



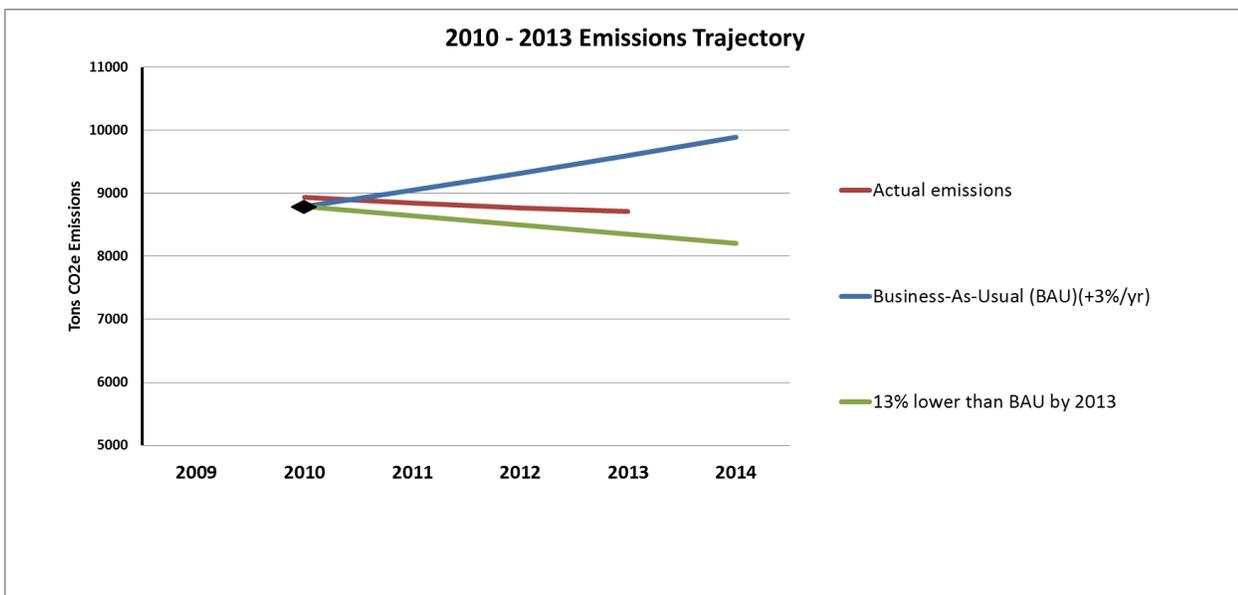
## 2011 TO 2013 SUSTAINABILITY PLAN REPORT

### EXECUTIVE SUMMARY

Sustainability is an overarching component of the Council's Mission Statement and Vision Statement. It helps ensure quality of life for present and future generations, increases efficiency of government operations, and reduces costs contributing to the economic stability of county government. This report has been prepared to inform Council of the progress made toward achieving the goals of the Sustainability Plan.

Summit County's commitment to sustainability was put into action by adoption of the 2011 Sustainability Plan. Every department has contributed to the accomplishments of the goals outlined in this report. Implementation of the action items contained in the Sustainability Plan has been valuable toward increasing awareness, initiating actions, and implementing new technologies that have improved efficiencies and reduced operating costs throughout County operations.

A major component of the Sustainability Plan is the greenhouse gas (GHG) reduction goal to reduce carbon dioxide equivalent (CO<sub>2</sub>e) emissions 13% below business-as-usual by the end of 2013. Although we did not meet the goal, we are trending the right direction as shown in the 2010-2013 Emissions Trajectory graph below.

