustainability and economic development are consistent and compatible with one another in trying to minimize inefficiencies and waste while trying to improve overall prosperity.

For a community and region to be sustainable, it requires: Businesses that produce profits so they can employ people; Jobs that pay wages that enable people to live lives of decent quality and numbers of jobs that match to the demand produced by existing residents, potential residents, and export customers; and Residents and businesses that provide adequate tax base and fees and rates to sustain basic services such as police, fire, water, stormwater systems, education, libraries, public transportation, and other community needs.

### Baseline Conditions

According to the 2011 Quality of Life Indicators Report, there are a number of “red flags” or indicators that reflect downward trends affecting El Paso County’s long-term economic vibrancy. Many of the indicators, such as decreased construction and home purchasing, are directly linked to the economic recession. More worrisome indicators that may have more long-term and direct effects on the region’s economy and welfare of families are the loss of civilian jobs, increased unemployment and poverty rates, and the continued loss of the young professionals who greatly contribute innovative and entrepreneurial thinking to the region’s economy. These problems are not only confined to El Paso County but are shared in Teller County as well. According to the US Bureau of Labor, for July 2011, Teller County unemployment was 8.7% and El Paso County unemployment was 9.6%.

While the economic conditions are challenging, there are amazing opportunities as well. Not only is Colorado one of the most prominent states in the country in the aerospace industry, but the regional economic development corporation has been successful in recruiting data centers, promoting the region’s low utility rates. The region consistently receives high national recognition for being a healthy and affordable place to live.

The presence of five military installations not only plays a significant role in the regional economy, but it also drives regional sustainability efforts as well. The military installations’ pursuit of renewable energy and other sustainability efforts offer economic development opportunities and potential

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\* Many stakeholders participated in the development of PPR 2030. This list represents the individuals who led the development of the Economic Development section. A full list of participants can be found on page ii-iii.

technological information transfer that can significantly benefit the region. Innovative and clean-tech companies exist in the region, forming a strong industry cluster as well.

### **Goals to Reach a Sustainable Economy**

In reviewing the data, it is apparent that the region is in need of improving economic conditions. Much planning has been conducted over the past few years. Operation 6035, the Teller County Economic Development Plan, and Colorado Governor John Hickenlooper’s Blueprint for Colorado recognized the telling data and prescribed goals and strategies for the region, in conjunction with input from regional groups. These efforts began with a SWOT (strengths, weaknesses, opportunities, and threats) analysis to identify strengths in industry clusters, other market opportunities, and of course, threats and weaknesses that appear to hold the region back in terms of fully capitalizing on the strengths and opportunities. These economic development plan documents (see Appendix E) have been consulted and strategies from these preceding plans dovetail with strategies described here.

The economic development goals and strategies identified in PPR 2030 try to improve the long-term conditions for the region’s economy by promoting businesses that seek to reduce impacts to systems, the environment, energy use, and costs of doing business; improving overall wealth and prosperity by increasing job opportunities and living wages; and creating a business-friendly environment. Specific to PPR 2030, that environment should be especially conducive and supportive of “green businesses,” mixed-use infill development, and “economic gardening” techniques to encourage entrepreneurial growth.

In addition, the goals and strategies try to capitalize on the presence of the military installations and their pursuit for renewable energy and sustainability initiatives. The goals and strategies promote the development of potential industry clusters that surround innovation, clean tech, and technology transfers as our military strives to meet their sustainability goals.

#### The goals for sustainable economic development are:

By 2030, the region will have a strong and diverse economy that supports and benefits from sustainability.

Achieving this means:

1. Growing the wealth of all demographic groups of the Pikes Peak region to sustain households and quality of life by increasing jobs, expanding the economic base, and increasing business profitability;
2. Diversifying the economy into multiple sectors to provide structural integrity, resilience, and innovation; and
3. Ensuring the region has a strong localized economy that reinvests in the region.

### **Strategies and Outcomes**

Quantifiable strategies are described where practical and probable. In general, goal metrics will include monitoring of numbers of jobs, unemployment rates, and regional income levels. Also, numbers of businesses, primary employers, and small businesses will be measured through data sources and compared to the baseline data provided here (see Appendix E). The intent is to share implementation of PPR 2030 with others in the region who are already active in economic development programs, such as the Regional Leadership Forum; economic development agencies; departments and non-profits from Fountain, Tri-lakes, eastern El Paso County, and Teller County; the Colorado Springs Economic Development Corporation; the Southern Business Partnership; and area chambers of commerce.

## Strategy Table Overview

The following strategy table outlines the high-level strategies recommended for the economic development goals. Please note that the lead entity(s) and potential partners were proposed by the task groups and may require refinement as PPR 2030 is implemented. For additional information such as baseline data and current conditions, please see Appendix E. The appendix also provides a strategy table that outlines more detailed proposed sub-strategies to facilitate implementation of the goals. While the high-level strategy table in the main document and the strategy table in the appendix correlate and address the same economic development goals, as a part of the strategy development process, they may not match in structure. The strategy table in the appendix served as the foundation from which the task group revised and modified strategies to develop the high-level strategy tables outlined in the main document (below).



## Economic Development Strategy Table

<p><b>GOAL 1:</b> By 2030, the region will have a strong and diverse economy that supports and benefits from sustainability. Achieving this means:</p> <ol style="list-style-type: none"> <li>1. Growing the prosperity of all demographic groups of the Pikes Peak region to sustain households and quality of life by increasing jobs, expanding the economic base, and increasing business profitability.</li> </ol>		<p><b>GOAL METRIC(S):</b></p> <ul style="list-style-type: none"> <li>• Median household income</li> <li>• Poverty rates for individuals and households</li> <li>• Number of regional households from Census Bureau statistics</li> <li>• Change in Gross Metropolitan Product (GMP) by sector</li> <li>• Total change in GMP</li> <li>• Numbers of sectors with significant employment</li> <li>• Change in number of primary jobs</li> <li>• Social impact</li> <li>• Environmental impact</li> </ul>			
<p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>• Determining a metric that accurately measures the goal to assess progress</li> <li>• Maintaining an equal focus on environmental and social impacts while increasing jobs, growing the economic base, and increasing profitability.</li> </ul>					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.1	<b>Focus economic development programs on industry clusters</b> and in particular on “resource efficient” businesses.	Pikes Peak Clean Tech Report, CO Blueprint	Colorado Springs Economic Development Corporation	Pikes Peak Workforce Center Pikes Peak Clean Tech group Chambers of commerce Industry associations	Net new jobs Net new payroll Net new capital investment Prospect pipeline activity Resources used/saved Related QLI improvements
1.2	<b>Attract and retain industries</b> that pay employees livable wages that allow workers and their families to afford a decent standard of living, including housing, transportation, and other basic needs without depending on public subsidies.	CSREDC 5-Year Strategic Plan 2011-2015	Colorado Springs Regional Economic Development Corporation	Economic development groups Chambers of commerce Cities Counties Industry associations Individual businesses	Wages for employees within specific industries Mean/median salary by local industry Reduction in subsidies Rate of retention Rate of attraction
1.3	<b>Develop a responsive and agile network for training and education</b> of the workforce that addresses the needs of companies and employees.	(TBD)	Industry associations relevant to each targeted sector	Pikes Peak Community College UCCS Colorado College Pikes Peak Workforce Center	Number of regional training programs related to selected industry sectors Degrees available; graduates Intern/co-operative education opportunities

By 2030, the region will have a strong and diverse economy that supports and benefits from sustainability. Achieving this means:  
 1. Growing the prosperity of all demographic groups of the Pikes Peak region to sustain households and quality of life by increasing jobs, expanding the economic base, and increasing business profitability.

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.4	<b>Enable career advancement and wage improvement</b> of a community's employee base via professional development, mentoring, and academic learning and retraining for evolving technologies.		Industry associations relevant to each targeted sector	Pikes Peak Community College UCCS Colorado College Pikes Peak Workforce Center	Wage distribution Number of available mentoring programs and enrollee count Number of employers providing or funding these opportunities

<b>GOAL 2:</b> By 2030, the region will have a strong and diverse economy that supports and benefits from sustainability. Achieving this means: 2. Diversifying the economy into multiple sectors to provide structural integrity, resilience, and innovation	<b>GOAL METRIC(S):</b> <ul style="list-style-type: none"> <li>GMP by North American Industry Classification System (NAICS) categories and codes</li> <li>Calculated impact on the economy from the loss of any one sectors can be absorbed by the other sectors</li> </ul>
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**Challenges:**

- Bringing all of the relevant parties to the table
- Introducing new sectors
- Developing sectors that do not have a strong base at this time
- Maintaining an equal focus on environmental and social impacts

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
2.1	<b>Stimulate new ways of addressing challenges</b> and provide opportunities for innovation to demonstrate performance in sustainability areas.	(TBD)	Colorado Springs Technology Incubator	Governors Energy Office Colorado Cleantech Industry Association Colorado Association of Manufacturing and Technology Pikes Peak Sustainable Business Network Rocky Mountain Technology Alliance	Financial performance of organizations with sustainability related goals

<b>GOAL 2:</b> By 2030, the region will have a strong and diverse economy that supports and benefits from sustainability. Achieving this means:					
2. Diversifying the economy into multiple sectors to provide structural integrity, resilience, and innovation					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
2.2	<b>Support and promote goals and plans</b> of local economic development organizations and departments that have identified business sectors that are viable, sustainable, and achieve Goal 2.	(TBD)	Colorado Springs Regional Economic Development Corporation Woodland Park Economic Development Council City of Fountain Economic Development Commission	Economic development groups Chambers of commerce Cities Counties Individual businesses	Salary ranges for employees within specific industries Mean/median salary by local industry
2.3	<b>Support and promote industry clusters</b> that align with the region’s resource capacity.	(TBD)	Operation 6035 Plan	Various chambers of commerce	Educational institutions Government and policy organizations Industry associations
2.4	<b>Support the growth of local businesses</b> , including sustainable natural resource-based businesses, such as agriculture.	(TBD)	Various chambers of commerce; Green Cities Coalition	Small Business Development Center Colorado Springs Technology Incubator	(TBD)

<b>GOAL 3:</b> By 2030, the region will have a strong and diverse economy that supports and benefits from sustainability. Achieving this means: 3. Ensuring the region has a strong localized economy that reinvests in the region.					<b>GOAL METRIC(S):</b>
<b>Challenges:</b> To build on industry clusters and economic gardening, but guard against one dominant industry or reliance on too few sectors.					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
3.1	<b>Provide systems to develop strong business plans</b> and secure funding (microloans, investors, or grants) to support small business.	(TBD)	SBDC, chambers, economic development groups	CHFA, Colorado Lending, banks, others as identified	Attain 10% annual growth of business which employs 100 people or less, in ten years, starting from 2% annual growth.
3.2	<b>Encourage promotional campaigns</b> that urge local buying and support for local businesses.	(TBD)	Colorado Springs Visitors Bureau Branding Committee	Various chambers of commerce and business associations Individual businesses	Increased market share among local businesses
3.3	<b>Support local B2B</b> (business to business) sourcing.	(TBD)	Southern CO Business Partnership	Economic development organizations Various chambers of commerce Individual businesses	(TBD)
3.4	<b>Foster and encourage educational opportunities</b> to local businesses and consumers about sustainable business practices.	(TBD)	Pikes Peak Sustainable Business Network	GEO, Catamount, PPACG, OEDIT	Produce periodic e-newsletters, hold forums, conduct workshops
3.5	<b>Identify and remove regulatory and financial barriers</b> to industry/business development.	(TBD)	PPACG and its associated city and county governments	Various chambers of commerce Economic development organizations	Conduct internal audits unnecessary regulations in all government entities by 2013.
3.6	<b>Support local sustainable industry development</b> through incentive programs for companies that meet high environmental standards or produce innovative technology, clean tech, or alternative and energy-efficient products, services.	(TBD)	Pikes Peak Sustainable Business Network	Various federal and State grant sources, local government incentive programs, like Fountain model	(TBD)

## Additional Strategies Relevant to Economic Development

The following table outlines strategies from other topic areas that potentially intersect with economic development issues and strategies. The correlation between these topics was identified by the task groups and outlined in an overarching strategy matrix that can be found on page 92.

<b>Other Topic-Area Strategies Intersecting with Economic Development</b>		
<i>Topic Area</i>	<i>Strategy</i>	<i>Strategy Table Page Number</i>
<b>Agriculture</b>	1.1 Support and encourage the economic viability of small and medium farms and ranches	6
	1.3 Promote farming practices and agricultural research	
	1.4 Encourage regional collaboration and cooperation	
<b>Arts and Culture</b>	1.1 Engage a larger segment of the community	13
	1.3 Track Metrics	
	2.2 Promote creative industry job creation	
	2.3 Encourage more civic engagement	
<b>Built Environment</b>	1.2 Plan and design new and existing projects	23
	1.5 Adapt public regulation and process	
	1.6 Create financial strategies and economic development incentives	
	1.8 Foster public/private partnerships	
	1.11 Develop an accessible, unified regional geographic	
	1.12 Develop coordinated regional land use regulations	
<b>Natural Environment</b>	1.1 Establish a systems paradigm	27
<b>Air Quality</b>	1.1 Voluntary indoor certification process	33
	1.2 Track baseline information-outdoor air quality	
	1.4 Develop indoor outreach plan	
	1.6 Ozone non-attainment designation	
<b>Water Quality</b>	1.1 Understand baseline conditions	36
	1.2 Water quality impairment	
<b>Health</b>	2.1 Increase the number of health care providers	61
	2.3 Reduce economic, social, geographical, and cultural barriers	
<b>Materials Management and Procurement</b>	1.3 Establish regional processing facility	67
	3.1 Help organizations obtain access to cost-competitive sustainable products	
	3.2 Establish a baseline measure for sustainable procurement practices	
	3.3 Form collaborations	
<b>Transportation</b>	1.1 Public education and outreach	74
	1.4 Financial strategies and economic development incentives	
	3.2 Seek, support, and expand interregional alternative transportation modes	

## Education

Access to quality, life-long education is a keystone component to the success of many of the sustainability goals in this document, in particular to the growth of wealth, increased public engagement in the arts, accessibility to health care, and overall improved well-being.

Education also impacts other

indicators, including public safety, civic engagement, employment rates, and crime rates just to name a few.

### Education Task Group\*

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Terry Ebert, Ellicott School District  
Bob Neuman, Memorial Health System  
Jeanice Swift, Colorado Springs School District 11  
Jan Tanner (chair), Colorado Springs School District 11  
John Wilson

Currently, there are some worrisome indicators in the region, as outlined in the 2011 Quality of Life Indicators Report. These indicators point to turbulent conditions facing the region and education, including increased child poverty rates; declining funding for K-12 and higher education; rising behavioral incidences by children in schools; proficiency problems in some areas, especially math and lower elementary reading; and rising unemployment rates. If these conditions continue without any improvement to the access to quality, life-long education for all residents, the current and future workforce will be impacted along with the region's long-term prosperity and overall well-being.

Although education was not originally an identified goal area in the early planning stages of the Pikes Peak Regional Sustainability Project (PPRSP), members of the Consensus Committee and task groups continuously expressed the need for addressing long-term education and the importance education has in the region. Therefore, goals for early education, K-12 education, higher education, and workforce training opportunities were proposed by the Consensus Committee and approved in December 2010.

#### The education goals are:

By 2030, comprehensive, affordable, life-long educational opportunities are available to all.

Achieving this goal means:

1. All students have access to a 21<sup>st</sup>-Century K-12 education that prepares them for the future.
2. Affordable, high-quality, early childhood care and education are available to all residents of the region to ensure school readiness.
3. Regional higher education and professional and technical skills training are increasingly available and accessible to residents of the region.

