

Green Government



**Board of Supervisors
June 4, 2008**



Maricopa County

Introduction

Maricopa County's significant population growth is historic and well-known. After adding approximately one million people in the 1990s, the County will again add another one million people in the first decade of this century. With a current population approaching four million and long-term projections showing the population nearly doubling again in less than 40 years, it is clear that strategies to help maintain a vibrant quality of life will be even more important in the future. An important part of these strategies will be maintaining a healthy and sustainable environment. Recognizing the relationship between a healthy environment and the County's long-term success, the Maricopa County Board of Supervisors directed County departments to prepare and implement a long-term strategy whereby the County will reduce its carbon footprint, help save money, and enhance the region's environment. Several months of collaboration and coordination between its departments and community stakeholders has resulted in a new and innovative plan known as the Maricopa County Green Government program.

Purpose

The Board of Supervisors recognizes the impacts that significant growth will continue to have on the region's environment. The Board of Supervisors also recognizes that it can and should be a regional leader in maintaining a healthy and sustainable community. Leadership is a fundamental part of the Green Government program because the identified actions will be implemented by County departments to demonstrate that environmental stewardship and cost savings can be achieved. This "Lead by Example" approach directs County departments to implement identified actions to help improve the region's air quality; improve water quality and quantity; increase material reuse and recycling; reduce energy use; make better informed decisions about efficient, economical, and environmentally sensitive land use and development patterns; and build long-lasting partnerships with the broader community. While sustainability is often a misunderstood cliché, its most commonly identified when environmental, economic, and social benefits overlap to achieve a positive outcome (**Figure 1**). Although achieving sustainability is difficult, Maricopa County believes the Green Government program is an important step in a long-term approach to addressing regional environmental issues.

Program Organization

The Green Government program is a cooperative effort between many County departments (**Table 1**) in coordination with various community stakeholders (**Table 2**). These stakeholders represent a sample of experts in environmental issues, are associated with organizations that have initiated similar programs and can provide helpful insight, or are directly affected by the Green Government program.

Figure 1: Model for Long-Term Sustainability

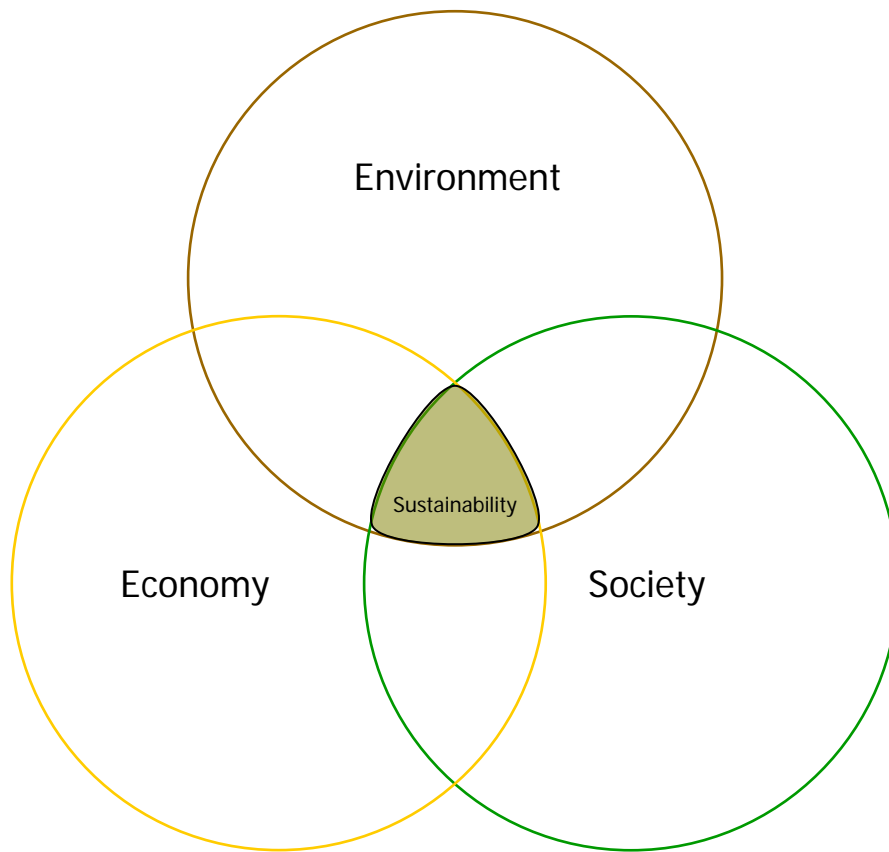


Table 1
Green Government Program - County Dept. Participation

Air Quality Department
Transportation Agency of Public Works
Environmental Services Department
Equipment Services
Facilities Management Agency of Public Works
Flood Control Agency of Public Works
Parks and Recreation Department
Planning and Development Department
Department of Public Health
Solid Waste Agency of Public Works