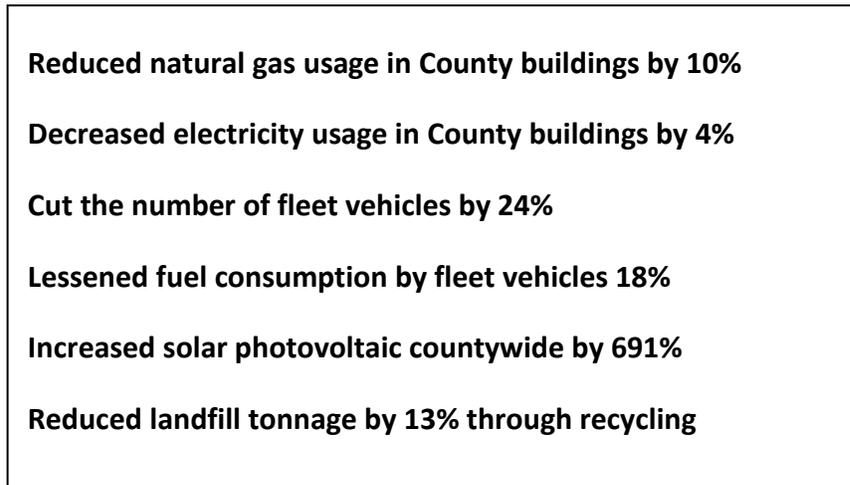


Baseline CO<sub>2</sub>e emissions in 2010 of 8,785 metric tons were corrected to 8,989 metric tons. Total 2013 emissions were 8,799 metric tons resulting in an overall emissions reduction of 2.1% between 2010 and 2013. However, by achieving the remaining goals in the 2010-2013

Sustainability Plan and implementation of a utility and fuel tracking system to more accurately quantify emissions, the County is likely to meet the 13% reduction goal by the end of 2014.

While the overall goal was not met, significant progress was made toward increasing efficiency of county buildings, reducing fleet operating costs, and expanding the use of renewable energy countywide, and increasing recycling that extends the life of the landfill. See Figure 1.0 below.

**Figure 1.0 2010 to 2013 Sustainability Achievements**



The County has invested wisely in numerous energy efficiency measures and lighting upgrades that have resulted in decreased usage of natural gas by 10% and electricity by 4% throughout major County buildings despite increased hours of operation, colder-than-normal winters and hotter-than-normal summers. To reduce tailpipe emissions, the County has introduced compressed natural gas vehicles to its fleet. Staff facilitated construction of a compressed natural gas refueling station at a key location on Interstate-80 east/west corridor in Silver Creek that now provides CNG for County vehicles and makes the cleaner burning fuel available to all residents.

Solar PV installations on the University of Utah Extension building in Coalville and the Public Health Center reveal the County’s commitment and support of renewable energy that will further reduce utility costs, reduce emissions and demonstrates leadership to the community.

Progress made toward the achievement of twenty goals outlined in the Sustainability Plan follows.

## **ADMINISTRATION**

### **Goal 1 Establish accountability for sustainability efforts and energy conservation measures.**

The County has established accountability for sustainability efforts and energy conservation measures as evidenced by the following:

- Conducted annual inventories of County Facility and Operations utility data, fleet and employee commute fuel consumption, water, and landfill emissions from 2005 – 2010 that established a carbon emissions baseline.

- Established and adopted by Resolution No, 2011-22, County Facility and Operations Carbon Footprint reduction goal to reduce carbon dioxide equivalent (CO2e) emissions 13% below business-as-usual by the end of 2013.
- Identified shortcomings in emissions analysis and purchased software to expedite analysis, improve tracking and accurately verify results of energy conservation measures.
- County supported Rocky Mountain Power Blue Sky renewable energy program through the purchase renewable energy that avoided the release carbon dioxide into the atmosphere:
  - 347,900 kWh in 2011 avoided 416,916 pounds of carbon dioxide
  - 368,400 kWh in 2012 avoided 459,962 pounds of carbon dioxide
  - 2013 information unavailable at this time

**Goal 2    Develop funding stream for projects to meet reduction goal.**

Council has continued to fund the Sustainability Coordinator position since 2010. Additionally, numerous grant funds have been obtained to help fund energy efficiency improvements, build solar PV installations and install water conservation measures—all contributing to emissions reduction and utility cost savings that allows the County to repurpose the money for other uses. A list of sustainability-related grant funds awarded to Summit County follows:

2009	U.S. Department of Energy Energy Efficiency & Conservation Block Grant	\$154,500
2009	Rocky Mountain Power Solar PV installation on University of Utah Extension	\$26,000
2011	U.S. Department of Energy, SunShot Initiative Remove barriers to Solar	\$7,139
2012	Rocky Mountain Power, Blue Sky Program Solar PV Installation on Public Health Building	\$216, 925

- Participation in the Blue Sky program to show public support of renewable energy and increase eligibility for additional Blue Sky Funding Awards has been successful as demonstrated by the funding of the 70.8 kW solar PV systems on the County Health building. The system is designed to:
  - produce 92,000 kW annually
  - reduce the building’s electricity usage by approximately 1/3 annually
  - reduce electricity bills approximately \$8,000/year
  - reduce carbon dioxide equivalent emissions 64.9 metric tons per year
  - provide real-time verification of solar energy production via web link: <https://easyview.auroravision.net/easyview/index.html?entityId=1775911>
- Applied for \$297,000 Blue Sky Grant funds to install 74 kW solar PV system on the Justice Center, the County’s largest utility user.