Because education is so multifaceted and issues surrounding education are so complex involving many different players, it has been very challenging for the participants involved in the PPRSP to create informed, long-term strategies for education for the whole region. Although the above-

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\* Many stakeholders participated in the development of PPR 2030. This list represents the individuals who led the development of the Education section. A full list of participants can be found on page ii-iii.

mentioned education stretch goals were developed and approved by the Consensus Committee, there has not been sufficient consistent dialogue with enough regional education experts to adequately review the Consensus Committee's proposed goals and to develop meaningful education strategies to meet those goals. This is due in part to the inability to bring together educators to participate in meetings during the day, which is when most task group and team meetings occur. Therefore, there are no high-level strategies included in this section.

It is essential to include and have a vision for the current and future generations to have access to equitable and affordable education. Key groups and individuals have been identified to help develop and move this vision forward, including the Quality of Life Indicators Report Education Council and school district representatives. It is the intention of the PPRSP Consensus Committee, participants, and PPACG staff to pursue more representation and dialogue from regional community members and education experts in the next phase of the Sustainability Project.

## Energy

Energy is critical to our way of life. The growing demand for energy is driven by the growth of our communities, changing technologies, and increased demand of our customers. Energy, its use, and production must be sustainable to maintain our vibrant urban and rural communities, and must not affect our health and well-being or our incredible surroundings.

***Sustainable Energy** - that which is produced from renewable sources that do not deplete or degrade our natural resources (air, water, land). Sustainable energy sources include all renewable energy sources, such as solar energy, wind energy, wave power, geothermal energy, bioenergy, hydroelectricity, and tidal power. It also includes technologies designed to improve energy efficiency.*

Energy, though, brings with it inherent problems. Fossil fuels like coal, petroleum, and natural gas must be mined or extracted from the Earth, processed, and transported to the point where they are burned either in homes, like natural gas and fuel oil, or at generating stations where large amounts of fossil fuels are burned, producing electricity that is then transmitted to homes and businesses. Scientists link the burning of fossil fuels to air and water pollution, the spread of toxic substances like mercury, human health impacts, damage to ecosystems, the potential to affect climate change, and most recently with impacts to drinking water from natural gas production. And while wind and solar energy have the potential to greatly reduce greenhouse gases as well as the nation's dependence on foreign oil, they are not without negative effects: wind turbines kill significant numbers of birds and bats annually, and solar farms can displace habitat for plants and animals.

Energy use in El Paso County differs greatly from its use in Teller County. El Paso County is the most populous county in Colorado and is a thriving urban center. Teller County is more rural with smaller mountain communities. These differences can be seen simply by looking at the fuels we most commonly use to heat our home:

### Energy Task Group\*

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Mark James, Colorado Springs Utilities  
Joe Jenkins, Black Hills Energy  
Brent Kennedy, Coalition for the Upper South Platte  
Ray Krueger, Green Cities Coalition

\* Many stakeholders participated in the development of PPR 2030. This list represents the individuals who led the development of the Energy section. A full list of participants can be found on page ii-iii.



El Paso County:

Utility gas (85.6%)

Electricity (8.2%)

Bottled, tank, or LP gas (5.3%)

Teller County:

Natural gas (40.6%)

Bottled, tank, or LP gas (37.7%)

Wood (11.3%)

Electricity (9.1%)

Solar energy (0.8%)

Six utilities provide electric and natural gas services to El Paso and Teller Counties: Colorado Springs Utilities, Black Hills Energy Gas Operations in El Paso and northern Teller Counties, Black Hills Energy Electric in southern Teller County, Fountain Utilities in southern El Paso County, Mountain View Electric in El Paso County, Colorado Natural Gas in southern and western Teller County, and Intermountain Rural Electric in northern Teller County. All are invested to some degree in renewable energy resources and all promote energy efficiency and conservation.

The Pikes Peak regional Sustainability Project identified two primary goals, with associated strategies, in order to help our region move toward a more sustainable energy future:

**Renewable Energy** - 50% of energy consumed in the region is renewable and/or sustainable, maximizing the amount of renewable energy produced in the region from a 2010 baseline.

**Energy Efficiency** - Energy use in the region is reduced by 20% from a 2010 baseline (despite growth in population or commercial expansion).

**The Case for Conservation and Energy Efficiency**

America has 5% of the world's population yet consumes 25% of the world's energy. This statistic alone should wake us up to the need, or at least the opportunity, for conservation.

*“Conservation really is the low-hanging fruit.”* The cheapest energy is what we do not consume.

It is estimated that spending \$1 on energy efficiency measures saves \$5 on renewable energy measures. Energy efficiency measures achieve the same benefits, both in quantity and quality of output, while using less energy – they save money, yet maintain functionality, comfort, and health. Many of the conservation measures we can make in our habits pay back instantly. Other energy efficiency measures, such as lighting, equipment upgrades, and insulating our homes and businesses pay back quickly and continue to save money thereafter.

It is estimated that about 30% of our nation's energy is wasted through human behavior and inefficiencies of equipment, processes, and building design. Energy efficiency improvements in all manner of energy consumption can greatly enhance a family's or business's bottom line. Technologies to help support such improvements continue to be developed and represent significant economic opportunities. Helping implement renewable energy, energy efficiency, and conservation strategies requires a new relationship between energy provider and consumer.

Utility providers in the Pikes Peak region actively work with their customers to engage them in energy efficiency programs and renewable energy measures. The consumer, however, is a

critical element in the equation; programs offered by utilities will be successful only when substantial numbers of consumers participate. It is incumbent on all customers to engage in conservation and energy efficiency programs, as well as renewable energy measures, to help reduce environmental impacts associated with increasing energy production needed to serve the demand of our customers.

### **The Case for Renewable Energy**

Few things have benefited society and harmed our environment more than our energy choices. The abundance of cheap fossil fuels has been a significant factor in economic development and population growth over the past 200 years. Petroleum, coal, and natural gas are energy-rich and have, in the past, been easy to extract and transport. These resources are, however, finite. In the future these resources will be more costly to produce.

We now compete globally for resources, and demand is driving the cost up at a time of decreasing supply. We see growing evidence of the increase in cost for petroleum products in gas, airline travel, and food prices. Global oil production has reached a peak with most of the world's oil-producing nations no longer able to increase production. Oil production will likely plateau for perhaps a decade and then decline, while demand will continue to rise.<sup>20</sup> This does not mean we will run out of oil soon; it means cheap oil is effectively gone.<sup>21</sup> This fact will drive the development of vehicles with greater fuel efficiency, as well as alternative fuel and electric vehicles. Electric vehicles will require new methods of energy storage and major expansion of distributed charging options.

National security is also impacted by our dependence on oil. Today, over 80% of world petroleum reserves are controlled by countries that have the power to manipulate supply and price with impunity. From an economic point of view, energy independence means supply and price stability. This is an objective that can only be achieved through the development of alternative transportation fuels and multi-fuel vehicles, including electric, which give consumers an opportunity to choose a non-petroleum fuel at the pump.<sup>22</sup>

If we expect to continue to have a vibrant economic landscape in the future, transitioning from fossil-fuel-based energy to renewable sources is imperative. Across the nation, and the world, the demand for low-sulfur coal is growing. China is now a net importer of coal<sup>23</sup> with their reserves expected to last less than 40 years. Locally, the cost of coal is expected to rise by 4% per year. The US Geological Survey has estimated that the Powder River Basin coal reserves, while large, have only 6% that is recoverable at prices close to today's costs.<sup>24</sup>

Since the mid-seventies oil embargo, science and technology have been steadily making great advances in renewable energy. New methods and materials are coming to market at increasing speed and the costs continue to come down. At present, the cost of wind and solar power is approaching parity with electricity production from natural gas.<sup>25</sup> Generation from coal is still

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<sup>20</sup> [http://www.eia.gov/forecasts/ieo/more\\_highlights.cfm#world](http://www.eia.gov/forecasts/ieo/more_highlights.cfm#world)

<sup>21</sup> <http://www.energyboom.com/policy/shell-oil-report-warns-peak-oil>

<sup>22</sup> <http://www.americanenergyindependence.com/>

<sup>23</sup> [http://iis-db.stanford.edu/pubs/22966/WP\\_94\\_Morse\\_He\\_Greatest\\_Coal\\_Arbitrage\\_5Aug2010.pdf](http://iis-db.stanford.edu/pubs/22966/WP_94_Morse_He_Greatest_Coal_Arbitrage_5Aug2010.pdf)

<sup>24</sup> <http://pubs.usgs.gov/of/2008/1202/>

<sup>25</sup> <http://www.renewableenergyworld.com/rea/news/article/2011/10/solar-closes-in-on-grid-parity>

cheaper; however, significant investments are needed to maintain compliance with new environmental requirements. For example, Colorado Springs Utilities recently began work to remove sulfur dioxide (SO<sub>2</sub>) from emissions from the coal-fired Drake Power Plant to comply with new regional haze air pollution requirements in Colorado and in support of cleaner coal technologies for power generation.<sup>26</sup>

There is no fuel cost associated with wind and solar. Long-term costs like operation and maintenance are minimal. But there are replacement costs at the end of life of these technologies that must be considered. When utilities develop new programs to offer electricity from wind, solar, and other new technologies, consumers' utility bills typically go up in the short term. This is because utilities must invest in infrastructure needed to integrate these new technologies into their electric transmission and/or distribution system.

Locally there has been significant recent development in renewable projects. The Air Force Academy's 5.2 megawatt (MW) solar array and Fort Carson's 2 MW array are excellent examples of new, clean, renewable energy sources. With the Defense Department's Net Zero Energy installation initiative, the military has made it clear that sustainability and energy security are top priorities. For the residential sector, Colorado Springs Utilities recently approved two 500 kilowatt (kW) solar gardens that will make solar energy leases available to customers who cannot put a system on their home, and Colorado Springs Utilities has pending requests to install two additional 500 kW solar gardens by 2012. These highly visible projects heighten our awareness of renewables and have the potential to help expand the clean energy technology industry throughout the region.

Conservation, energy efficiency, and renewable and/or sustainable energy are the future, for mankind and our community. Energy technology has enormous potential for economic development during the transition to a renewable and sustainable energy future. Energy is the life blood of our economic vitality, and we need to meet this challenge eagerly and efficiently.

There will be inevitable debate among policy makers, industry, stakeholders, and the citizenry over the short-term versus long-term costs of transitioning to renewable and sustainable energy systems. There is no doubt it must be done; the pace is more the question. The combination of federal and state mandates as well as voluntary strategies will eventually move us to a more sustainable mix of energy sources. With this PPR 2030, we are establishing specific and achievable goals for the near future.

### **Strategy Table Overview**

The following strategy table outlines the high-level strategies recommended for the energy goals. Please note that the lead entity(s) and potential partners were proposed by the task groups and may require refinement as PPR 2030 is implemented. For additional information such as baseline data and current conditions, please see Appendix G. The appendix also provides a strategy table that outlines more detailed proposed sub-strategies to facilitate implementation of the goals. While the high-level strategy table in the main document and the strategy table in the

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<sup>26</sup> Colorado Springs Independent, Oct 4, 2011; <http://www.pollutiononline.com/article.mvc/Emissions-Control-Technology-Colorado-Springs-0001>

appendix correlate and address the same energy goals, as a part of the strategy development process, they may not match in structure. The strategy table in the appendix served as the foundation from which the task group revised and modified strategies to develop the high-level strategy tables outlined in the main document (below).

## Energy Strategy Table

<b>GOAL 1:</b> By 2030, the region has made considerable progress toward 100% sustainable energy usage. Achieving this goal means: <ol style="list-style-type: none"> <li>50% of energy consumed in the region is renewable and/or sustainable, maximizing the amount of renewable energy produced in the region from a 2010 baseline.</li> </ol>				<b>GOAL METRIC(S):</b> Metered sales by utilities, units sold of petroleum products and propane	
<b>Challenges:</b> Due to its intermittency, integrating renewable energy will be a challenge requiring new technologies and different operating parameters for both energy provider and user. With renewable energy systems, you are effectively buying your fuel up front which increases first cost but has more stable future costs.					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.1	<b>Incentivize renewable/sustainable energy:</b> Incentivize residential, commercial, and industrial participation in renewable/sustainable energy.	Utilities have renewable energy rebate programs	Utilities	Governor’s Energy Office, local governments, residential, commercial, industrial customers	Number of utility program participants and those program values; RE portfolio value (the percentage of energy sales that come from renewable sources), typical for many strategies.
<i>Examples:</i> 1) rebate programs for distributed photovoltaic, geexchange, solar thermal and wind systems, 2) create policy and programs to grow community solar gardens; 3) RE businesses and home builders/contractors collaboration/training; 4) community branding					
1.2	<b>Encourage utility-scale RE projects</b> within the region <sup>27</sup>	USAFA, USAF, Ft. Carson	Utilities, customer groupings (community, subdivision, retail, military base, complex, local government)	Governors Energy Office, cities, counties, DOD customers, college campuses, large industrial, neighborhoods, renewable energy associations	MW renewable v MW fossil-fuel-based generation (i.e., portfolio mix); number of projects
<i>Examples:</i> 1) create micro grids or net-zero energy districts; 2) foster energy storage technology; 3) partnerships and collaborations with utilities, businesses, and financiers					

<sup>27</sup> Region is defined as Teller and El Paso Counties but realizes that state-based projects provide local benefits.

**GOAL 1:** By 2030, the region has made considerable progress toward 100% sustainable energy usage. Achieving this goal means:  
 1. 50% of energy consumed in the region is renewable and/or sustainable, maximizing the amount of renewable energy produced in the region from a 2010 baseline.

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.3	<b>Create public outreach and education strategies</b> to engage public participation in renewable energy programs.	Woodland Park Sustainability Plan, Teller Energy Strategic Plan, TellerEnergy.com,	Community advocates	Catamount Institute local media, Teller Energy; COSEIA, Council of Neighborhood Organizations, realtors, civic groups, business and trade groups, utilities	Funding and participation levels; number and depth of promotions and media outlets, number of engagements and events; existence of campaign, engagement of constituents
<i>Examples:</i> 1) create publicity materials that highlight the benefits of renewable energy, 2) use all media avenues to promote a clean energy ethic for our community; 3) regular engagement of community in their local meeting places and events; 4) energy independence campaign; 5) community feedback; 4) community branding					
1.4	<b>Develop and encourage adoption of local/regional policy and regulatory strategies</b> to enable the use of renewable energy.	USAFA Solar Project, BHE third-party agreements, Woodland Park Comprehensive Plan	(TBD)	Utilities, cities, counties, schools, corporations, non-profits	(TBD)
<i>Examples:</i> 1) standardized third-party power purchase agreements; 2) feed-in tariffs; 3) regional and national electric grid to support RE; 4) community design and development; 5) distributed generation and micro-generation; 6) equalization of renewable portfolio standards for all utilities					
1.5	<b>Encourage the development of electric vehicle policies and programs.</b>	Ford, Clean Cities Coalition	Clean Cities Coalition	EDC, COC, utilities, solar providers, consumers, businesses, local government, car dealers	Number of electric vehicles