Table 2
Community Stakeholder Participation *

Arizona Department of Commerce - Energy Office
Arizona Department of Environmental Quality
Arizona Department of Water Resources
Arizona Game & Fish
Arizona Public Service
Central Arizona Home Builders Association
City of Phoenix
City of Scottsdale - Green Building Program
Desert Botanical Gardens
Generation Seven Strategic Partners
Arizona State University - Global Institute of Sustainability
Global Water Resources
Kitchell Corp.
Maricopa Association of Governments
Salt River Project
Valley Forward
Valley Metro
Waste Management, Inc.

* Requested to participate

The participants provided useful information and advice, and provided an opportunity for Maricopa County to begin building cooperative partnerships for successful program implementation. However, the public outreach needed to ensure success will extend beyond these initial stakeholders to include other community and public, private, and non-profit organizations.

The Green Government program establishes a fundamental yet important mission: to achieve a cleaner, healthier, and higher quality Maricopa County. From this mission, the program establishes an advocacy plan that identifies various actions Maricopa County will pursue. This program also identifies specific measures that will help determine progress in meeting the approved actions. This three-step process allows Maricopa County to identify short- and long-term successes, and to reassess whether initial assumptions and time lines need modification. However, since the actions and measures for each County department will vary, and because technological, financial resource, and staff changes will occur, the Green Government program will be flexible and adaptable to changing conditions, and will be reconsidered on a periodic basis.

Green Government Program

Mission: To achieve a cleaner, healthier, and higher quality Maricopa County

Action: Advocate the implementation of a "Green" Shop program

Measure: Through partnerships with ADEQ and the RMFMA (Rocky Mountain Fleet Management Association), by July 2013 RMFMA will have 60% of Arizona's public sector fleet facilities green shop certified through State program. Beginning in July 2009, Equipment Services will provide an annual report that identifies progress towards meeting the target deadline and identifies overall program results.

Action: Advocate programs that increase material reuse and recycling, and reduce administrative and other supply use

Measure: By July 2009, the Environmental Services Department will develop and implement a program whereby its staff will utilize electronic documents, instead of hard copies, for at least 50% of all inspection data. Beginning in July 2009, the Environmental Services Department will provide an annual report that measures progress toward achieving and maintaining the target use rate and identifies overall program results.

Measure: By July 2010, the Environmental Services Department will develop and implement a system to recycle aluminum cans in facilities occupied by Environmental Services staff. Beginning in July 2009, the Environmental Services Department will provide an annual report that measures progress toward achieving and maintaining the target recycle rate.

Measure: By July 2009, the Public Works Professional Support Services will develop and implement a program that will reduce the amount of paper used for copies by an average of 5% annually by July 2013. Beginning in July 2009, the Public Works Professional Support Services will provide an annual report that measures progress towards achieving and maintaining the paper use reduction target and identifies overall program results.

Measure: By July 2009, the Public Works Professional Support Services will develop and implement a "Green" purchasing program that by December 2013 increases by an average of 5% annually the amount of recycled and remanufactured products purchased by Public Works. Beginning in July 2009, the Public Works Professional Support Services will provide an annual report that measures progress towards achieving and maintaining the target product purchase and identifies overall program results.

Measure: By July 2009, the Public Works Professional Support Services will develop and implement a uniform rental program that will reduce water use by a minimum of 20% by July 2014. Beginning in July 2009, the Public Works Professional Support Services will provide an annual report that measures progress towards achieving and maintaining the water reduction target and identifies overall program results.

Measure: By July 2015, the Transportation Agency of Public Works - in partnership with Equipment Services - will develop and implement a program whereby the Transportation Agency of Public Works will construct a sustainable truck and car wash station at the Durango Yard that uses recycled water and properly disposes of dirt and oil. Beginning in July 2013, the Transportation Agency of Public Works will provide an annual report that measures progress in achieving completion by the identified date and identifies overall program results.

Measure: By July 2009, the Solid Waste Agency of Public Works will develop and implement a program whereby the Solid Waste Agency of Public Works accepts all types of recyclables at transfer stations where feasible. Beginning in July 2009, the Solid Waste Agency of Public Works will provide an annual report that measures progress towards achieving and maintaining the recycling goals and identifies overall program results.