- Applied for Utah Solar Incentive Program rebate lottery to obtain up to \$57,000 rebate if Justice Center solar installation is not funded by Blue Sky grant.

## LAND USE PLANNING/BUILDING

### **Goal 3 Incorporate sustainability measure in the Land Management Codes and General Plans.**

Will begin the process of incorporating sustainability measures into the Development Codes following Council's adoption of updated General Plan in 2014.

- The 2009 International Energy Conservation Code (IECC) is currently being in governing new commercial construction, not residential construction. Residential construction remains governed by the 2006 IECC.
- Removed barriers to renewable energy:
  - Reduced solar building permits from \$388.50 to \$50 (June - Dec. 2013).
  - Provided ABCs of solar permitting requirements on-line that streamlined permit processing at the counter.
  - Met with local municipalities to help reduce barriers and promote renewable energy through participation in Summit Community Solar program.
  - Trained seven (7) Park City and Summit County building inspectors on solar installations.

### **Goal 4 Develop community programs for residents and businesses to retro-fit homes and buildings for greater energy efficiency and conservation.**

Limited progress was made on this goal during the plan period however it will likely be a top priority in 2014.

### **Goal 5 Initiate a program to encourage the community to generate an additional 100 kW of energy from solar thermal or solar photovoltaic by 2014.**

- Increased total residential and commercial solar photovoltaic installations countywide from 82.8 kW in 2010 to 654.8 kW in 2013.
- Partnered with Utah Clean Energy and Park City Municipal Corporation to guide a group of citizens in the administration of the Summit Community Solar program that Installed 363 kW of residential solar on 60 homes throughout Summit County in 2013.
  - Homeowners will save an average of \$700 during the first year, increasing to an average annual savings of \$914 over the next 25 years.
  - The installations will prevent 9,299 metric tons of CO<sub>2</sub>e emissions from entering the atmosphere.
- The Planning Department recorded renewable energy permits issued annually and an inventory of exact location of renewable energy systems is currently being compiled.

NOTE: There are currently 171 net metered residential and commercial solar installations throughout Summit County generating 1.06 Megawatts annually, eliminating 75.5 metric tons of CO<sub>2</sub>e emissions annually.

**Goal 6 Maintain and preserve natural resources significant to Summit County’s identity and quality of life.**

- An inventory of all protected open space in Summit County, including open space as part of subdivision plats was completed in 2012.
- Long-term management plans have been developed for certain county-owned open spaces.
- Open space maintenance funds have been included in the annual County budget.
- An ongoing funding source for the purchase of open space and/or agricultural land preservation has not yet been established.
- Participation in the preservation of natural resources and open space remains ongoing.

**FACILITIES/OPERATIONS**

**Goal 7 Increase energy and water efficiency standards for all new construction and major remodels for County facilities.**

The County has invested wisely in energy efficiency measures as evidenced by the following:

- Reduced electricity usage in the County’s major buildings by 4% despite double the number of cooling degree days (130 CDD in 2010 compared to 248 CDD in 2013).<sup>1</sup>
- Reduced natural gas usage in the County’s major buildings by 10% despite increase in heating degree days (8,124 HDD in 2010 compared to 8,434 HDD in 2013).<sup>2</sup>
- Obtained Rocky Mountain Power rebates issued in the amount of \$ 15,779 for saving 136,884 kW of electricity in 2011 and 2012.
- Utility Cost Management Consultants monitor utility bills and have identified rate changes that saved the County over \$19, 750 in natural gas bills since 2010.
- Wrote and circulated a Request for Proposal for oversight and implementation of the most cost-effective energy efficiency measures and lighting retrofits to install in the Justice Center and County Courthouse that will:
  - Reduce utility costs approximately \$45,000/year.
  - Reduce CO<sub>2</sub>e emissions roughly 260 metric tons annually.
- Xeriscaping and water conservation landscapes have been implemented at most County facilities including the Richins Building, Jeremy Ranch Park-and-Ride, Kamas County facilities, Public Works, the Courthouse and Animal Control.
- 24 outdoor lighting fixtures on County buildings have been replaced with “night-sky friendly” high-efficiency LED fixtures that qualify for Rocky Mountain Power wattSmart rebates.