<b>GOAL 2:</b> By 2030, the region has made considerable progress toward 100% sustainable energy usage. Achieving this goal means: 2. Energy use in the region is reduced by 20% from a 2010 baseline (despite growth in population or commercial expansion).				<b>GOAL METRIC(S)</b> Metered sales by utilities and unit sold of petroleum and propane products. All forms will be converted to therms for a total.	
<b>Challenges:</b> Funding, education, and outreach for these programs is the biggest challenge.					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
2.1	<b>Incentivize for demand-side management:</b> Incentivize residential, commercial, and industrial participation in demand-side management programs.	Utilities, federal govt., Governor's Energy Office, Energy Star, LEAP-CO, HEAP (CSU and Energy Resource Center), Green Power, CSU web tools, Power Saver, DOE 'Building America' programs, ecobrokers	Utilities (BHE, CSU, IREA, MVEA), colleges, DOE, auditors, realtors, apartment associations, DOD	Contractors, national, state, and local government, consumers, alternative energy providers, citizen/community task force, website online tools, HBA, realtors, home improvement stores, library, contractors, auditors, HVAC techs, home builders, USGBC	Number of energy retrofits, number of rebate programs and applications, reduced number of customers in high rate categories, shifting of demand away from peak hours, adoption and impact of plans and billing programs, reduced energy use by targeted groups, development, reliability, and use of database when renting, buying or improving property
<i>Examples:</i> 1) rebate and tax incentive programs; 2) rate programs – block (volume) rates, time of day rates; 3) SmartGrid interruptible systems; 4) forward billing; 5) fee and dividend programs; 6) substation and subdivision specific programs; 7) home energy monitors; 8) public and online tools for EE support; 9) whole-house approach to new building and retrofits; 10) database of property energy use and green features					
2.2	<b>Create public outreach and education strategies</b> to engage public participation in energy efficiency.	Utilities, Energy Star, Pikes Peak Workforce Center, Teller Energy, Woodland Park Comprehensive Plan	Utilities, Pikes Peak Workforce Center, Governor's Energy Office, Teller Energy	Citizen task force, EE advocacy group, schools, colleges, HBA, local government, utilities, chambers of commerce, sustainable businesses, builders	Number and depth of messages, public awareness and engagement, EE promotion programs, development of website and green guide, survey completion

<b>GOAL 2:</b> By 2030, the region has made considerable progress toward 100% sustainable energy usage. Achieving this goal means: 2. Energy use in the region is reduced by 20% from a 2010 baseline (despite growth in population or commercial expansion).					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
<i>Examples:</i> 1) publicity materials that highlight and promote the benefits of the SmartGrid, availability of incentives and rebates, DSM programs, and energy efficiency measures 2) use of all media avenues to promote an energy saving ethic for our community; 3) regular engagement of community in their local meeting places and events; 4) website platform and EE models for effective engagement; 5) recognition, training, and promotion of local green tradesmen and developers; 6) green business directory; 7) community feedback surveys					
2.3	<b>Develop and encourage adoption of local/regional policy and regulatory strategies to promote energy efficiency.</b>	Federal projects, utilities, Teller Energy, Woodland Park Comprehensive Plan, Teller County Strategic Plan	Local governments, regional building and planning departments, industry	Local governments, contractors, HBA, regional building and planning departments, builders, USGBC, developers, architects and engineers, Green Cities Coalition, stakeholders, community task groups, stakeholders	Higher than international energy efficiency codes, development of tools and/or database of cost analysis, development and activities of task force, average energy consumption per building declines, use of renewable and regional materials in construction
<i>Examples:</i> 1) adoption of higher energy standards in building codes for new and remodeled buildings for all sectors; 2) develop policies and procedures to improve sustainable practices in community design and development; 3) citizen task force to develop and promote adoption of new standards; 4) sustainable and green certifications for new public buildings; 5) use of rapidly renewable and regional materials in building construction; 6) encouragement of environmentally preferred purchasing policies for public and non-public entities.					
2.4	<b>Facilitate the adoption of high-efficiency and grid-enabled vehicles and supportive infrastructure.</b>	(TBD)	Utilities, local governments, Southern Colorado Clean Cities Coalition, market, building department, designers, builders, contractors, citizen groups	EDC, COC, utilities, solar providers, consumers, businesses, local government, car dealers, auto dealers, electric contractors, hotels, motels	Number of electric vehicles sold, number of alternative and sustainable fuel conversions, number of plug-in hybrids sold, number of rebate programs for these type vehicles, number of charging stations installed



## Additional Strategies Relevant to Energy

The following table outlines strategies from other topic areas that potentially intersect with energy issues and strategies. The correlation between these topics was identified by the task groups and outlined in an overarching strategy matrix that can be found on page 92.

<b>Other Topic-Area Strategies Intersecting with Energy</b>		
<i>Topic Area</i>	<i>Strategy</i>	<i>Strategy Table Page Number</i>
<b>Agriculture</b>	1.3 Promote farming practices and agricultural research	6
<b>Built Environment</b>	1.4 Maintain existing public infrastructure	23
	1.9 Adopt enhanced green building and energy codes	
	1.10 Continue grant and rebate programs	
<b>Natural Environment</b>	1.1 Establish a systems paradigm	27
<b>Air Quality</b>	1.2 Track baseline information-outdoor air quality	33
	1.3 Greenhouse gas inventory and strategies	
	1.5 Develop outdoor outreach plan	
	1.6 Ozone non-attainment designation	
<b>Economic Development</b>	2.1 Stimulate new ways of addressing challenges	42
	2.2 Support and promote goals and plans	
	2.3 Support and promote industry clusters	
	2.4 Support the growth of local businesses	
	3.4 Foster and encourage educational opportunities	
	3.6 Support local sustainable industry development	
<b>Transportation</b>	1.2 Public funding of alternative transportation	74
	3.1 Facilitate the development, manufacturing, and deployment of fuel cell technology	
	3.3 Public/private partnerships	
<b>Water Quantity</b>	2.1 Implement conservation BMPs	84

## Health

Colorado currently has a reputation for being a healthy place to live. We are the leanest state in the nation, and we have a large population of individuals who engage in a variety of physical and outdoor activities. However, recent statistics show a much less favorable picture. For example, the prevalence of obesity has more than doubled in El Paso County since 1995.<sup>28</sup> Suicide rates in El Paso County for 2004-2009 were significantly higher than the rest of the state, and the suicide rate for veterans in El Paso County was more than twice the rate for the general population (which is higher than the state rate, which is 6<sup>th</sup> highest in the U.S.). In 2009, El Paso County saw an increase in the percentage of underinsured from 12.2% to 13.3%.<sup>29</sup>

### Health Task Group\*

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Tom Gonzales, El Paso County Public Health  
Nigel Guyot, El Paso County Public Health  
Carm Mocerri, Memorial Health System  
Dave Munger, Council of Neighbors and Organizations  
Matt Payne, Peak Vista Community Health Centers  
John Suits, Memorial Health System

In order to tackle these problems, a set of goals and strategies was envisioned that will lead to a regional population that is healthy, is long-lived, and has a good quality of life by 2030. The topic of health has shared strategies with environment (water, air), transportation (access to health care), built environment (hiking and biking trails, access to grocery stores, safe walking/biking to schools, local food), and agriculture (access to healthy foods, farm-to-school programs). Therefore, it is recognized that any proposed goals and/or strategies must align with the work being done within the other sectors and collaboration among groups has been a key component to writing PPR 2030.

The Pikes Peak region faces some significant challenges in the field of health, including the unknown impact of Memorial Health System's governance reform, the unknown effects that health care reform will bring about, the ever-shifting dynamics of the health care industry in general as well as the instability of the region's infrastructure. These challenges have led to a set of goals and strategies that have been written to adapt accordingly. In addition, El Paso County Public Health is currently conducting a Community Health Assessment. The findings from this assessment will be used as a basis on which to definitively set those goals and strategies. The results will be tracked and measured in subsequent Quality of Life Indicators Reports and Community Assessments.

Health indicators of a population include infant mortality, healthy eating and active living, cardiovascular health, mental health statistics, tobacco use, mental health and substance abuse,

\* Many stakeholders participated in the development of PPR 2030. This list represents the individuals who led the development of the Health section. A full list of participants can be found on page ii-iii.

<sup>28</sup> Behavioral Risk Factor Surveillance System (BRFSS); Healthy People 2020 Objectives NWS-9

<sup>29</sup> Various Authors (2011). *2011 Quality of Life Indicators for the Pikes Peak region*. Colorado Springs, CO: Pikes Peak United Way.

unsafe sexual practices, injury prevention, access to care, infectious disease prevention, food safety, etc. A ranking system is commonly used within this industry, so the first health goal has been drafted to mirror this ranking process. In order to ensure that the Pikes Peak region reaches the goal of being one of the top 10 regions in the country for individual and population health and well-being in 2030, the community must work as a whole toward increasing the emphasis on wellness and healthy living. This work starts with a second goal, which is to make health and wellness care accessible and affordable for every resident. In addition, the long-term health of the community depends on a network of care focused on prevention and early intervention to avoid worsening medical and behavioral health status.

As more data becomes available as a result of the Community Assessment, the strategies behind these goals will become more defined. Currently, the strategies address making all forms of health care widely available and affordable to everyone by increasing the number of primary care, behavioral, and specialist providers and by increasing the number of individuals who have health insurance. Additional strategies focus on helping to facilitate collaboration among these health care providers to create a patient-centered primary care relationship that allows for smooth transition of care across disciplines. In addition, strategies are written to address increasing access to healthy foods and opportunities for physical activity as well as increasing regulatory barriers to the purchase and use of tobacco.

The successful implementation of the health goals and strategies are imperative to the success of PPR 2030. There is no question that without sustaining healthy and thriving individuals, there can be no sustainable and thriving region.

### **Strategy Table Overview**

The following strategy table outlines the high-level strategies recommended for the health goals. Please note that the lead entity(s) and potential partners were proposed by the task groups and may require refinement as PPR 2030 is implemented. For additional information such as baseline data and current conditions, please see Appendix H. The appendix also provides a strategy table that outlines more detailed proposed sub-strategies to facilitate implementation of the goals. While the high-level strategy table in the main document and the strategy table in the appendix correlate and address the same health goals, as a part of the strategy development process, they may not match in structure. The strategy table in the appendix served as the foundation from which the task group revised and modified strategies to develop the high-level strategy tables outlined in the main document (below).

## Health Strategy Table

<p><b>GOAL 1:</b> By 2030, the region’s population is healthy, long-lived, and has a good quality of life. Achieving this goal means:</p> <ol style="list-style-type: none"> <li>By 2030, the Pikes Peak region ranks in the top 10 in the United States for individual and population health and well-being.</li> </ol>				<p><b>GOAL METRIC(S):</b></p> <ul style="list-style-type: none"> <li>Quality of Life Indicators Report</li> <li>Public Health Assessment</li> <li>Gallup Healthways Well-Being Index</li> <li>OECD Health and Well-Being Index</li> </ul>	
<p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>The current use/application of the 2-1-1 system</li> <li>The unknown impacts of health care reform</li> <li>The unknown and shifting dynamics of the health care industry</li> <li>The unknown impacts of Memorial Health System’s ownership</li> <li>The instability of the region’s infrastructure (e.g., movement of organization and leadership, development of Peak View, etc.)</li> <li>Coordination of varying projects tracking community health</li> </ul>					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.1	The community has more <b>opportunities to become better informed and knowledgeable</b> about health and wellness.	(TBD)	(TBD)	El Paso County Public Health; LiveWell Colorado Springs; Hospitals; Kaiser/other insurers; 2-1-1; School districts, public and private K-12; YMCA	Public awareness campaigns about nutrition, exercise, health risks like tobacco use and obesity; preventable childhood diseases, preventable injuries and illness, mental health, and self-management tools for prevention and chronic disease management promote health and wellness Increased levels of health literacy Awareness of the economic impact of untreated mental illness
1.2	Our community <b>promotes safe and healthy behaviors.</b>	(TBD)	(TBD)	El Paso County Public Health; hospitals; private and public providers	Increased barriers to tobacco use Increased compliance with cancer and other chronic condition screenings Prenatal and postnatal care is available to all who need it. Decreased obesity rates for children and adults Food, air, and water are safe for everyone. Accessible exercise opportunities are widely available. Local, healthy food is widely available, safe, and affordable Behavioral health care and crisis intervention is widely available and affordable for everyone

<b>GOAL 2:</b> By 2030, the region’s population is healthy, long-lived, and has a good quality of life. Achieving this goal means: 2. By 2030, health and wellness care is accessible and affordable for every resident.				<b>GOAL METRIC(S):</b> <ul style="list-style-type: none"> <li>• Quality of Life Indicators Report</li> <li>• Public Health Assessment</li> </ul>	
<b>Challenges:</b> <ul style="list-style-type: none"> <li>• The growing aging population</li> <li>• Cutbacks in military health care providers, which increases the need for/use of community health care systems</li> </ul>					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
2.1	<b>Increase the number of health care providers</b> to meet needs of the community: primary care, behavioral, specialists.	(TBD)	(TBD)	Hospitals, public and private health care providers; AspenPointe; UCCS; University of the Rockies; PPCC; Governor’s Commission on Family Medicine; El Paso County Medical; Society Medical; Student Support; Task Force; State Health Department; Cedar Springs; Network of Care; Peak Military Care Network	Expansion of medical residency programs Implement community-based cooperative recruiting of providers Expansion of educational programs for health care providers Reduction of regulatory barriers for behavioral health providers
2.2	<b>Increase care coordination and communication</b> among providers within community care systems.	(TBD)	(TBD)	CORHIO; Community Health Partnership; El Paso County Medical Society; public and private providers including long-term, home, hospice, rehab; El Paso County Medical Society; Extended Care; Network of Care; Peak Military Care Network	Continued and expanded collaboration among all health care providers, including those serving the uninsured, underinsured, and active and retired military Coordination of behavioral and medical care Participation in Health Information Exchange, electronic medical records, and technology solutions to sharing information Increased use of patient navigators, health coaches, community health workers Adoption of patient-centered care and programs to improve health outcomes and reduce costs Smooth transitions of care throughout the health care system

**GOAL 2:** By 2030, the region’s population is healthy, long-lived, and has a good quality of life. Achieving this goal means:

2. By 2030, health and wellness care is accessible and affordable for every resident.

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
2.3	<b>Reduce economic, social, geographical, and cultural barriers to care.</b>	(TBD)	(TBD)	Social service agencies; 2-1-1; Pikes Peak United Way; public and private providers; El Paso County Public Health; YMCA (Access to Healthcare); Peak Military Care Network; Network of Care	<p>Increased knowledge of resources by consumers through public awareness campaigns</p> <p>Increased number of individuals who have health insurance</p> <p>Enhanced provider reimbursement rates for Medicaid, Medicare, and Tricare</p> <p>Increased number of people in patient-centered primary care relationships</p> <p>Increased geographic distribution of health care providers</p> <p>Implementation of a centralized resource navigation system for social services</p> <p>Utilization of patient navigators, health coaches, and case managers who have cultural relevance</p>

## Additional Strategies Relevant to Health

The following table outlines strategies from other topic areas that potentially intersect with health issues and strategies. The correlation between these topics was identified by the task groups and outlined in an overarching strategy matrix that can be found on page 92.

<b>Other Topic-Area Strategies Intersecting with Health</b>		
<i>Topic Area</i>	<i>Strategy</i>	<i>Strategy Table Page Number</i>
<b>Agriculture</b>	1.2 Improve regional food systems	6
	1.3 Promote farming practices and agricultural research	
	1.4 Encourage regional collaboration and cooperation	
	1.5 Promote urban agriculture	
	1.7 Promote programs that teach	
	1.9 Promote programs and practices	
<b>Built Environment</b>	1.2 Plan and design new and existing projects	23
	1.4 Maintain existing public infrastructure	
	1.7 Support/promote local food production	
<b>Natural Environment</b>	1.5 Apply adaptive management practices	27
<b>Air Quality</b>	1.1 Voluntary indoor certification process	33
	1.2 Track baseline information-outdoor air quality	
	1.3 Greenhouse gas inventory and strategies	
	1.4 Develop indoor outreach plan	
	1.5 Develop outdoor outreach plan	
	1.6 Ozone non-attainment designation	
<b>Water Quality</b>	1.1 Understand baseline conditions	36
	1.2 Water quality impairment	
	1.3 Develop outreach plan	
	1.4 Develop strategies	
	1.5 Update and implement regulations	
	1.6 Implement Strategic Plan	
<b>Economic Development</b>	2.1 Stimulate new ways of addressing challenges	42
	3.6 Support local sustainable industry development	
<b>Transportation</b>	1.2 Public funding of alternative transportation	74
	2.2 Facilitate multi-mobility alternatives	
	3.2 Seek, support, and expand interregional alternative transportation modes	

## Materials Management and Procurement

How we use materials here in the Pikes Peak region is fundamental to many aspects of our economic and environmental future. If we want to be competitive, we need to adopt a goal of sustainably using materials in a way that integrates both environmental and economically feasible approaches to reduce and reuse waste and recycle and remanufacture goods. Materials management requires active examination of routine purchasing, use, and disposal decisions in ways that reflect the interrelatedness of these actions and their impact on the environment. The materials management goals in PPR 2030 include elements related to procurement, hazardous waste, reuse and recycling, and disposal.