Measure: By July 2009, the Solid Waste Agency of Public Works will build a second Waste Tire Recycling plant in the West Valley, contingent upon project approval in FY 2008. Beginning in July 2009, the Solid Waste Agency of Public Works will provide an annual report that measures progress towards completing and maintaining the plant and identifies operational achievements.

Measure: By July 2009, the Solid Waste Agency of Public Works will develop and implement a program whereby the Solid Waste Agency of Public Works offers waste education regarding recycling, illegal dumping, composting, source reduction and reuse, and climate change to county residents, general public, and schools. Beginning in July 2009, the Solid Waste Agency of Public Works will provide an annual report that measures progress towards implementing and maintaining the education program and identifies overall program results.

Measure: By July 2009, the Solid Waste Agency of Public Works will develop and implement a program whereby the Solid Waste Agency of Public Works will collect and recycle miscellaneous scrap metal at all Transportation Agency of Public Works maintenance areas. Further, by July 2010, the Solid Waste Agency of Public Works will expand this program to collect such scrap metal at all development lots owned by Maricopa County. Beginning in July 2009, the Solid Waste Agency of Public Works will provide an annual report that measures progress towards implementing and maintaining the program and identifies overall program results.

Measure: By July 2009, the Solid Waste Agency of Public Works will develop and implement a program whereby the Solid Waste Agency of Public Works will partner with recycling initiatives and other agencies in Maricopa County, and include data collection and reporting on recycling efforts and outcomes. Beginning in July 2009, the Solid Waste Agency of Public Works will provide an annual report that measures progress towards establishing and maintaining the partnership program and identifies overall program results.

Measure: By July 2008, the Solid Waste Agency of Public Works will develop and implement a program whereby the Solid Waste Agency of Public Works hosts at least two Household Hazardous Waste events by July 2009, and offer the events to two additional interested communities who need them. In July 2009, the Solid Waste Agency of Public Works will provide a report that identifies overall program results.

Measure: By July 2008, the Facilities Management Agency of Public Works will implement the following programs:

- A revenue neutral paper and cardboard recycling program in County facilities
- A formalization of the program which will encompass the direct reuse of the old furniture through Asset Inventory Management (AIM) which will avoid solid waste disposal.

Further, by July 2009, the Facilities Management Agency of Public Works will complete a cost/benefit study, in conjunction with Materials Management, which explores a revenue neutral program for the recycling of other materials such as cans and plastic bottles. Beginning in July 2010, Facilities Management will provide an annual report that measures progress towards program implementation and identifies overall program results.

Measure: By July 2009, the Facilities Management Agency of Public Works will complete a study regarding the viability of processing Food Factory waste for biogas generation. If deemed viable, then by July 2011 Facilities Management will complete a study that identifies a time frame for implementation. Beginning in July 2009, Facilities Management will provide an annual report that measures progress towards implementation, and identifies overall program results.

Measure: By July 2011, the Facilities Management Agency of Public Works will develop and implement a program whereby Facilities Management will require all contractors and consultants to provide all construction project documentation in electronic format. Beginning in July 2010, Facilities Management will provide an annual report that measures progress towards achieving and maintaining compliance and identifies overall program results.

Measure: By December 2012, the Facilities Management Agency of Public Works will develop and implement a program whereby Facilities Management will convert all of its new records from paper to electronic format, contingent upon consent by the Arizona State Library, Archives and Public Records. Beginning in July 2010, Facilities Management will provide an annual report that measures progress towards the conversion rate target and identifies overall program results.

Measure: By July 2010, the Facilities Management Agency of Public Works will develop and implement a program which requires its employees to reuse 50% of office file folders and other office supplies when possible.

Beginning in July 2010, Facilities Management will provide an annual report that measures progress towards target rate compliance, and which identifies overall program results.

Measure: By July 2010, the Facilities Management Agency of Public Works will develop and implement a program whereby Facilities Management will have touch-less paper towel dispensers and touch-less soap dispensers installed in all restrooms in Downtown, Southeast Mesa, and San Tan Court county-owned / managed facilities to reduce product waste. Beginning in July 2009, Facilities Management will provide an annual report that measures progress towards achieving and maintaining its installation target and identifies overall program results.

Measure: By July 2009, the Flood Control Agency of Public Works will develop and implement a purchasing program that increases by an average of 5% annually by July 2013 the amount of recycled and remanufactured products purchased by the Flood Control Agency of Public Works. Beginning in July 2009, the Flood Control Agency of Public Works will provide an annual report that measures progress towards achieving and maintaining the target product purchase and identifies overall results.