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<sup>1</sup> Comparison of 2010 – 2013 electricity usage provided by Rocky Mountain Power and cooling degree days obtained from National Oceanic Atmospheric Association.

<sup>2</sup> Comparison of 2010 – 2013 natural gas usage provided by Quester and heating degree days obtained from National Oceanic Atmospheric Association.

## **Goal 8 Reduce energy and water consumption in existing County facilities.**

- Window audit was conducted and storm windows were installed where appropriate.
- Lighting Audits have been conducted on eight (8) major County buildings and recommended improvements have been made or scheduled to be made.
- Personal electric space heaters have been eliminated by County Manager directive in 2011.
- Programmable thermostats, low flow toilets and faucet aerators have been installed throughout County buildings.
- Wrote a Request for Proposal, facilitated committee selection of contracted solar contractor, and oversaw installation of solar system on the County Public Health building that generates free electricity.
- Hired consultant that designed a preliminary solar PV system required for submission of Rocky Mountain Power Blue Sky Renewable Energy Grant request.
- Worked closely with Facilities Manager to continue identification of energy efficiency upgrades and improvements to be made throughout all County buildings.
- The American Recovery and Reinvestment Act funded energy efficiency and water conservation upgrades with an Energy Efficiency and Conservation Block Grant in the amount of \$154,500.
- Obtained Rocky Mountain Power utility rebates in the amount of \$16,846 for completing energy efficiency improvements between 2010 and 2013.

## **Goal 9 Incorporate best practices for procurement.**

- Enrolled the County in BidSync, an on-line procurement system that provides end-to-end e-procurement solutions that reduce costs and improves vendor/solicitation efficiencies (at no cost to County).
- Adopted Ordinance #822, an updated Procurement Policy in Dec. 2013 that established a system of financial controls for the efficient use and expenditure of public funds.

## **Goal 10 Engage County employees in methods of conservation for energy, fuel, supplies, and water, as well as participation in recycling.**

County employees have demonstrated ever-increasing awareness of sustainability by proposing and/or instituting numerous sustainability practices. Some examples are described below:

- Replaced non-recyclable Styrofoam cups in lunchroom with cups and mugs.
- Established office battery recycling collection in the Coalville Courthouse.
- A 2013 survey of employees' commutes compared with a survey conducted in 2010 revealed positive trends toward reduction of emissions and fuel consumption:
  - The percentage of employees driving pickup trucks decreased by 5%.
  - The average distance of a round-trip commute decreased 17% (from 117 miles to 97).
  - 15% of respondents are carpooling with at least one (1) other person at least one (1) day per week; of those carpooling nearly half carpool 4-5 days/week.
  - 42% of respondents reported a willingness to utilize mass transit if offered.

- Four (4) County employees have been sharing a 100 mile round trip commute together for the past 10 years.

### **Goal 11 Integrate automated energy and paper saving technologies.**

- County departments have implemented on-line services including recording of public documents, tax payments, motor vehicle registration, and issuance of building permits and business licenses that have reduced vehicle trips to the Courthouse and minimized the use of paper records.
- County Clerk implemented paperless check-in at polling locations.
- Budget committee endorsed the use of I-pads that reduced the number of paper copies from 11,800 to 900 pages per budget cycle, saving the equivalent of 1.3 trees.<sup>3</sup>
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## **WASTE MANAGEMENT**

County hiring of Landfill Manager has brought the landfill current on meeting state and federal landfill regulations.

### **Goal 12 Extend life of the County landfills.**

- Landfill diversion rate (diverted by recycling) for 2013 was 18.8%, up from 12.4% in 2012 when curbside recycling was implemented.
- Landfill Manager conducts regular audits and monitors collection of residential waste and recycling collections to ensure efficiency and maximization of diversion.
- Trash bin size was reduced from 95 gallon carts to 65 gallon carts in July 2012 to encourage recycling.
- The County curbside recycling was implemented that includes all residences in the County except those in Samak and Weber Canyon Road where 15-yd roll-off bins are provided to co-mingle recyclables.
- A recycling facility established in Coalville became obsolete due to curbside recycling and was closed resulting in a cost-savings of \$1,400 per month to the County.
- County Council Adopted Resolution # 2013-09 to encourage the reduction of single-use bags by the utilization of reusable bags.
- A solid Waste Master Plan is currently being developed by the Summit County Solid Waste Superintendent Jaren Scott that will explore options for a green wasted composing facility and bio-solid disposal options.
- County provided funds to Recycle Utah to deliver the following services:
  - Conduct presentations on recycling that reaches every student in the County.
  - Collect and recycle glass that is not collected curbside (670 tons in 2013).
  - Collect and recycle e-waste (94.3 tons in 2013).