### Materials Management and Procurement Task Group\*

Kathy Andrew, El Paso County Household Hazardous Waste Facility  
Alicia Archibald, Bestway Disposal  
Felicia Barber, Pikes Peak Workforce Center  
Bard Lower, City of Colorado Springs  
Carrie McCausland (chair), City of Colorado Springs  
Nate Searing, Sustainable Fort Carson

Sustainable materials management includes maximizing the use of renewable sources in manufacturing processes, extending the usable life of products through reuse and repurposing, and minimizing or

eliminating disposal methods that pollute. This includes concepts like Product Stewardship, whereby environmental protection centers around the product itself, and everyone involved in the lifespan of the product takes responsibility to reduce its environmental impact.

Manufacturers redesign products and packaging to use fewer harmful substances, to be more durable, reusable, and recyclable, and commit to make products from recycled materials. Consumers take an active role in ensuring the recycling or proper disposal of end-of-life products.

It is important to shift our emphasis from waste management to materials management. Materials management includes: knowing about and reducing the lifecycle impacts across the supply chain; using fewer material inputs (reduce, reuse, recycle); using less toxic and more renewable materials; and considering whether services can be substituted for products. Colorado's recycling rate is 12.5%, which is less than half the national average. Colorado ranks 39th in the United States, while El Paso County (including Colorado Springs) has one of the lowest rates in the state. In the Pikes Peak region, we landfill over 2,500,000 tons of waste every year. A recent audit of residential trash in our area found 58% was recoverable.

Recycling is a powerful economic development tool. When a community cuts its waste stream in half, it reduces solid waste management costs and builds the local and regional economy. It is environmentally and economically imperative to properly manage materials.

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\* Many stakeholders participated in the development of PPR 2030. This list represents the individuals who led the development of the materials management and procurement section. A full list of participants can be found on page ii-iii.



The materials management goals are:

1. **There is a 70% reduction in solid waste sent to landfills.** This goal can be accomplished by adopting plans and incentives to reduce, reuse, and recycle, such as converting organic kitchen and garden waste into compost. It is an easy way to limit the growth of landfills, reduce the carbon footprint, and add healthy, rich nutrients to garden soil and potted plants.
2. **Household hazardous waste is minimized, managed, and properly disposed of, as reflected in a substantial increase in drops to regional hazardous household hazardous waste facilities.** This goal can be accomplished by encouraging reduction in the amount of products purchased that contain hazardous ingredients, considering non-hazardous alternative methods or products for common household needs, promoting involvement in household hazardous waste programs rather than discarding items in the trash, and providing options and easy alternatives to allow increased participation.
3. **Individual, business, and government purchasing is guided by the tenets of reduce, reuse, recycle. All businesses and public institutions have developed and are choosing to follow sustainable procurement guidelines.** This goal seeks to establish guiding principles and goals, cost-benefit analyses, and detailed action plans to develop procurement key impacts, such as energy use, waste generation, and transportation.

### **Strategy Table Overview**

The following strategy table outlines the high-level strategies recommended for the materials management and procurement goals. Please note that the lead entity(s) and potential partners were proposed by the task groups and may require refinement as PPR 2030 is implemented. For additional information such as baseline data and current conditions, please see Appendix I. The appendix also provides a strategy table that outlines more detailed proposed sub-strategies to facilitate implementation of the goals. While the high-level strategy table in the main document and the strategy table in the appendix correlate and address the same materials management and procurement goals, as a part of the strategy development process, they may not match in structure. The strategy table in the appendix served as the foundation from which the task group revised and modified strategies to develop the high-level strategy tables outlined in the main document (below).

## Materials Management and Procurement Strategy Table

<b>GOAL 1:</b> By 2030, the region has made significant progress toward a zero-waste future. Achieving this goal means: 1. There is a 70% reduction in solid waste sent to landfills			<b>GOAL METRIC(S):</b> Number of pounds of waste sent to landfill.		
<b>Challenges:</b> Multiple haulers in the region					
#	High-Level Strategies	In an Existing Plan?	Lead Entity(s)	Potential Partners	Relevant Strategy Metric(s)
1.1	<b>Provide recycling at government facilities:</b> Provide and expand easy-to-use and easy-to-understand recycling opportunities for on-site users at all government-owned facilities within the region.	No	Governmental entities (federal, state, local, school districts, etc.)	Waste haulers, general public	(TBD)
1.2	<b>Provide more public recycling:</b> Provide more public recycling opportunities throughout the region.	No	Local governments, waste haulers, HOAs	Green Cities Coalition and other recycling organizations	(TBD)
1.3	<b>Establish regional processing facility:</b> Establish a regional processing facility for the reuse of publicly owned roadway construction materials.	No	Local governments	Developers, HBA	(TBD)
1.4	<b>Require recycling for permitted activities:</b> Require that recycling options be provided for any event for which governmental permits are required or issued.	No	Local governments	(TBD)	(TBD)
1.5	<b>Incentivize construction and demolition recycling:</b> Incentivize construction and demolition recycling.	No	Local governments, regional building departments	Developers (HBA), waste haulers	(TBD)
1.6	<b>Develop tracking methods:</b> Develop methods to track recycled materials throughout the region consistent with the Colorado Department of Public Health and Environment's (CDPHE's) Commodities Reporting Form.	No	Local governments	Waste haulers, CDPHE	Developing metrics will be part of the methods

<b>GOAL 1:</b> By 2030, the region has made significant progress toward a zero-waste future. Achieving this goal means: 1. There is a 70% reduction in solid waste sent to landfills					
#	High-Level Strategies	In an Existing Plan?	Lead Entity(s)	Potential Partners	Relevant Strategy Metrics
1.7	<b>Require recycling areas for multifamily and commercial:</b> Adopt building codes that require the inclusion of fenced recycling collection areas in all new or renovated multifamily and commercial buildings.	No	Regional building entities	Local governments, developers (HBA)	(TBD)
1.8	<b>Establish funding source for education programs:</b> Establish an ongoing funding source to educate the public regarding composting at home, recycling, minimizing waste.	No	Local governments, waste haulers	Business community, nonprofit entities interested in recycling (e.g., recycling coalitions)	(TBD)
1.9	<b>Secure funding:</b> Secure grant and other funding that can be used to implement the recycling strategies.	No	(TBD)	(TBD)	(TBD)

<b>GOAL 2:</b> By 2030, the region has made significant progress toward a zero-waste future. Achieving this goal means: 2. Household hazardous waste is minimized, managed, and properly disposed of, as reflected in a substantial increase in drops to regional hazardous household hazardous waste facilities.			<b>GOAL METRIC(S):</b> Number of drops to household hazardous waste facilities		
<b>Challenges:</b> (TBD)					
#	High-Level Strategies	In an Existing Plan?	Lead Entity(s)	Potential Partners	Relevant Strategy Metric(s)
2.1	<b>Establish satellite drop-off sites:</b> Establish strategically placed hazardous waste drop satellite sites.	No	El Paso County	(TBD)	(TBD)
2.2	Build upon and expand the <b>education/outreach</b> program developed by the county.	(TBD)	(TBD)	(TBD)	(TBD)

<b>GOAL 3:</b> By 2030, the region has made significant progress toward a zero-waste future. Achieving this goal means: 3. Individual, business, and government purchasing is guided by the tenets of reduce, reuse, recycle. All businesses and public institutions have developed and are choosing to follow sustainable procurement guidelines.				<b>GOAL METRIC(S):</b> (TBD)	
<b>Challenges:</b> (TBD)					
#	High-Level Strategies	In an Existing Plan?	Lead Entity(s)	Potential Partners	Relevant Strategy Metric(s)
3.1	Establish systems, collaborations, or cooperatives to <b>help organizations obtain access to cost-competitive sustainable products.</b>	(TBD)	(TBD)	(TBD)	(TBD)
3.2	<b>Establish a baseline measure for sustainable procurement practices:</b> Sub-strategy: Develop a survey for local business and government procurement practices Sub-strategy: Collaborate with business consortiums to collect data.	No	Pikes Peak Sustainable Business Network; chambers of commerce; military installations	Local governments	(TBD)
3.3	<b>Form collaborations</b> with local businesses to develop and adopt sustainable procurement guidelines.	No	Pikes Peak Sustainable Business Network, chambers of commerce	Local governments; military installations	(TBD)

## Additional Strategies Relevant to Materials Management and Procurement

The following table outlines strategies from other topic areas that potentially intersect with materials management and procurement issues and strategies. The correlation between these topics was identified by the task groups and outlined in an overarching strategy matrix that can be found on page 92.

<b>Other Topic-Area Strategies Intersecting with Materials Management and Procurement</b>		
<i>Topic Area</i>	<i>Strategy</i>	<i>Strategy Table Page Number</i>
<b>Air Quality</b>	1.1 Voluntary indoor certification process	33
	1.4 Develop indoor outreach plan	
<b>Water Quality</b>	1.1 Understand baseline conditions	36
	1.2 Water quality impairment	
	1.5 Update and implement regulations	
<b>Economic Development</b>	2.1 Stimulate new ways of addressing challenges	42
	2.2 Support and promote goals and plans	
	2.3 Support and promote industry clusters	
	2.4 Support the growth of local businesses	
	3.6 Support local sustainable industry development	
<b>Materials Management and Procurement</b>	2.3 Develop and encourage adoption of local/regional policy and regulatory strategies—energy efficiency	67

## Transportation

Transportation binds people to create society and transfers products to consumers through the supply chains. Fossil fuels are the power source for our current transportation choices and are not sustainable; they will eventually be depleted and the cost of extracting from the final, isolated pockets will rise dramatically for our successor generations. As fossil fuels become very scarce, disputes will continue between societies and cultures beyond what we might see now. This dilemma has two sides: 1) increasing miles traveled per capita increases the fuel depletion problem, and 2) shifting to different power sources and vehicle technologies for the long run (20 years and beyond).

### Transportation Task Group\*

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Bob Featherstone, City of Colorado Springs  
Amy Filipiak, Safe Routes to School  
Alma Grandpre, City of Colorado Springs  
Christopher Juniper, Sustainable Fort Carson  
Brent Kennedy, Coalition for the Upper South Platte  
Ray Krueger (chair), Green Cities Coalition  
Nate Searing, Southern Colorado Clean Cities Coalition  
Lisa Thomas, PPACG

Future generations will need very different transportation modes that do not require fossil fuel to sustain their access to employment, goods, and services. America is nearly 84% urbanized, and by 2050 66% of the world's population will live in urban areas. The Pikes Peak region is unlikely to reach those levels simply due to our topology and public land concentrations. Highway expansion in other areas has delivered diminishing returns; we should explore other approaches to relieving congestion such as transit, walking, carpooling, etc. Another measure of transportation use, vehicle miles traveled (VMT) per capita, has been found in other regions to represent robust economic activity, yet our region is not following that trend. Our economy is currently weak as represented by home foreclosures, unemployment is approximately double a "healthy" level, and employment trends have shifted away from well-paying, high-tech industries toward lower-paid service industries. Thus, the increasing rate of VMT, much higher than our population rate of growth in the Pikes Peak region, represents a distribution of new residents further from their jobs and the destinations they want to visit. Some people call this phenomenon "sprawl." The VMT in our region must be reduced. The primary tool toward this end is to identify employment areas and encourage new, attractive, affordable, mixed-use housing near those employment areas.

Most advocates of VMT reduction targets and recent legislation on the topic (e.g., in California and Washington State) do not specify direct rations or restrictions. Rather, they presume that jurisdictions will try to achieve the targets indirectly by affecting the factors that contribute to or are simply correlated with VMT per capita. Thus, the preferred policies aim at land use (more diversity, density, and infill), investment in alternative modes of transportation to increase ridership per trip, and demand management (including pricing of parking, congestion mitigation, and premium amenities like high-occupancy-vehicle (HOV) lane access supported by access fees).

Our transportation infrastructure, the roads, bridges, and related storm drain structures are deteriorating in the Pikes Peak region with a current maintenance backlog of nearly \$1 billion to rebuild or renovate the infrastructure with declining revenue expectations from the next generation.

\* Many stakeholders participated in the development of PPR 2030. This list represents the individuals who led the development of the Transportation section. A full list of participants can be found on page ii-iii.

New amenities, like the plan to replace at-grade intersections throughout just the City of Colorado Springs and along the State-owned Powers Boulevard corridor with grade-separated interchanges, will cost dozens of millions of dollars each while gasoline sales tax revenue and other sources are rapidly declining. Until new funding sources are found similar to public-private partnerships (PPP) or viable means to access infrastructure banks, we must focus on improving accessibility for our citizens.

The transportation goals are:

1. **The region financially sustains building and maintaining roadway and bridge infrastructure, transit service, bike trails, pedestrian sidewalks, and hiking trails, and supports human service transportation needs.** This goal supports the 25-year long-range plan of the Pikes Peak Area Council of Governments' (PPACG) assessment of each of the our goal's issues and incorporates the known needs of member jurisdictions and best understanding of future funding sources at this time. While the funding estimates are weighted toward road and bridge infrastructure issues, transit services currently support less than 2% of our non-driving citizens' needs to access their jobs, health care, education and social activities. Non-motorized infrastructure sustains the health and wealth of our citizens while attracting visitors to boost our economic development efforts. Non-profit human service transportation providers currently are unable to meet the documented needs of the disabled, senior, and low-income persons.
2. **There is increased accessibility, integration, and connectivity between where we live, work, play, learn, shop, and obtain basic services.** This goal addresses the desired reduction of vehicle miles traveled by improving accessibility with enhanced proximity between citizens and the goods and services they desire.
3. **Half of all transportation-related fuels purchased in the region are renewable and/or sustainable and transportation-related fossil fuel use is reduced by 40% from a 2010 baseline.** This is an incredibly ambitious goal to reduce vehicle fossil fuel consumption in the face of a nearly 20-year population growth trend and even higher rates of vehicle miles traveled than the population growth. Since the auto industry is expecting to begin significant production of hydrogen fuel cell electric vehicles nationally in 2015 and no public charging stations are deployed in the state now, we propose to seek hydrogen recharging equipment manufacturers to establish manufacturing facilities in our region to meet the expected demand for the West. Improvements in internal combustion engine technologies and some switching to electric vehicles will also help attain this goal.
4. **All transportation infrastructures are constructed, maintained, and operated using sustainable practices.** Currently our regional jurisdictions are focused on improving the materials used in capital and maintenance projects (such as recycling asphalt roofing shingles mixed with the road material for street overlay projects) using sustainable funding sources. This innovation reduces the use of very expensive oil used in asphalt by about 5% which helps sustainability. The strategies offer monitoring jurisdictions' efforts for sustainable practices.
5. **There is decreased reliance on single-occupancy-vehicle modes of travel with public transit's share of trips increasing above 3%.** Shifting rides from cars to buses (currently around 1.2% of regional trips) requires a more robust system than the City of Colorado Springs can operate with its general fund sales tax revenue depleted during the recession since 2008.

## **Strategy Table Overview**

The following strategy table outlines the high-level strategies recommended for the transportation goals. Please note that the lead entity(s) and potential partners were proposed by the task groups and may require refinement as PPR 2030 is implemented. For additional information such as baseline data and current conditions, please see Appendix J. The appendix also provides a strategy table that outlines more detailed proposed sub-strategies to facilitate implementation of the goals. While the high-level strategy table in the main document and the strategy table in the appendix correlate and address the same transportation goals, as a part of the strategy development process, they may not match in structure. The strategy table in the appendix served as the foundation from which the task group revised and modified strategies to develop the high-level strategy tables outlined in the main document (below).