Measure: By July 2009, Planning and Development will establish a program to reduce paper use by 5% by July 2012. Beginning in July 2010, Planning and Development will provide an annual report that measures progress in achieving and maintaining the target reduction and identifies overall program results.

All County Departments

Measure: Maricopa County will develop and implement a program whereby Maricopa County agencies will increase product reuse and recycling for the following products and by the following percentages by July 2013:

- 80% of all paper will consist of post-consumer content
- 80% of toner cartridges will be recharged and reused
- 60% of cameras, phones, GPS units, and other similar equipment will utilize rechargeable batteries
- 50% of new or replacement furniture will be made out of recyclable and/or recycled material
- 100% of county-owned / managed facilities will have recycling facilities and capabilities
- Establish a policy regarding the use and disposal of recycled paper, and have a paper recycling program policy in place

Beginning in July 2009, each county agency will provide an annual report that measures progress towards achieving and maintaining the target recycle rates and identifies overall program results for their agency.

Measure: By July 2009, Maricopa County agencies will prepare reward and incentive programs for employees and/or groups of employees that demonstrate leadership in furthering Maricopa County's recycling goals. Beginning in July 2010, each county agency will provide an annual report that identifies the recipients of such rewards.

Action: *Advocate programs and efforts that reduce air pollution and improve air quality in Maricopa County*

Measure: By July 2008, the Environmental Services Department will have at least 70% of daily field inspectors utilize automatic routing to minimize travel. Beginning in July 2008, the Environmental Services Department will provide an annual report that measures progress toward achieving and maintaining the target routing rate and identifies overall program results.

Measure: By July 2012, the Environmental Services Department will have replaced 50% of its fleet with alternate fuel or hybrid vehicles. Beginning in July 2009, the Environmental Service Department will provide an annual report that measures progress toward achieving and maintaining the target vehicle replacement rate and identifies overall program results.

Measure: By July 2009, the Department of Public Health will develop and implement a program that trains department supervisors and employees on the principles of trip reduction and provides technical assistance to supervisors as they develop management techniques for effective accountability with respect to trip reduction. Beginning in July 2009, the Department of Public Health will provide an annual report that measures progress towards achieving and maintaining the trip reduction training program and overall program results.

Measure: By July 2009, the Department of Public Health will develop and implement a program that recognizes and rewards staff leaders who champion and maintain trip-reduction activities within programs. Beginning in July 2009, the Department of Public Health will provide an annual report that measures progress towards achieving and maintaining the rewards program and identifies overall program results.

Measure: By July 2009, the Department of Public Health will develop and implement a program whereby the Department acquires additional connectivity tools and trains staff on effective use to reduce travel from returning to workstations between appointments. Beginning in July 2009, the Department of Public Health will provide an annual report that measures progress towards achieving and maintaining this program and identifies overall program results.

Measure: By July 2009, the Department of Public Health will develop and implement a program that increases and expands the use of web and videoconferencing capabilities to reduce local travel to meetings and appointments. Public Health will also encourage state agencies and community partners to adopt this strategy. Beginning in July 2009, the Department of Public Health will provide an annual report that measures progress towards achieving and maintaining this program and identifies overall program results.

Measure: By July 2011, the Department of Public Health will procure a fleet of pool hybrid vehicles that will be available for employees that commute to work via bicycling or walking, by using public mass transit, or by using car- or van-pools. Beginning in January 2009, the Department of Public Health will provide an annual report that measures progress towards achieving and maintaining this program and identifies overall program results.

Measure: By July 2009, the Public Works Professional Support Services will develop and implement a program which designates and reserves at least 10 preferred parking spaces for employees that commute to work using hybrid vehicles. Beginning in July 2009, the Public Works Professional Support Services will provide an annual report that measures progress in achieving and maintaining the target number of preferred parking spaces and identifies overall program results.

Measure: By July 2009, the Public Works Professional Support Services will develop and implement a program whereby a minimum of 20% of monthly meetings will be conducted via video or conferencing and office Communicator. Beginning in July 2009, the Public Works Professional Support Services will provide an annual report that measures progress in achieving and maintaining the target number, and which identifies overall program results.

Measure: Beginning July 2008, the Transportation Agency of Public Works will allocate a minimum of \$3 million each fiscal year towards the paving of dirt roads and roadway shoulders to reduce dust emissions. Beginning in July 2009, the Transportation Agency of Public Works will provide an

annual report that measures progress in achieving its target allocation, identifies the number of miles paved using the allocation, and identifies overall program results.