<sup>3</sup> <http://www.conservatree.org/learn/EnviroIssues/TreeStats.shtml>

### **Goal 13 Offer more recycling opportunities at all county facilities for employees and the public.**

- Employee recycling at the County Courthouse has resulted in the reduction of garbage pickup from an 8-yard dumpster two days per week to a 6-yard dumpster one day per week.
- Eliminated the use of 10 gallon plastic bottles by installing water filtration system.
- Recycling opportunities have increased at both landfill sites to collect and recycle the following:
  - Household hazardous waste, Freon, tires, metals, electronic waste, cardboard, paper, plastic and clean green waste.
- Contracted Silly Market to conduct “Net Zero Waste” collection at County Fair and educate the public about specific recycling requirements.
- Added additional recycling carts at County facilities.
- Distributed reusable shopping bags to all County employees at the 2013 holiday party.
- Eliminated the purchase of bottled water at all County sponsored/hosted meetings.

## **TRANSPORTATION**

### **Goal 14 Implement County fleet management initiatives to increase fuel efficiency reduce emissions and save money.**

- Facilitated installation of public CNG refueling station to serve county fleet as well as county residents and interstate traffic at a savings of approximately \$2.00/gasoline gallon equivalent (gge).
- Purchased CNG refueling appliance for installation at Public Works to dispense CNG at approximately \$1.00/gasoline gallon equivalent (approximate \$2.50/gge savings).
- Introduced first dedicated CNG Honda Civic to the fleet that will reduce tailpipe emissions 78% and lower fuel cost from \$1,529/year to \$793/year as compared to a gasoline fueled Honda Civic.<sup>4</sup>
- Facilitated purchase of first County gaseous-prepped Public Works pickup truck for conversion to CNG that will reduce tailpipe emissions and reduce fuel cost by approximately \$2.25/gasoline gallon equivalent.<sup>5</sup>
- Monthly fuel use by department was tracked from 2005 – 2011 and cumulatively for 2013.
- Identified the need for improved fuel tracking system and purchased software system to meet to that need, produce emissions data, flag usage anomalies and generate reports.
- Tire pressure is checked when county vehicles are serviced at Public Works to ensure optimal fuel economy and tire life.
- Public Works tracks mileage between oil changes to maximize life of engines.

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<sup>4</sup> Based on 45% highway, 55% city driving, 15,000 annual miles and gasoline priced at \$3.24/gallon

<sup>5</sup> Fuel cost savings based on \$1.00/GGE CNG dispensed from refueling appliance installed at Public Works and current gasoline of \$3.24 per gallon in Kimball Junction.

- An air compressor has not been installed outside of the Public Works garage.
- Promotion of efficient driving practices through employee education, an Employee Driving Policy and the use of fuel tracking has not been done.
- Coordinated Fleet Review Committee that instituted and administered fleet vehicle acquisition policy—requires consideration of CNG first, reduced tailpipe emissions and increased fuel economy of County fleet.
- Decreased the size of the County fleet by 24% —reduced the number of vehicles from 254 in 2010 to 193 in 2013.
- Fleet Committee and Sustainability Coordinator adopted compressed natural gas (CNG) as a locally abundant, low-cost, lower tailpipe emissions fuel while research continues into clean fuel technologies best-suited to various vehicle types.

**Goal 15      Eliminate vehicle idling in fleet vehicles.**

- Sheriff’s Department implemented the use of dual battery set-ups in patrol vehicles to increase stand-by battery power for auxiliary electronic equipment and reduce vehicle idling.
- Dual battery set-ups have reduced the frequency of single battery replacements.

**Goal 16      Practice conservation in County Road construction & maintenance.**

- Public works continues to make brine solution in-house and retrofit County trucks with salt-brine spray systems.
- The practice of asphalt recycling continues to reduce the need to haul old asphalt off-site and to minimize importing new materials.