## Transportation Strategy Table

<p><b>GOAL 1:</b> By 2030, the region has a sustainable, equitable, and affordable multi-model transportation system (roads, transit, bicycles, and pedestrians walkways) that efficiently and safely moves people and goods. Achieving this goal means:</p> <ol style="list-style-type: none"> <li>The region financially sustains building and maintaining roadway and bridge infrastructure, transit service, bike trails, pedestrian sidewalks, and hiking trails, and supports human service transportation needs.</li> </ol>		<p><b>GOAL METRIC(S):</b></p> <ul style="list-style-type: none"> <li>70 % road centerline miles rated in good condition annually.</li> <li>Project analysis checklists will include measurable social, economic, and environmental factors.</li> <li>Total user cost per mile of transportation modes is constant through 2030 after annual adjustment for inflation.</li> </ul>			
<p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>Federal funding for capital and maintenance of roads, bridges, and transit infrastructure is unstable at the time of this report preparation.</li> <li>PPRTA funding for capital projects will expire at end of 2014.</li> <li>Transit funding in the City of Colorado Springs budgets reduced dramatically after 2008 reducing bus and ADA service.</li> <li>No significant funding increase is committed to support transit-dependent wage earners or to offer premium services for choice riders.</li> <li>Human service providers are consistently declining requests for rides requested by senior, disabled, and low-income individuals adversely affecting their health, wealth, and social well-being.</li> </ul>					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.1	<p><b>Public education and outreach</b> regarding the value of transportation sustainability to community, culture, and commerce.</p>	<p>Pikes Peak Area Council of Governments (PPACG) 2035 Long-Term Regional Plan; City of Colorado Springs <i>Guiding Principles for a More Sustainable City Organization</i>; University of Colorado at Colorado Springs <i>Facilities Strategic Plan</i>; Fort Carson’s <i>Sustainable Fort Carson Program</i>; <i>Colorado College Sustainability Plan</i>; State of Colorado <i>Greening Government</i> program; US Air Force Academy (USAFA) <i>1996 Community Relations Plan</i></p>	<p>PPACG; regional jurisdictions</p>	<p>American Institute of Architects (AIA); Colorado College; University of Colorado at Colorado Springs; United States Green Building Coalition (USGBC); Green Cities Coalition; City of Colorado Springs and other regional jurisdictions</p>	<p>Community-based sustainability studies, workshops, and adopted plans are conducted with increasing frequency year over year</p>

**GOAL 1:** By 2030, the region has a sustainable, equitable, and affordable multi-model transportation system (roads, transit, bicycles, and pedestrians walkways) that efficiently and safely moves people and goods. Achieving this goal means:

1. The region financially sustains building and maintaining roadway and bridge infrastructure, transit service, bike trails, pedestrian sidewalks, and hiking trails, and supports human service transportation needs.

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.2	<b>Public funding of alternative transportation</b> including ridesharing, walking, biking, and transit.	Pikes Peak region 2035 Long-Term Regional Plan; City of Colorado Springs Bicycle Master Plan, Business Plan; Fort Carson <i>Sustainability Bicycle Plan</i>	PPACG; Pikes Peak Rural Transportation Authority (PPRTA); City of Colorado Springs	Region jurisdictions; Trails and Open Space Coalition; Colorado Springs Downtown Partnership	Short-term list of projects accomplished yearly
1.3	<b>Public funding for the maintenance of existing public infrastructure</b> (roads, bridges, utilities, parks, trails, green infrastructure, etc.).	PPACG 2035 Long-Term Regional Plan; PPRTA project list; City of Colorado Springs and other regional jurisdictions	PPACG; PPRTA; City of Colorado Springs and other regional jurisdictions	Region jurisdictions; Trails and Open Space Coalition; private conservatory entities	Short-term list (3-year backlog) of projects evaluated annually
1.4	<b>Financial strategies and economic development incentives</b> to promote multiple choices for mobility modes and infill development to provide complete neighborhoods.	City of Colorado Springs Comprehensive Plan incorporating Academy Boulevard Great Street features	Chamber of Commerce/Colorado Springs Economic Development Corporation (COC/EDC)	Public / private partnerships (PPP)	Energy use (measured as fleet efficiency (mpg), mode split (share of trips by transit, bike, and walk), or as a correlate of VMT)

<p><b>GOAL 2:</b> By 2030, the region has a sustainable, equitable, and affordable multi-model transportation system (roads, transit, bicycles, and pedestrians walkways) that efficiently and safely moves people and goods. Achieving this goal means:</p> <ol style="list-style-type: none"> <li>2. There is increased accessibility, integration, and connectivity between where we live, work, play, learn, shop, and obtain basic services.</li> </ol>	<p><b>GOAL METRIC(S):</b></p> <ul style="list-style-type: none"> <li>• Reduced average regional vehicle miles traveled (VMT) per resident</li> <li>• Media recognition of one or more emerging neighborhood-focused retail projects (at least two articles per year in three local periodicals)</li> </ul>
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**Challenges:**

- Public is largely unaware of cost of job commuting tied to their home location
- Public is also unaware of their neighborhood walkability (ability to walk for access everyday needs) and the benefits of improving both

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
2.1	<b>Increase frequency of fixed route service</b> per hour to improve availability and offer premium, express, and rapid transit services for choice riders (Note: This would augment the current “local” stops and serve only at major intersections and transit hubs.)	FoRT recommendations call for incremental service improvements	Mountain Metropolitan Transit (MMT)--City of Colorado Springs Transit Division	PPRTA; Downtown Partnership	Score routes from a baseline and each doubling of hourly departures from stations. Target eight buses per commuting hour at arterial street stops
2.2	<b>Facilitate multi-mobility alternatives</b> for mobility choices offering highly sustainable performance (e.g., express buses, bus rapid transit infrastructure and services, fixed guideway transit infrastructure and services, personal rapid transit, autonomous low-speed electric vehicles and non-motorized choices for neighborhoods) and emphasize removing mobility gaps with more alternatives.	Academy Boulevard Great Streets study	City of Colorado Springs Planning Division	Downtown Partnership; Economic Development Corporation (EDC)/Chamber of Commerce; PPACG, K-12 education, AIA/USGBC	Engage our communities in conversations to reinvent mobility options. Use this topic as a checklist item for community development plans

<p><b>GOAL 3:</b> By 2030, the region has a sustainable, equitable, and affordable multi-model transportation system (roads, transit, bicycles, and pedestrians walkways) that efficiently and safely moves people and goods. Achieving this goal means:</p> <p>3. Half of all transportation-related fuels purchased in the region are renewable and/or sustainable and transportation-related fossil fuel use is reduced by 40% from a 2010 baseline.</p>		<p><b>GOAL METRIC(S):</b></p> <ul style="list-style-type: none"> <li>• Reduced average vehicle age to increase regional deployment of more fuel-efficient vehicles at normal replacement rates</li> <li>• Decreased single-occupancy vehicle usage rates</li> <li>• Increased deployment of electric vehicles</li> </ul>			
<p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>• Federal funding to support these strategies is unstable at the time of this report preparation; no alternative fuel usage or sales reports are available for the state or region</li> <li>• Hydrogen fuel cell manufacturing technology is not yet attracted to our region (current hydrogen fuel cell vehicle public programs are concentrated in California primarily by Honda and Mercedes)</li> <li>• Vehicle Miles Traveled (VMT) are currently increasing at a rate faster than population increases in our region</li> <li>• Limiting fossil fuel use to 40% of the 2010 level in the face of increasing population with vehicles is daunting</li> </ul>					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
3.1	<p><b>Facilitate the development, manufacturing, and deployment of fuel cell technology</b> for fuel cell electric vehicles (FCEV) in the region.</p>	<p>All major automotive manufacturers intend to deploy production of FCEV vehicles in 2015 and they are currently conducting test programs in hundreds of markets in the world</p>	<p>EDC and Chamber of Commerce; PPACG</p>	<p>Auto manufacturers, their suppliers; gasoline retail dealers e.g., Western Refining Inc. (based in El Paso, TX) operating four Western Convenience Stores in Colorado Springs and two in Teller County</p>	<p>One charging station manufacturer committed (by 2014) to establish a plant in the region before 2016; commitments by private entities to deploy charging station near downtown CS, in EPC, and others in each quadrant of CS at existing gas stations</p>
3.2	<p><b>Seek, support, and expand interregional alternative transportation modes</b> such as commuter rail services, car pools, van pools, and non-motorized modes to build/maintain a robust economic climate.</p>	<p>CDOT (state freight and passenger rail plan in development, 2011); City of Colorado Springs transit division Metro Rides programs; City of Colorado Springs Parks, Recreation and Culture division multi-use trail programs; City of Colorado Springs Bicycle Master Plan (to be updated)</p>	<p>MMT</p>	<p>Various FTA and CDOT programs; car rental companies; fitness programs promoting outdoor non-motorized activities</p>	<p>Increased mode share by the itemized modes</p>

**GOAL 3:** By 2030, the region has a sustainable, equitable, and affordable multi-model transportation system (roads, transit, bicycles, and pedestrians walkways) that efficiently and safely moves people and goods. Achieving this goal means:

- Half of all transportation-related fuels purchased in the region are renewable and/or sustainable and transportation-related fossil fuel use is reduced by 40% from a 2010 baseline.

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
3.3	<b>Public / private partnerships</b> (PPP) to foster deployment of recharge stations for hydrogen fuel cell electric vehicles (FCEV) with solar powered hydrogen generation at recharge sites.	Unknown	Chamber of Commerce/Colorado Springs Economic Development Corporation (CoC/EDC)	Public / private partnerships (PPP); a regional fossil fuel distributor (possibly Western Refining, Inc.) (Public jurisdictions may not need to join except to adjust regs for the new fuel delivery tech.)	Legal agreements to pursue the early market for FCEV technology deployment

**GOAL 4:** By 2030, the region has a sustainable, equitable, and affordable multi-model transportation system (roads, transit, bicycles, and pedestrians walkways) that efficiently and safely moves people and goods. Achieving this goal means:

- All transportation infrastructures are constructed, maintained, and operated using sustainable practices.

**GOAL METRIC(S):**  
Number of proposed annual changes to design and construction engineering codes, standards, and practices with sustainability attributes

**Challenges:**

Identifying applicable sustainable practices; adoption of sustainable practices by building regulation entities.

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
4.1	<b>Analyze transportation system enhancements and maintenance projects</b> using life-cycle assessment of sustainability (social, economic, and environmental externalities) performance.	Fort Carson's <i>Sustainable Fort Carson Program</i>	PPACG	Jurisdictions' public works engineering divisions, Regional Planning Board	Proposed number of changes to "standard" engineering codes by PPACG entities per year
4.2	<b>Track and apply industry-best sustainability practices</b> as benchmarks for regional transportation investments and expenditures.	Transportation plans such as: the Regional Long-Range Transportation Plan, the South Academy Great Streets Project, etc.	PPACG	Ft Carson; public works departments' engineering divisions, National Renewable Energy Laboratory (NREL)	Tally RFPs issued calling out efficient features and summarize progress annually through 2030
4.3	<b>Develop and sustainably fund sustainable transportation research</b> expertise in qualified regional institutions.	None known	Industry public-private partnerships (PPP); PPACG	Regional higher education engineering departments; National Renewable Energy Laboratory (NREL)	Annually offer more collaboratively produced workshops for regional institutions; annual introductions tallied and summarized through 2030

<p><b>GOAL 5:</b> By 2030, the region has a sustainable, equitable, and affordable multi-model transportation system (roads, transit, bicycles, and pedestrians walkways) that efficiently and safely moves people and goods. Achieving this goal means:</p> <p>5. There is decreased reliance on single-occupancy-vehicle modes of travel with public transit's share of trips increasing above 3%.</p>				<p><b>GOAL METRIC(S):</b> Number of transit and non-motorized share of trips rises during consecutive years until goal is attained</p>	
<p><b>Challenges:</b></p> <ul style="list-style-type: none"> <li>Local culture attached to sense of independence suggested by vehicle ownership choices adulating pickup trucks</li> <li>Regional funding of transit system offers a bare-bones route structure and schedule funding (2011 budget) that will continue to decline as opportunities for funding at current levels diminish over the next few years</li> </ul>					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
5.1	<b>Offer rapid transit options with faster commute times</b> for specific corridors defined in service performance goals and provide premium services for premium fares (e.g., WiFi).	Academy Boulevard Corridor Complete Streets Plan, 201; City of Colorado Springs Transit Division strategic plan; 2035 Long-Range Plan transit update	City of Colorado Springs Transit Division	PPRTA (project funding)	Survey riders and non-riders to assess service needs and develop funding requirements every two years
5.2	<b>Offer Guaranteed Ride Home programs</b> , also referred to as “emergency ride home,” to encourage group commuting by single-parent riders of buses, carpoolers, and vanpool riders.	At least one human service provider is planning this type of voucher program	City of Colorado Springs as local recipient of Federal Transit Administration (FTA) grants and sponsor of private carrier programs	Employers, Job Access and Reverse Commute (JARC) program providers; Metro Rides; ride providers	Annually increasing number of participating employers and employees
5.3	<b>Demonstrate value to the region's taxpayers</b> of transit operations and offer performance goals with specific service enhancements and alternatives.	Recommended: Future of Regional Transit study results	City of Colorado Springs Transit Division or regional transit entity	PPRTA and entities served by transit operations	Periodic surveys of tax payers and riders and public sharing of results; outreach to develop service performance goals every two years after onboard rider surveys
5.4	<b>Enhance non-motorized transportation</b> with complete travel networks across the urbanized areas.	PPACG 2035 Long-Range Transportation Plan (updates, 2011)	PPACG	City of Colorado Springs, other incorporated entities and El Paso County	Tally outreach meetings with neighborhoods to maintain interest annually (at least); focus on completing bike lanes and full multi-use trails

## Additional Strategies Relevant to Transportation

The following table outlines strategies from other topic areas that potentially intersect with transportation issues and strategies. The correlation between these topics was identified by the task groups and outlined in an overarching strategy matrix that can be found on page 92.

<b>Other Topic-Area Strategies Intersecting with Transportation</b>		
<i>Topic Area</i>	<i>Strategy</i>	<i>Strategy Table Page Number</i>
<b>Agriculture</b>	1.4 Encourage regional collaboration and cooperation	6
<b>Built Environment</b>	1.2 Plan and design new and existing projects	23
	1.4 Maintain existing public infrastructure	
<b>Air Quality</b>	1.2 Track baseline information-outdoor air quality	33
	1.3 Greenhouse gas inventory and strategies	
	1.5 Develop outdoor outreach plan	
	1.6 Ozone non-attainment designation	
<b>Economic Development</b>	2.1 Stimulate new ways of addressing challenges	42
	2.2 Support and promote goals and plans	
	2.3 Support and promote industry clusters	
	2.4 Support the growth of local businesses	
	3.6 Support local sustainable industry development	
<b>Energy</b>	1.5 Encourage the development of electric vehicle policies and programs	54
	2.4 Facilitate the adoption of high-efficiency and grid-enabled vehicles and supportive infrastructure	

## Water Quantity

The Pikes Peak region is located in a semi-arid environment and receives as little as 14.5 inches per year. As much as 70 percent of the water that the region currently depends on to meet its water needs comes from the Western Slope. The other 30 percent comes from limited and intermittent supplies along Fountain Creek or from nonrenewable groundwater sources. It is only because of our ability to bring water from somewhere else that the population has grown, that we have encouraged industry, and that we have allowed residents to landscape in any manner they choose.

Water Quantity Task Group*
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Jeff Besse, City of Colorado Springs
Curtis Mitchell, Fountain Utilities
Connie Perry, City of Colorado Springs
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The region's demand for water is increasing and will likely continue to rise as industry and population continue to grow. Other emerging conditions, such as oil and gas drilling in El Paso County, will require a significant amount of the region's water for production now and into the future. Because water is so limited in the region, and the environmental and financial costs of transporting water to the region are so great, more actions need to be taken to make sure the region is using and will continue to use this resource as efficiently and effectively as possible.

