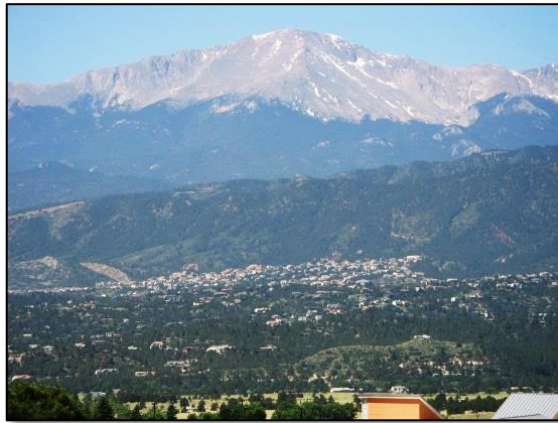


## Integrated Regional Planning

Planning for transportation, land use, and environmental conservation

**Location:** El Paso, Teller, and Pueblo Counties, Colorado

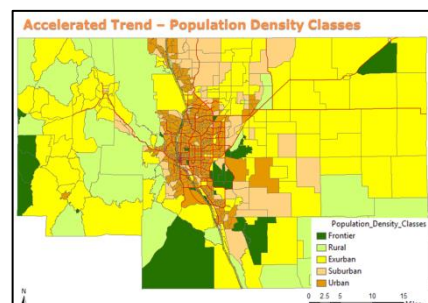
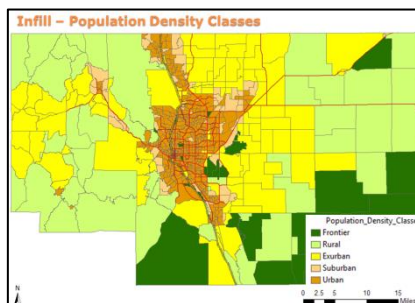
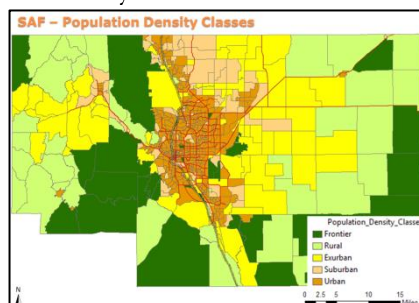
**Partners:** Pikes Peak Area Council of Governments; Placeways, LLC; HDR; NatureServe; Colorado Natural Heritage Program



**Context:** The Pikes Peak Area Council of Governments (PPACG) in southern Colorado is the regional planning agency whose territory includes the city of Colorado Springs. The agency's region encompasses a network of cities and towns dramatically situated around the namesake 14,000 ft peak. Much of the area is part of the Fountain Creek watershed, home to diverse ecosystems, fragile water systems, and sensitive plant and wildlife habitats. Long-term population estimates show the region growing from its present population of 640,000 to 1 million during the current 30-year planning period, and regional planners are tasked with developing responsible plans for the region's future.

Over the past 7 years, PPACG has been dedicated to pursuing a Regional Transportation Plan called *Moving Forward* that accounts for land use and environmental conservation goals. With the help of funding from the Federal Highway Administration (FHWA), they use a set of scenario planning tools—one for each discipline—that link together to create a more comprehensive plan. Placeways assists with their use of CommunityViz for land use planning and overall scenario development, NatureServe Vista and sensitive species data from the Colorado Natural Heritage Program (CNHP) are used for conservation planning, and PPACG uses its own transportation models for the transportation aspects of the study.

**Project Description:** The project has continued over 3 RTP updates: one each in 2007, 2011, and 2014. Most recently, Placeways developed two different CommunityViz scenarios that showed contrasting potential strategies for the 2040 *Moving Forward* plan. The adopted Small Area Forecast (SAF) served as a base scenario. The first alternative was an Infill scenario that concentrated residential and commercial growth near transit in downtown areas. The second alternative was an Accelerated Trend scenario that showed greater expansion of low-density residential development into outlying areas. The team used traffic analysis zone polygons as their primary analysis layer, but used parcels for more detailed work when necessary.