**Goal 17      Promote more sustainable County Park City transit initiatives and increase ridership.**

- Implemented route changes recommended in the Regional Short Range Transit Plan (5/23/11) that stabilized ridership.
- Research into advanced vehicle technologies and alternative fuels to reduce emissions of transit buses remains ongoing.
- Increased participation in the Park City/Summit County jointly operated public transit system to ensure that new bus purchases result in lower tailpipe emissions.
- Extended transit service between Park City and Salt Lake City in 2011.
- Stopped the design/build of Kimball Junction Transit Center pending comprehensive assessment of transportation needs and identification of optimal location of a transit center.
- County Council approved funds to conduct regional transportation study in 2013 for development of a Snyderville Basin Transportation Master Plan—study to begin in 2014.
- Started participating in local and regional transportation planning efforts including the Wasatch Accord.

## **Goal 18 Enhance walkability and non-motorized transportation links in Eastern Summit County.**

- Trails have been mapped and corridors prioritized for regional connectivity in the Summit County Master Trails Plan adopted by Resolution # 2012-29.
- Constructed a non-motorized trail from Echo to Henefer partially funded with \$56,738 grant from Utah Department of Natural Resources through the Federal Recreational Trails Program.
- Eastern Summit County Transportation Master Plan adopted by Ordinance No. 808 on 6/26/2013 to enhance cycling/motorist use.

## **COMMUNITY ENGAGEMENT AND ECONOMIC VITALITY**

### **Goal 19 Engage the community in sustainability initiatives through example, education and incentives.**

- Engaged community members that led the successful Summit Community Solar program to install renewable energy at reduced cost through the power of bulk purchase.
- Conducted two (2) CNG Stakeholder meetings to encourage use of CNG as a clean-burning transportation fuel.
- Provided funds to help incubate the “Summit County Beef” program in support of local ranchers that evolved into a retail market selling locally produced beef in Kimball Junction.
- Provided funds, coordinated lease, and helped develop reliable water supplies to irrigate a community garden plots (30) and promote food sustainability.
- Installed solar powered water fountain at Summit County Public Health building to provide experiential education on the workings of solar panels and promote renewable energy.
- Installed educational kiosk in Summit County Public Health building to educate visitors and promote renewable energy.
- Conducted outreach and education of Summit Community Solar at local events, markets, outdoor concerts.
- Ongoing community outreach includes the following:
  - Regular postings of sustainability-related information on County website
  - Monthly articles written and published in Summit Buzz
  - Live interviews on KPCW
  - Coordination of information with County Public and Community Affairs Coordinator to increase presence on social media and story placements in local and Salt Lake media markets

### **Goal 20 Establish communitywide carbon emissions reduction goal and Action Plan.**

- Conducted county-wide greenhouse gas (GHG) emissions study of years 2005-2009 and produced the Summit County Greenhouse Gas Reduction Roadmap in 2012.
- Discontinued involvement in the “Low Carbon Diet” program with Park City Municipal Sustainability staff due to limited results from time-intensive initiative.

- County Council adopted No Idling Guidelines on May 11, 2011.
- Erected “Idle-Free County” anti-idling signs in parking lots at county facilities.
- Continued limited participation in Save Our Snow community Action Plan.

## CONCLUSION

The 2011 Sustainability Plan was ambitious and well-defined; a declaration of the County’s commitment to the social, environmental and economic needs of its citizens. The inter-departmental coordination required to accomplish the goals of the Sustainability Plan proved beneficial to instilling an awareness of the value of sustainability throughout County government.

The County made significant progress toward achievement of most of the goals in the Plan and demonstrated the value of sustainability. The County’s footprint is getting smaller and trending downward. Wise investments in energy efficiency measures and lighting upgrades resulted in lower utility costs and reduced emissions. The addition of a CNG refueling station to the infrastructure within the County has made the choice of cleaner burning transportation fuel an option for the County fleet as well as all a more viable option for businesses and residents to help maintain our air quality.

In the areas where progress was limited, re-evaluation of those goals and the Council’s desired outcomes will help guide future sustainability actions and the development of a 2014-2016 Sustainability Plan.

Going forward, a more targeted approach may be beneficial for short term results specific to County facilities and operations. A longer time frame is more appropriate to implement countywide emissions reduction strategies due to the time required to develop and administer programs and the complexity of measuring results. My recommendation is to consider adopting an emissions reduction goal of 17% below 2005 levels by 2020.

*Finally, a special thank you to County Council, County Manager and County staff for embracing sustainability as an important component of the County’s mission to provide efficient services that ensure quality of life for present and future generations.*