The water quantity goals in PPR 2030 focus on a regional approach of meeting the water supply needs of the Pikes Peak region through efficient use of water from all sources and by leveraging reusable water supplies to the fullest extent. Ultimately, the purpose of the goals is to use less water in the region. Goals and strategies for protecting the quality of the water are located in the Built and Natural Environment section of PPR 2030.

This section includes three goals with multiple strategies to meet the water needs of the region through 2030.

**Goal 1: The region utilizes 100% of its reusable water supplies including but not limited to nonpotable water, water exchange programs, and transmountain water.**

The strategies for this goal focus on expanding nonpotable water use by developing flexible policies and building infrastructure to expand its use where appropriate. PPR 2030 also aims to improve regional cooperation to better meet the water needs of customers in the area. There are also opportunities to better manage stormwater through low-impact development (LID). This strategy crosses over to the built environment, with impacts from the built environment affecting water availability and vice versa. Lastly, the strategies in PPR 2030 seek to educate the community on the value of water, including nonpotable, exchanges, and recycled water.

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\* Many stakeholders participated in the development of PPR 2030. This list represents the individuals who led the development of the Water Quantity section. A full list of participants can be found on page ii-iii.



**Goal 2: Residential water use is at or below 80 gallons per person per day; 80% of commercial and industrial users in the region employ best water management practices.**

Colorado Springs is among the lowest residential water users in the West, with per capita residential water use coming in 15-30% lower than that in Boulder, Denver, and Pueblo. According to the Colorado Springs Utilities 2008 – 2012 Water Conservation Plan, from 1990 through 2006, system-wide water use averaged 186 gallons per capita per day. During the same period, single-family residential water use averaged 112 gallons per capita per day. From 2002 through 2005, water use declined due to mandatory water restrictions, but water use has remained relatively low since water restrictions were lifted in late 2005. In Teller County, Woodland Park serviced approximately 3,600 homes, businesses, and institutions with water taps. Their 2011 raw water consumption per capita averaged 88 gallons per day.

The goal of 80 gallons per person per day, while ambitious, recognizes that we live in a semi-arid region, we are primarily dependent on water from outside the region, and we should strive to live within our existing water supplies to the maximum extent practical. While PPR 2030 does not identify the specific strategies and tactics needed to achieve the goal, our community has shown that it can make significant strides when it comes to water conservation - residential users have reduced their water consumption by 16 % since 2001.

The strategies for this goal primarily focus on implementing the *Best Management Practices* (BMPs) that were developed in 2010 for Colorado.<sup>33</sup> The BMPs are a comprehensive list of efficiency strategies for the water providers (the supply side of the water equation). The BMPs include metering to incentivize water conservation, increasing conservation rates, and minimizing system loss. There are also demand-side measures or customer-based strategies that address both residential and commercial customers' indoor and outdoor water use. This goal also includes an educational component on the value of water. Finally, in the spirit of regional cooperation, as listed in Goal 1, it is important that all water providers, regardless of their size, develop and implement water conservation plans for their service territory.

**Goal 3: Landscaping for each intended use is resource-efficient.**

The strategies for this goal are aimed at ensuring that the water used in the landscape is not excessive or wasted. The market will often drive behavior; thus, rates for water that is used within the landscape must be tied to a water budget or a tiered rate structure. Stormwater management techniques (as note above) can help meet local landscape needs as well as help meet other regional stormwater plans.

**Strategy Table Overview**

The following strategy table outlines the high-level strategies recommended for the water quantity goals. Please note that the lead entity(s) and potential partners were proposed by the task groups and may require refinement as PPR 2030 is implemented. For additional information such as baseline data and current conditions, please see Appendix K. The appendix also provides a strategy table that outlines more detailed proposed sub-strategies to facilitate implementation of the goals. While the high-level strategy table in the main document and the strategy table in the appendix correlate and address the same water quantity goals, as a part of the

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<sup>33</sup> The referenced BMPs can be found in the "Guidebook of Best Management Practices for Municipal Water Conservation in Colorado," which was developed in conjunction with a grant from the Colorado Water Conservation Board. The guide can be found at <http://cwcb.state.co.us/technical-resources/best-management-practices/Pages/main.aspx>

strategy development process, they may not match in structure. The strategy table in the appendix served as the foundation from which the task group revised and modified strategies to develop the high-level strategy tables outlined in the main document (below).

## Water Quantity Strategy Table

<b>GOAL 1:</b> By 2030, the region’s water use is met by currently-owned water supply and is as efficient as possible through application of best management practices. Achieving this goals means: 1. The region utilizes 100 % of its reusable water supplies, including but not limited to nonpotable water, exchange programs, and transmountain water.				<b>GOAL METRIC(S):</b> Number of acre-feet of reusable water supplies utilized	
<b>Challenges:</b> Public resistance/misunderstanding in using nonpotable water; health restrictions; infrastructure inadequate					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.1	<b>Develop nonpotable policies:</b> Each water provider has a policy and the flexibility to use and expand the use of nonpotable water wherever possible, thereby expanding the capacity of the reclaimed and raw water systems, while optimizing the use of all water supplies.	Water provider plans	Water providers	Users, Colorado Department of Public Health and Environment	Number of water providers with policies; percentage of nonpotable water used in each provider’s portfolio, as well as the aggregate percentage
1.2	<b>Install infrastructure:</b> Proactively plan and install infrastructure that allows for the use of nonpotable water (e.g., dual-delivery systems that allow for the use of nonpotable water in appropriate areas, such as golf courses).	Some water provider plans	Water providers; local governments	CDPHE, Housing and Building Association (HBA), water users	Number of providers that have a plan and are working on the plan; number of dual systems installed
1.3	<b>Regional cooperation:</b> Develop a policy/system that allows regional interaction, exchanges, and cooperation among water providers.	Water provider plans	Water providers, governmental policymakers, Pikes Peak Regional Water Authority		
1.4	<b>Identify and implement emerging uses:</b> Identify and implement emerging uses and incentives/rates to make the use of nonpotable water more attractive.	Water provider plans	Water providers; statewide organizations		

**GOAL 1:** By 2030, the region’s water use is met by currently-owned water supply and is as efficient as possible through application of best management practices. Achieving this goals means:

1. The region utilizes 100 % of its reusable water supplies, including but not limited to nonpotable water, exchange programs, and transmountain water.

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
1.5	<b>Encourage low-impact development:</b> Develop and implement policies, programs, and incentives to using low-impact development to encourage the use of nonpotable water as a means of groundwater recharge where appropriate.	Water provider plans; Drainage Criteria Manual	Water providers; local governments	HBA, water users	
1.6	<b>Develop specific education plan:</b> Develop a specific education program/ process addressing nonpotable water and its potential.	Some water provider plans; State requirement to hold annual meetings for nonpotable users	Water providers	Users; HBA	Number of participants in the education program, number of programs presented

**GOAL 2:** By 2030, the region’s water use is met by currently-owned water supply and is as efficient as possible through application of best management practices. Achieving this goals means:

2. Residential water use is at or below 80 gallons per person per day; 80% of commercial and industrial users in the region employ best water management practices.

**GOAL METRIC(S):**  
Number of gallons per person per day; Number of commercial and industrial users employing BMPs

**Challenges:**

Public support wanes in non-drought years; neighborhood covenants that require high water using landscaping

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
2.1	<b>Implement conservation BMPs:</b> Implement conservation best management practices (BMPs) from the Colorado WaterWise Guidebook of Best Practices for Municipal Water Conservation in Colorado for residential, commercial, and industrial customers: <ul style="list-style-type: none"> <li>• sub-strategy: develop incentives for existing development and new development</li> <li>• sub-strategy: identify the commercial and industrial users that use BMPs</li> </ul>	Colorado WaterWise Guidebook of Best Practices for Municipal Water Conservation in Colorado	Water providers; Colorado Water Conservation Board (CWCB)	Too many to list – essentially every entity, organization, individual connected to water	Amount of customer water use

<b>GOAL 2:</b> By 2030, the region's water use is met by currently-owned water supply and is as efficient as possible through application of best management practices. Achieving this goals means: 2. Residential water use is at or below 80 gallons per person per day; 80% of commercial and industrial users in the region employ best water management practices.					
2.2	<b>Develop plans:</b> Develop urban water conservation plans for areas/communities not currently covered by a plan (should include covered and non-covered entities).	No	Water providers, CWCB	CWCB, other utilities, green industry	Number of areas and communities that do not have a plan
2.3	<b>Educate on water importance:</b> Educate Pikes Peak region water users on the importance of water in our community (e.g., where our water comes from, water is a limited resource, the value of water efficient landscaping).	Utility conservation plans, Water 2012 Celebration (state initiative by the Colorado Federation of Water Education), Value of Water Campaign (CWCB), Fountain Creek plan, Stormwater Permits	Water providers, municipalities, State of Colorado	Housing and Building Association (HBA), Council of Neighbors and Organizations (CONO), various foundations with a water focus (e.g., American Waterworks Association Research Foundations), water users	Number of customers who participated in education programs; number of presentations given
2.5	<b>Fix state water law:</b> Identify state laws that are barriers to achieving goals, develop a plan and strategy to change those laws.	No	Colorado Water Congress Legislative Committee, Pikes Rural Water Authority (PPRWA), Colorado Springs Utilities	Established organizations for water providers, water users	Number of laws identified and changed

<b>GOAL 3:</b> By 2030, the region’s water use is met by currently-owned water supply and is as efficient as possible through application of best management practices. Achieving this goals means: 3. Landscaping for each intended use is resource efficient (original language “Landscaping is efficient, low-water use, or water wise.”)					<b>GOAL METRIC(S):</b> Number of gallons of water used by landscape type
<b>Challenges:</b> Persistent drought; dependence on nonrenewable groundwater					
#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
3.1	<b>Develop water budget/tiered rate:</b> Develop water budget and/or tiered rate structure for all outdoor users.	Water conservation plans	Water providers	Water users, green industry, Colorado Water Conservation Board (CWCB), stormwater entities, Council of Neighbors and Organizations (CONO) – or functional equivalent, Housing and Building Association (HBA)	Number of budgets developed
3.2	<b>Stormwater as irrigation:</b> Promote integration of stormwater managements techniques to help meet landscape irrigation needs.		Stormwater entities, local governmental entities responsible for landscaping ordinances	City and County planning departments, water providers, HBA, military installations	Number of functioning and compliant water quality facilities; number of plan proposals that incorporate fine grading and soil amendment
3.3	<b>Replace large turf areas:</b> Replace large turf areas with small turf areas.	Colorado Springs Landscape Code and Policy Manual	Local governments, water providers	HBA, water users,	Number of square feet of large turf area replaced

**Goal 3:** By 2030, the region’s water use is met by currently-owned water supply and is as efficient as possible through application of best management practices. Achieving this goals means:

3. Landscaping for each intended use is resource efficient (original language “Landscaping is efficient, low-water use, or water wise.”)

#	High-Level Strategies	In An Existing Plan?	Lead Entity(s)	Potential Partner(s)	Relevant Strategy Metric(s)
3.4	<b>Develop policies addressing specifics:</b> Develop policies, incentives, and ordinances addressing soil amendment, water efficient landscaping, waste from watering, and low impact development. Sub-strategy: develop a timeline and requirement for periodic review of the implementation and effectiveness of each policy, incentive, and ordinance.	Water conservation plans, Colorado Springs, El Paso County, and Fountain ordinances	Water providers, local governments	Developers, Green industry, water users, CWCB stormwater entities, CONO or its functional equivalent, HBA	Number of policies, incentives, ordinances in place  Number of budgets developed
3.5	<b>Support/implement regional stormwater plans:</b> Identify opportunities, programs, ordinances, etc. that support and implement the Fountain Creek Watershed Plan, as well as other regional stormwater plans.	Fountain Creek Watershed Plan; Drainage Criteria Manual, Stormwater permit; Corps of Engineers Watershed Management Plan	Water providers, local governments, stormwater entities	HBA, CONO, water users, CWCB	

## Additional Strategies Relevant to Water Quantity

The following table outlines strategies from other topic areas that potentially intersect with water quantity issues and strategies. The correlation between these topics was identified by the task groups and outlined in an overarching strategy matrix that can be found on page 92.

<b>Other Topic-Area Strategies Intersecting with Water Quantity</b>		
<i>Topic Area</i>	<i>Strategy</i>	<i>Strategy Table Page Number</i>
<b>Agriculture</b>	1.3 – Promote farming practices and agricultural research	6
	1.4 – Encourage regional collaboration and cooperation	
	1.8 – Ensure that farmers and ranchers have adequate water supplies	
	1.9 – Promote programs and practices	
<b>Built Environment</b>	1.3 – Integrate green infrastructure	23
	1.4 – Maintain existing public infrastructure	
	1.9 – Adopt enhanced green building and energy codes	
	1.12 – Develop coordinated regional land use regulations	
<b>Water Quality</b>	1.1 – Understand baseline conditions	36
	1.2 – Water quality impairment	
	1.4 – Develop strategies	
	1.5 – Update and implement regulations	
	1.6 – Implement Strategic Plan	
	1.7 – Protect and maintain existing water quality	
<b>Economic Development</b>	3.4 – Foster and encourage educational opportunities	42
	3.6 – Support local sustainable industry development	
<b>Transportation</b>	1.3 – Public funding for the maintenance of existing public infrastructure	74



## Conclusion and Next Steps

Looking to Our Future – Pikes Peak Region 2030 (PPR 2030) aims to take a comprehensive and integrative approach to fostering innovative efforts and collaborative endeavors to improve the lives of the region’s residents now and in the future. PPR 2030 sets ambitious but achievable goals for ten complex issues, examines the challenges that exist to achieving sustainability in those issue areas, and identifies high-level strategies that governments, businesses, and nonprofits in the region can work together to implement. Completion of PPR 2030 marks a milestone in the advancement of regional sustainability in the Pikes Peak region.

Future work will focus on implementing PPR 2030 and, if additional funding becomes available, expanding it. PPACG will continue to pursue additional funding through grants and other sources to address the regional sustainability needs identified in PPR 2030 and continue coordination with regional stakeholders and military installations. The Consensus Committee disbanded on March 5, 2012, once PPR 2030 was completed, and a Transition Team was formed. The Transition Team consists of a group of representatives from the Consensus Committee and other stakeholders throughout the region who will work with the lead entity(s) and potential partners identified to implement the strategies contained in PPR 2030.

In moving forward with the management and implementation of PPR 2030, the Transition Team will also explore development of a transition plan to address:

- Development of a new organization or utilization of an existing organization to manage PPR 2030;
- The need for a leadership steering committee that is engaged and committed to the oversight of regional sustainability;
- Potential funding for technical support, case studies, and/or pilot projects;
- A method or management system for tracking and reporting success in achieving the goals and strategies; and
- The need for a permanent, dedicated staff person to coordinate and facilitate meetings, maintain and/or build the website, disseminate information, monitor progress of PPR 2030, research and/or apply for funding, and be an advocate for PPR 2030.

Immediate next steps will include targeted education and outreach, coordination with stakeholders through the Transition Team, and integration of PPR 2030 goals and strategies into future updates of the Quality of Life Indicators Report. Public engagement will be one of the most important elements of the PPR 2030 process and will include:

- A speaker series to discuss key sustainability topics that have been developed and that will be further addressed through monthly presentations to classrooms, military,

businesses, and other organizations. This series will focus on making citizens and the community aware of the information contained in PPR 2030.

- Working with government agencies and organizations on how to effectively integrate the recommendations and strategies contained in PPR 2030 into local plans and planning efforts.
- Expanding information contained on the PPACG website regarding PPR 2030 to include sustainability events and activities, tools to assist in implementation of the activities, and examples of similar sustainability strategies being implemented in other regions.