The team used the region’s 30-year population forecast for all scenarios, and focused their modeling efforts on growth patterns. To create scenarios, they allocated jobs and dwelling units across the area according to the precepts of each scenario. Special attention was paid to avoiding development in land areas that were designated by CNHP as particularly sensitive from a conservation perspective.

“We use scenario planning as a way to address uncertainty in our future forecasts. Money for transportation is tight. We look at all our planned transportation infrastructure improvements, and if they improve the network in all scenarios, we feel much more confident about making the investment.”

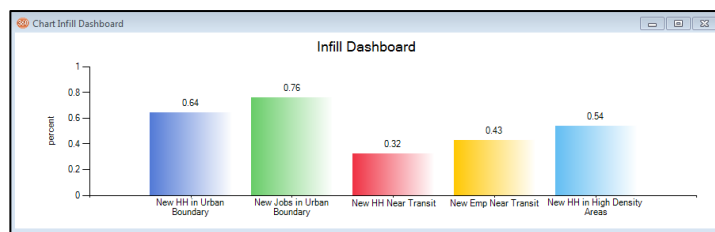
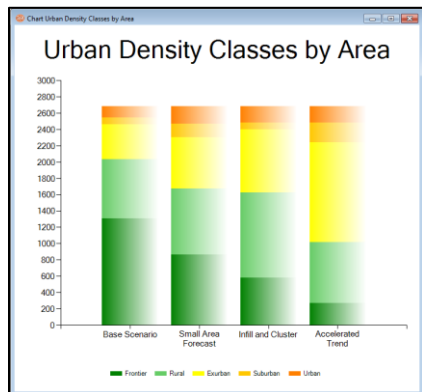
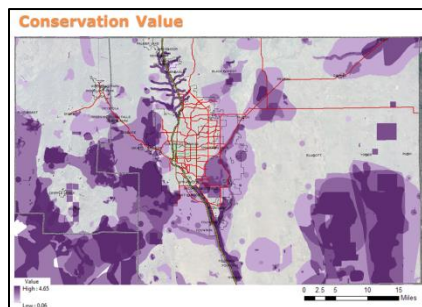
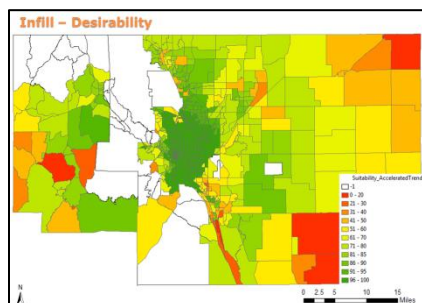
—Craig T. Casper, AICP  
PPACG Regional Transportation Director

Once initial drafts of the scenarios had been developed, PPACG hosted a stakeholder workshop with its Technical Advisory Committee. Working with live CommunityViz analysis in small groups, participants moved households and jobs to refine and create more realistic scenarios while remaining consistent with the scenario’s theme. In real time, CommunityViz calculated a wide variety of performance measures and indicators which were also useful for comparison with the Small Area Forecast. In addition to standard indicators such as vehicle miles traveled and land use mixes, many indicators measured potential adverse

impacts to sensitive places and populations. A “dashboard” set of summary indicators displayed in a single chart helped the team monitor results during and after scenario creation.

**Technology and Tools:** CommunityViz Scenario 360; ArcGIS Spatial Analyst, NatureServe Vista.

**Outcomes:** This ongoing project continues to show how conservation and land use planning can successfully integrate with transportation plans. CommunityViz is a key tool in the process, used for creating and analyzing alternative scenarios.



**KEY LINKS**

- CommunityViz  
<http://www.placeways.com/communityviz>
- Placeways, LLC  
<http://www.placeways.com>
- Pikes Peak Area Council of Governments  
<http://ppacg.org>
- NatureServe  
<http://www.natureserve.org>
- Colorado Natural Heritage Program  
<http://www.cnhp.colostate.edu>