PPACG and the Transition Team will work with members of the QLI Steering Committee to incorporate indicators that are discussed in PPR 2030 but are not currently included in the QLI Report that can be used to track progress towards achieving the goals and strategies. The QLI Report, which currently just covers El Paso County, might also be expanded to include indicators in Teller County that have been developed as part of PPR 2030.

## Matrix: Intersection and Impact of High-Level Strategies

Topic / Task Group	Strategies – Referenced by Strategy Number and Strategy Title from the Task Group High-Level Strategy Tables	Agriculture	Arts / Culture	Built Environment	Natural Envnt	Air Quality	Water Quality	Water Quantity	Econ Devlt	Education	Energy	Health	Materials Mgmt	Transportation	Projects / Progs	Incentives	Data/Info	Outreach/Ed	Local Policy/Regs	State Policy/Regs	Other
		<b>Agriculture</b>	1.1 Support and encourage the economic viability of small and medium farms and ranches	X	X						X						X	X			
	1.2 Improve regional food systems	X										X			X	X		X			
	1.3 Promote farming practices and agricultural research	X			X		X	X	X		X	X			X	X		X			
	1.4 Encourage regional collaboration and cooperation	X		X	X			X	X			X		X	X	X		X			
	1.5 Promote urban agriculture	X								X		X			X	X		X			
	1.6 Promote programs that preserve	X			X										X	X		X			
	1.7 Promote programs that teach	X	X							X		X			X	X		X			
	1.8 Ensure that farmers and ranchers have adequate water supplies	X			X		X	X							X	X		X	X	X	
	1.9 Promote programs and practices	X			X		X	X				X			X	X		X			
	1.10 Gather data, establish baselines, and track trends	X															X				
<b>Arts and Culture</b>	1.1 Engage a larger segment of the community		X						X						X			X			
	1.2 Use COPPeR as a Cultural Representative		X							X					X			X			
	1.3 Track metrics		X						X								X				

<b>Arts and Culture cont.</b>	2.1 Provide information		X															X				
	2.2 Promote creative industry job creation		X						X									X				
	2.3 Encourage more civic engagement		X						X	X								X	X		X	
	3.1 Develop task forces		X															X				
<b>Built Environment</b>	1.1 Provide public education and outreach		X	X						X								X			X	
	1.2 Plan and design new and existing projects			X		X			X			X	X	X							X	
	1.3 Integrate green infrastructure			X				X					X									
	1.4 Maintain existing public infrastructure			X	X	X		X			X	X	X	X								
	1.5 Adapt public regulation and process			X					X												X	
	1.6 Create financial strategies and economic development incentives			X					X									X	X			
	1.7 Support/promote local food production	X		X								X						X	X			
	1.8 Foster public/private partnerships			X					X									X	X		X	
	1.9 Adopt enhanced green building and energy codes			X				X			X										X	X
	1.10 Continue grant and rebate programs			X			X				X							X	X		X	X
	1.11 Develop an accessible, unified regional geographic information system			X					X									X	X		X	
	1.12 Develop coordinated regional land use regulations			X	X		X	X	X									X				X
<b>Natural Environment</b>	1.1 Establish a systems paradigm				X	X	X		X		X							X			X	
	1.2 Create a regional database				X														X		X	
	1.3 Ascertain baseline conditions, components and processes				X		X												X			
	1.4 Design a plan				X		X											X				
	1.5 Apply adaptive management practices	X			X							X						X				
	1.6 Obtain funding				X													X			X	
<b>Air Quality</b>	1.1 Voluntary indoor certification process			X		X			X	X		X		X	X							

	1.2 Track baseline information--outdoor air quality	X			X	X	X		X		X	X		X			X				
	1.3 Greenhouse gas inventory and strategies	X			X	X	X				X	X		X	X		X				
	1.4 Develop indoor outreach plan			X		X			X	X		X		X	X			X			
	1.5 Develop outdoor outreach plan	X			X	X		X			X	X		X	X			X			
	1.6 Ozone non-attainment designation	X			X	X		X	X		X	X		X	X				X	X	
<b>Water Quality</b>	1.1 Understand baseline conditions	X		X	X		X	X	X			X	X			X	X				
	1.2 Assess water quality impairment	X		X			X	X	X		X	X	X				X				
	1.3 Develop outreach plan	X		X	X		X			X				X		X					
	1.4 Develop strategies	X		X	X		X	X				X			X			X			
	1.5 Update and implement regulations	X		X	X		X	X			X	X	X					X			
	1.6 Implement Strategic Plan	X		X	X		X	X				X							X		
	1.7 Protect and maintain existing water quality	X					X	X	X						X				X		
<b>Economic Development</b>	1.1 Focus economic development programs on industry clusters		X						X						X						
	1.2 Attract and retain industries		X						X						X	X		X			
	1.3 Develop network for training and education								X	X					X	X		X			
	1.4 Enable career advancement and wage improvement								X	X					X			X			
	2.1 Stimulate new ways of addressing challenges	X				X	X	X		X	X	X	X	X	X	X					
	2.2 Support and promote goals and plans	X	X			X	X		X		X		X	X	X	X		X			
	2.3 Support and promote industry clusters	X	X			X	X	X			X		X	X	X	X		X			
	2.4 Support the growth of local businesses	X		X			X		X		X		X	X	X						
	3.1 Provide systems to develop strong business plans								X						X	X					
	3.2 Encourage promotional campaigns	X							X	X					X	X		X			
	3.3 Support local B2B								X						X	X					
	3.4 Foster and encourage educational	X	X			X	X		X	X	X				X	X		X			

	opportunities																			
	3.5 Identify and remove regulatory and financial barriers				X				X										X	
	3.6 Support local sustainable industry development	X	X	X	X	X	X	X	X		X	X	X		X					
<b>Education</b>	*None developed. See the narrative in Section II																			
<b>Energy</b>	1.1 Incentivize renewable/sustainable energy			X						X					X	X		X		X
	1.2 Encourage utility scale RE projects									X					X	X		X		
	1.3 Create public outreach and education—renewable energy				X	X				X	X	X						X		
	1.4 Develop and encourage adoption of local/regional policy and regulatory strategies—renewable energy			X						X								X	X	X
	1.5 Encourage the development of electric vehicle policies and programs					X				X			X		X	X			X	X
	2.1 Incentivize for demand-side management			X						X					X	X				
	2.2 Create public outreach and education strategies—energy efficiency	X								X	X				X			X		
	2.3 Develop and encourage adoption of local/regional policy and regulatory strategies—energy efficiency									X						X		X	X	X
	2.4 Facilitate the adoption of high-efficiency and grid-enabled vehicles and supportive infrastructure			X						X	X			X		X	X		X	X
<b>Health</b>	1.1 Create more opportunities to become better informed and knowledgeable									X		X			X	X		X		
	1.2 Promote safe and healthy behaviors	X								X		X			X	X		X		
	2.1 Increase the number of health care providers								X	X		X			X	X		X		
	2.2 Increase care coordination and communication									X		X			X			X		

<b>Health cont.</b>	2.3 Reduce economic, social, geographical, and cultural barriers								X	X		X				X	X		X	X		
<b>Materials Management and Procurement</b>	1.1 Provide recycling at government facilities				X		X					X				X			X			
	1.2 Provide more public recycling						X					X				X			X			
	1.3 Establish regional processing facility						X		X			X				X						
	1.4 Require recycling for permitted activities						X					X				X						
	1.5 Incentivize construction and demolition recycling			X			X					X				X						
	1.6 Develop tracking methods											X						X				
	1.7 Require recycling areas for multifamily and commercial			X			X					X				X				X		
	1.8 Establish funding source for education programs												X			X				X		
	1.9 Secure funding												X									X
	2.1 Establish satellite drop-off sites							X					X			X						
	2.2 Education and outreach		X										X							X		
	3.1 Help organizations obtain access to cost-competitive sustainable products							X		X			X			X						
	3.2 Establish a baseline measure for sustainable procurement practices			X				X		X			X	X				X				
	3.3 Form collaborations			X						X			X			X				X		
	<b>Transportation</b>	1.1 Public education and outreach		X	X					X	X			X						X		
1.2 Public funding of alternative transportation											X	X			X				X			X
1.3 Public funding for the maintenance of existing public infrastructure				X			X	X	X					X	X					X		X
1.4 Financial strategies and economic development incentives				X										X			X					
2.1 Increase frequency of fixed route service														X	X							
2.2 Facilitate multi-mobility alternatives													X	X	X	X						

	3.1 Facilitate the development, manufacturing, and deployment of fuel cell technology								X		X			X		X	X					
	3.2 Seek, support, and expand interregional alternative transportation modes								X			X		X		X	X		X			
	3.3 Public/private partnerships								X		X			X		X		X				
	4.1 Analyze transportation system enhancements and maintenance projects													X		X		X				
	4.2 Track and apply industry-best sustainability practices													X		X		X		X		
	4.3 Develop and sustainably fund sustainable transportation research										X			X		X		X				
	5.1 Offer rapid transit options with faster commute times													X		X	X					
	5.2 Offer Guaranteed Ride Home programs													X		X						
	5.3 Demonstrate value to the region's taxpayers										X			X		X			X			
	5.4 Enhance non-motorized transportation													X		X						
<b>Water Quantity</b>	1.1 Develop nonpotable policies	X		X	X		X	X														X
	1.2 Install infrastructure	X		X	X		X	X								X						
	1.3 Regional cooperation	X	X	X	X		X	X							X			X	X			X
	1.4 Identify and implement emerging uses	X		X	X		X	X							X	X						
	1.5 Encourage low-impact development	X		X	X		X	X							X	X			X			
	1.6 Develop specific education plan	X		X			X	X		X					X							
	2.1 Implement conservation BMPs	X		X	X		X	X			X				X							
	2.2 Development plans	X			X		X	X							X							
	2.3 Educate on water importance	X			X		X	X		X									X			
	2.4 Fix state water law	X		X	X		X	X							X						X	
	3.1 Develop water budget/tiered rate	X		X	X		X	X											X			X
	3.2 Stormwater as irrigation	X		X	X		X	X							X							
	3.3 Replace large turf areas	X		X	X		X	X							X							
	3.4 Develop policies addressing specifics	X		X	X		X	X							X	X			X			
	3.5 Support/ implement regional stormwater plans	X		X	X		X	X							X				X			



## Glossary

**21<sup>st</sup>- Century Education:** Educational skills requiring the development of core academic subject knowledge and understanding. Within the context of core knowledge instruction, students must also learn the essential skills for success in today's world, such as critical thinking, problem solving, communication, and collaboration.

**Abiotic Environmental Attributes:** Non-living chemical and physical factors that affect the structure and/or function of the environment and the relationship between living and non-living parts of the environment. Examples are minerals, soils, water, temperatures, insolation, climate.

**Acid Rain:** Precipitation which has been rendered acidic by airborne pollutants.

**Adaptation:** Adjustment in natural or human systems to a new or changing environment. Adaptation to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. Various types of adaptation can be distinguished, including anticipatory and reactive adaptation, private and public adaptation, and autonomous and planned adaptation. (EPA)

**Air Quality:** A measure of the condition of air (indoor or outdoor) relative to the requirements of one or more biotic species and/or to any human need or purpose.

**Baseline Conditions:** Conditions of the environment prior to any management actions, disturbance, or other changes in environmental structure or function.

**Best Management Practices (Best Practices):** An effective, innovative solution, process, or procedure that demonstrates a business' dedication to making progress in environmental and corporate social responsibility; sometimes shared with collaborators and competitors to shape standards for an industry. (Catamount)

**Biodiversity:** The variety (types, kinds, richness) and variability (numbers, equitability, relative) of life at any level in an ecological system, from molecular and genetic diversity to diversity of species, habitats, communities, ecosystems and landscapes, to global biological diversity.

**Biotic:** The living components of an environmental

**Built Environment:** The human-made surroundings that provide the setting for human activity, ranging in scale from personal shelter and buildings to neighborhoods and cities that can often include their supporting infrastructure, such as water supply or energy networks

**Carbon Footprint:** The total amount of greenhouse gases emitted directly or indirectly through any human activity, typically expressed in equivalent tons of either carbon or carbon dioxide

**Carbon Monoxide (CO):** A colorless, odorless, poisonous gas produced by incomplete fossil fuel combustion.

**Carrying Capacity:** The maximum population size of the species that the environment can sustain indefinitely

**Climate Change:** Climate change refers to a statistically significant variation in either the mean state of the climate or in its variability, persisting for an extended period (typically decades or longer). Climate change may be due to natural internal processes or external forces, or to persistent anthropogenic changes in the composition

**Complexity, ecological:** The intricate relationships between components, pattern, and process at multiple levels of hierarchical organization in natural systems. Complexity theory derives from the core disciplines of complex systems science (physics, mathematics, computer science). Includes the complex interactions between human and natural systems.

**Compost:** A humus or soil-like material created from aerobic, microbial decomposition of organic materials such as food scraps, yard trimmings, and manure

**Community Health Assessment:** A fundamental tool of public health practice. Its purpose is to portray the health of a given community by representing information on health status, community health needs, resources, and epidemiologic and other studies of current local health issues. It assesses the environment of the larger community and how it relates to the health of individuals. In addition, it looks at the health of specific target populations that may be at increased risk of poor health outcomes and to gain a better understanding of their needs. It recognizes health disparities among different subpopulations, quality of health care, and disability rates in the population.

**Community Solar Garden:** A collaborative effort among entities that could not normally pursue a Photovoltaic system as individuals for reasons of scale, siting, programs, tax advantages or other economics or policy. The original model had just homeowners as participants. Other versions might include non-profits, government facilities, schools who partner with investors to build PV systems with income potential for all and stable electric costs for the property owners. At present (Sept, 2011) Colorado Springs Utilities has a Tariff policy and procedures for these partnerships.

**Conservation:** Preserving and renewing, when possible, human and natural resources. The use, protection, and improvement of natural resources according to principles that will ensure their highest economic or social benefits.

**Connectivity:** The ability of the natural environmental functions to connect on an ecological “framework” of high-quality land consisting of central hubs interconnected by corridors that provide for the movement of energy, matter, and species across the landscape.

**Constraints:** The state of being restricted or confined within prescribed bounds

**Context:** The set of conditions, patterns, and processes that surround another component or process of a natural system.

**Correlation:** A causal, complementary, parallel, or reciprocal relationship, especially a structural, functional, or qualitative correspondence between two comparable entities

**Costs and Benefits:** In governmental planning and budgeting, the attempt to measure the social or environmental benefits of a proposed project in monetary terms and compare them with its costs

**Cumulative Effects:** The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions

**Demand Side Management:** Refers to changing the load (sales, long term or instantaneously) on the utility through the use of improved Energy Efficiency and Energy Conservation measures at the consumer end of the chain. Such programs would include lighting, HVAC and insulation rebate programs. Also included would be Smart Grid systems which can control (throttle, regulate) energy use at the consumer site based on special agreements with customers.

**Direct Effects:** Reference the National Environmental Policy Act: Those effects, which are caused by the action and occur at the same time and place.

**Distribution System:** The portion of the transmission and facilities of an electric system that is dedicated to delivering electric energy to an end user.

**Distributed Generation:** Having many locations of small energy generating facilities. Numerous large backup generators would qualify as such. Having many forms of energy collected and converted for use at the same location would reduce the demand on delivery systems, a large portion of the cost of energy. Electricity generation that is located close to the particular load that it is intended to serve.

**Disturbance:** A change from the normal state of conditions. Disturbances to environmental systems can cause shifts in structure and function that create new systems with different structure and function. Disturbances affect different systems differently, depending on the system's vulnerability to that disturbance, and the inherent resilience of the system. Disturbances can be direct or indirect. Examples include natural disturbances (fire, wind, landslide, floods, drought, disease) and human-caused disturbances (climate change, land-use change, habitat and species loss, built environment, invasive species).

**Do No Harm:** As in the medical oath to "First, do no harm." "Given an existing problem, it may be better not to do something, or even to do nothing, than to risk causing more harm than good."

**Drivers:** Those qualitative forces which change or move the environment in another direction such as human population growth or the expanding Sahara Desert

**Ecological Health:** The state of sustainable structure, function, resilience; intact natural environmental system components and processes, functional health, resilience and adaptability. Ecological integrity.

**Ecology:** The science of the relationships between organisms and their environments

**Ecoregion:** Sometimes called a bioregion, is an ecologically and geographically defined area that is smaller than an ecozone and larger than an ecosystem

**Ecosystem:** A place having unique physical features, encompassing air, water, and land, and habitats supporting plant and animal life, including humans.

**Ecosystem Health:** An ecosystem's ability to sustain structure and function over time in the face of external stress, disturbances, or perturbations

**Ecosystem Goods and Services:** The fundamental life-support benefits that nature provides for human well-being and survival. The raw materials and functions derived from natural systems that support human endeavors, health, economic gains and social-cultural vitality. Natural systems provide these goods and services "free of charge," and can be directly or indirectly provided. Most ecosystem goods and services are difficult to value in terms of dollars, and as a result are often undervalued. Examples of direct ecosystem services are:

- regulating (climate, floods, nutrient balance, water filtration)
- provisioning (food, medicine, fur, minerals)
- cultural (science, spiritual, ceremonial, recreation, aesthetic)
- supporting (nutrient cycling, photosynthesis, soil formation).<sup>[12]</sup>

**Emission:** Pollution discharged into the atmosphere from smokestacks, other vents, and surface areas of commercial or industrial facilities; from residential chimneys; and from motor vehicle, locomotive, or aircraft exhausts.

**Endangered Species:** Animals, birds, fish, plants, or other living organisms threatened with extinction by anthropogenic (man-caused) or other natural changes in their environment. Requirements for declaring a species endangered are contained in the Endangered Species Act.

**Energy Conservation:** Changing consumer habits to use less energy.

**Energy Efficiency:** The result of actions taken to reduce dependence on or to save fuels, i.e., selection of road vehicles with higher miles per gallon or the use of renewable sources of power for heating and cooling.

**Energy Technology:** An interdisciplinary engineering science having to do with the efficient, safe, environmentally friendly and economical extraction, conversion, transportation, storage and

use of energy, targeted towards yielding high efficiency whilst skirting side effects on humans, nature and the environment. (Wikipedia)

**Environment:** The combined living and non-living features and assets of a geographic area that provide the basis for biological, economic, and social patterns and processes.

**Exchange Program:** An exchange program is a program by which water, under certain conditions, may be diverted out of priority at one point and replaced with a like amount of water at another point.

**Feed-in-Tariff:** (FIT, standard offer contract, advanced renewable tariff or renewable energy payments) A policy mechanism designed to accelerate investment in renewable energy technologies. It achieves this by offering long-term contracts to renewable energy producers, typically based on the cost of generation of each different technology. (Wikipedia)

**Food Desert:** Any area in the industrialized world where healthy, affordable food is difficult to obtain. It is prevalent in rural as well as urban areas and is most prevalent in low-socioeconomic minority communities, and is associated with a variety of diet-related health problems. (Wikipedia)

**Food Distribution:** A method of distributing or transportation food or drink from one place to another, is a very important factor in public nutrition. Where it breaks down, famine, malnutrition, or illness can occur. (Wikipedia)

**Fossil Fuel:** Fuel derived from ancient organic remains; e.g. peat, coal, crude oil, and natural gas.

**Fragmentation:** The emergence of discontinuities in an organism's preferred environment (habitat), causing populations to split

**Gaps:** Missing information that would be useful in piecing together the parts and processes in an environmental system.

**GeoExchange:** Often called geothermal however this needs differentiation. GeoExchange is the process of exchanging heat and cold into and out of the Earth by means of heat pumps connecting the Earth and buildings by means of circulating fluids (water most often).

**Green Building:** A comprehensive process of design and construction that employs techniques to minimize adverse environmental impacts and reduce the energy consumption of a building, while contributing to the health and productivity of its occupants; a common metric for evaluating green buildings is the LEED (Leadership in Energy and Environmental Design) certification.

**Greenhouse Gas:** A gas, such as carbon dioxide or methane, which contributes to potential climate change.

**Greenhouse Gas Inventory:** A type of emission inventory that is developed for a variety of reasons including natural and anthropogenic (human-caused) emissions as tools when developing atmospheric models. Policy makers use inventories to develop strategies and policies for emissions reductions and to track the progress of those policies. And, regulatory agencies and corporations rely on inventories to establish compliance records with allowable emission rates. Businesses, the public, and other interest groups use inventories to better understand the sources and trends in emissions.

**Green Infrastructure:** Green infrastructure is strategically planned and managed networks of natural lands, working landscapes and other open spaces that conserve ecosystem values and functions and provide associated benefits to human populations

**Gross Metropolitan Product:** The market value of all final goods and services produced within a metropolitan area in a given period of time.

**Groundwater:** Water located beneath the ground surface in soil pore spaces and in the fractures of rock formations.

**Habitat:** The area or type of environment in which a plant or animal normally lives or occurs

**Hazardous Waste:** By-products of society that can pose a substantial or potential hazard to human health or the environment when improperly managed. Possesses at least one of four characteristics (ignitability, corrosivity, reactivity, or toxicity), or appears on special EPA lists.

**Infill:** the use of land within a built-up area for further construction and focuses on the reuse and repositioning of obsolete or underutilized buildings and sites

**Invasive Species:** Species which are not native to an area, spread by either natural processes (wind, water, animals) or humans (roads, boats, intentional or unintentional transport of organisms or parts of organisms that are able to reproduce. Invasive species are a disturbance to natural systems.

**Landscape:** The landforms of a region in the aggregate.

**LEED™ (LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN):** A green building rating system encouraging and accelerating global adoption of sustainable green building and development practices through the creation and implementation of environmental tools and performance criteria. (US Green Building Council)

**Location Efficiency:** An urban design and planning term referring to neighborhoods and locations that require less time, money, and greenhouse gas emissions for residents to meet their everyday travel requirements. (Center for Neighborhood Technology)

**Low Impact Development (LID):** LID is an approach to land development (or re-development) that works with nature to manage stormwater as close to its source as possible. (Environmental Protection Agency)

**Life Cycle:** A period involving all different generations of a species succeeding each other through means of reproduction, whether through asexual reproduction or sexual reproduction

**Materials Management:** Planning and building design for the movement of materials, or with logistics that deal with the tangible components of a supply chain, including procurement, waste, compost, recycling.

**High-Level Strategy:** A conceptual or general strategy that identifies a broad direction.

**Metrics:** A measurement of an attribute or parameter of a component, process, or system.

**Micro Grid:** A defined portion of the local electric grid. It may be isolated from the larger grid or managed differently than other areas.

**Models:** A simplified description, esp. a mathematical one, of a system or process, to assist calculations and predictions

**Natural Environment:** The synthetic sum of components and processes of the places where organisms live or potentially could live. Natural environments are a synthesis of interactions of components, patterns, and processes, the result of which is different than its individual parts. The natural environment is fundamentally determined by climate and physical and chemical soil factors, with living organisms superimposed and integrated into a whole interactive system.

**Net Zero Energy Districts:** Self-sufficient districts in energy, including electricity, warm water, and heating and cooling of buildings, provided by a combination of Photo-Voltaic (PV) solar panels, solar thermal, Earth's heat or geothermal, wind and biomass.

**Non-Attainment Designation:** An EPA designation to any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant. (EPA)

**Non-Potable Water:** Former wastewater (sewage) that is treated to remove solids and certain impurities, and used in sustainable landscaping irrigation or to recharge groundwater aquifers.

**Obesity:** A medical condition in which excess body fat has accumulated to the extent that it may have an adverse effect on health, leading to reduced life expectancy and/or increased health problems. (Wikipedia)

**Ozone (O<sub>3</sub>):** Found in two layers of the atmosphere, the stratosphere and the troposphere. In the stratosphere (the atmospheric layer 7 to 10 miles or more above the Earth's surface) ozone is a natural form of oxygen that provides a protective layer shielding the Earth from ultraviolet radiation.

**Particulate Matter:** (particulates, suspended particulate matter (SPM), fine particles, and soot) are tiny subdivisions of solid matter suspended in a gas or liquid. Sources of particulate matter can be man-made or natural.

**Photovoltaic:** A method of generating electrical power by converting solar radiation into direct current electricity using semiconductors that exhibit the photovoltaic effect.

**Pikes Peak Regional Sustainability Project (PPRSP):** The entire regional, collaborative process to explore and plan for a community conversation on sustainability, gather support, develop stretch goals, identify strategies, and produce the final document for PPR 2030.

**Pollution:** Generally, the presence of a substance in the environment that because of its chemical composition or quantity prevents the functioning of natural processes and produces undesirable environmental and health effects. Under the Clean Water Act, for example, the term has been defined as the man-made or man-induced alteration of the physical, biological, chemical, and radiological integrity of water and other media.

**Power Purchase Agreement:** (PPA) An agreement, most often between a utility and a generator, to purchase energy from a generator and sold (retailed) by the utility.

**Protect:** Aim to preserve (a threatened plant or animal species) by legislating against collecting or hunting or restrict by law access to or development of (land) so as to preserve its natural state

**Reliability:** A measure of the ability of the electric system to continue operation while some lines or generators are out of service. Reliability deals with the performance of the system under stress and the quality of the electric grid (in maintaining voltage and frequency under fluctuating load/supply).

**Reserve:** That portion of the demonstrated reserve base that is estimated to be recoverable at the time of determination. The reserve is derived by applying a recovery factor to that component of the identified coal resource designated as the demonstrated reserve base.

**Renewable Energy:** energy derived from non-fossil fuel resources (such as solar, wind, or geothermal energy) that can be replenished in full without a loss of quality; separate from sustainable energy because of emissions or other unsustainable impacts of the process of creating renewable energy

**Renewable Portfolio Standard:** State law (or local intention) requiring a percentage of electric sales come from renewable energy sources.

**Smart Grid:** Refers to how energy is used by employing devices that have some control (by owner and /or utility) over the energy used. Such devices might turn off a water heater, refrigerator or air conditioner for a period of time agreed to by the owner and the utility so peak loads can be better managed. It also refers to monitoring of energy use by consumer and utility and to the communication between systems of energy supply and use.



**Smart Growth:** An urban planning and transportation theory that concentrates growth in compact walkable urban centers to avoid sprawl and advocates compact, transit-oriented, bicycle-friendly land use, including neighborhood schools, complete streets, and mixed-use development with a range of housing choices

**Solar Power:** The conversion of sunlight into electricity, either directly using photovoltaics (PV), or indirectly using concentrated solar power (CSP). (Wikipedia)

**Solar Thermal Energy:** A technology for harnessing solar energy for thermal heat. (Wikipedia)

**Species:** A group of living organisms consisting of similar individuals capable of exchanging genes or interbreeding. The **species** is the principal natural taxonomic unit, ranking below a genus and denoted by a Latin binomial, e.g., Homo sapiens

**Stretch Goal:** A goal that pushes everyone to move beyond what is currently being done and what is currently believed to be doable to achieve something big. Stretch goals can only be achieved if substantially new ideas, approaches and ideas are pursued. Stretch goals inspire and require creativity and innovation.

**Surface Water:** All water naturally open to the atmosphere (rivers, lakes, reservoirs, ponds, streams, impoundments, seas, estuaries, etc.)

**Sustainability:** Acting in a manner that improves our quality of life by balancing economic vitality, a healthy vibrant community, and mindful stewardship of natural resources and the environment for current and future generations.

**Sustainable Agriculture:** The practice of farming using principles of ecology, the study of relationships between organisms and their environment. (Wikipedia)

**Sustainable Energy:** Energy produced from renewable sources that do not deplete or degrade our natural resources (air, water, land).

**Systems Thinking:** A holistic way of thinking that considers all the parts of the whole and their interactions, interconnections, feedbacks, pathways of flow of energy and materials, dynamics, structure, and function of whole ecosystems. Thinking in terms of the big picture. Ecological systems thinking includes all the biotic and abiotic components, including human economic, social, cultural, political, health, and other factors interacting with the natural environment. Examples include ecosystems in which various elements such as air, water, movement, plants, and animals work together to survive or perish. Ecological systems thinking is based on the idea that the component parts and processes of a system can best be understood in the context of relationships with each other and with other systems, rather than in isolation

**Third Party Power Purchase Agreement:** The USAFA Solar Project is an example. This allows an investor (third party) to own a renewable energy generation system placed upon another facility (first party) and sells the energy in a net meter manner to the first party while within another system/territory/grid (second party).

**Threatened species:** Any species which has potential of becoming endangered in the near future. (US Department of Interior)

**Transmission:** (1) n. An interconnected group of lines and associated equipment for the movement or transfer of electric energy between points of supply and points at which it is transformed for delivery to customers or is delivered to other electric systems.  
(2) v. The movement or transfer of electric energy over an interconnected group of lines and associated equipment between points of supply and points at which it is transformed for delivery to consumers or is delivered to other electric systems. Transmission is considered to end when the energy is transformed for distribution to the consumer.

**Trans-Mountain Diversion (see Trans-Mountain Water):** The conveyance of water from one drainage basin to another across the Continental Divide.

**Trans-Mountain Water:** Water that originates outside of our drainage basin and crosses the Continental Divide.

**TriCare:** Worldwide health care program that serves Uniformed Service members and retirees and their families.

**Urban Density:** A term used in urban planning and design to refer to the number of people inhabiting a given urbanized area. (Wikipedia)

**Vehicle Miles Travelled (VMT):** A measure of the extent of motor vehicle operation; the total number of vehicle miles travelled within a specific geographic area over a given period of time.

**Wastewater:** The spent or used water from a home, community, farm, or industry that contains dissolved or suspended matter.

**Water Exchanges:** Voluntary, temporary, and generally localized (intrabasin) transfers of water between closely neighboring water supply or water storage entities.

**Water Pollution:** The presence in water of enough harmful or objectionable material to damage the water's quality.

**Water Quality Standards:** State-adopted and EPA-approved ambient standards for water bodies. The standards prescribe the use of the water body and establish the water quality criteria that must be met to protect designated uses.

**Water Right:** In water law refers to the right of a user to use from a water source, e.g., a river, stream, pond or source of groundwater.

**Water Transfers:** Selling or exchanging water or water rights among individuals or agencies. Artificial conveyance of water from one area to another. (US Department of Interior)

**Water User:** Any individual, district, association, government agency, or other entity that uses water supplied from a reclamation project. (US Department of Interior)

**Whole-Systems: (big picture)** Systems thinking that includes all the factors involved and examine how they relate to each other and how they work as a whole, approached in terms of context, interrelationships, and dynamics. Everything is considered relevant. Includes ecological, economic, and social issues. Taking into account causes and connection of all elements; integration. "Everything is connected to everything else."

**Wildland-Urban Interface:** The zone of transition between unoccupied land and human development. Communities that are within of the zone may also be included

**Wind Power:** The conversion of wind energy into a useful form of energy, such as using wind turbines to make electricity, windmills for mechanical power, wind pumps for water pumping or drainage, or sails to propel ships.

## Appendices

The appendices include the following supplemental information:

- A list of ongoing local and regional sustainability efforts;
- Reports of baseline data, current conditions, indicators, and data gaps associated with each topic area;
- Sub-strategy tables for each topic area that outline more detailed proposed methods for advancing the high-level strategies and developing implementation plans to facilitate accomplishment of the topic-area goals; and
- Documents outlining and addressing the public comments received in response to the draft PPR 2030 document.

Note: In order to facilitate downloading, reading, and printing of this document, the appendices have been separated from the main body of PPR 2030. The appendices are available as a separate document on the PPACG website.