Measure: In FY 2009, the Transportation Agency of Public Works will continue its program whereby MC the Transportation Agency of Public Works DOT will apply at least 65 lane miles of soil cement to roadway shoulders per year to reduce dust emissions, when economically feasible. Beginning in July 2010, the Transportation Agency of Public Works will provide an annual report that measures progress in achieving its paving target and identifies overall program results.

Measure: By July 2009, the Transportation Agency of Public Works will develop and implement a program whereby newly disturbed soils resulting from all the Transportation Agency of Public Works construction projects will be stabilized (native hydro-seeding or desert landscaping with decomposed granite) upon completion to reduce dust emissions. This measure will be consistent with the existing SWPPP for the project. Beginning in July 2010, the Transportation Agency of Public Works will provide an annual report that measures progress in achieving its stabilization target and identifies overall program results.

Measure: By July 2009, the Transportation Agency of Public Works will develop and implement a program to use bio-diesel fuel and liquid propane gas in a minimum of 50% of its newly acquired vehicles and equipment. Beginning in July 2010, the Transportation Agency of Public Works will provide an annual report that measures progress in achieving its target use and identifies overall program results.

Measure: By July 2010, the Transportation Agency of Public Works – in partnership with Equipment Services – will develop and implement a test program to inflate the Transportation Agency of Public Works vehicle tires with nitrogen to increase gas mileage and extend tire life. Beginning in July 2010, the Transportation Agency of Public Works will provide an annual report that measures progress in achieving its target and identifies overall program results.

Measure: By July 2009 and July 2011 respectively, the Transportation Agency of Public Works will prepare and implement a program whereby the Transportation Agency of Public Works will complete three signal modernization projects, and complete one signal synchronization project along one roadway corridor. Beginning in July 2010, the Transportation Agency of Public Works will provide an annual report that measures progress in completing these projects by the required date and identifies

overall program results.

Measure: By July 2011, the Transportation Agency of Public Works will prepare and implement a program whereby the Transportation Agency of Public Works will achieve at least 90% signal integration (130 signals), and deploy and integrate Closed Circuit Television cameras at every mile on key the Transportation Agency of Public Works corridors. Beginning in July 2012, the Transportation Agency of Public Works will provide an annual report that measures progress in achieving its signal integration target and identifies overall program results.

Measure: In FY 2009, the Transportation Agency of Public Works will continue its program of applying water to all dry road and shoulder surfaces prior to any road grading to minimize dust emissions. Beginning in July 2010, the Transportation Agency of Public Works will provide an annual report that measures progress in achieving its program target and identifies overall program results.

Measure: By July 2013, the Transportation Agency of Public Works will obtain MAG Congestion Management Air Quality funding to further enhance arterial traveler information systems and reduce traffic congestion. Beginning in July 2010, the Transportation Agency of Public Works will provide an annual report that measures progress in obtaining such funds and identifies overall results of such funding.

Measure: In FY 2009, the Transportation Agency of Public Works will continue its program of using contractors with PM-10 compliant sweepers exclusively to sweep 6,000 lane miles per year to reduce dust emissions. Beginning in July 2009, the Transportation Agency of Public Works will provide an annual report that measures progress toward compliance and identifies overall program results.

Measure: By July 2008, the Transportation Agency of Public Works will prepare and implement a program whereby all Operations employees will be trained by Maricopa County Department of Air Quality regarding dust reductions to promote better dust control at the Transportation Agency of Public Works construction sites and for all maintenance activities. Beginning in July 2009, the Transportation Agency of Public Works will provide an annual report that measures progress towards achieving and maintaining the training goal and identifies the overall program results.

Measure: By July 2009, the Transportation Agency of Public Works will add three hybrid vehicles to their fleet. Beginning in July 2009, the Transportation Agency of Public Works will provide an annual report that measures

progress in acquiring these vehicles and identifies overall program results.

Measure: By July 2009, the Flood Control Agency of Public Works will develop and implement a program whereby 100% of two-stroke small engine equipment will be replaced with four-stroke models. Beginning in July 2009, the Flood Control Agency of Public Works will provide an annual report that measures progress in achieving and maintaining its replacement target and identifies overall program results.

Measure: By July 2009, the Flood Control Agency of Public Works will implement a Carbon Footprint Assessment and Management Program, through a partnership with the ASU Global Institute of Sustainability, to establish a process and methodology for calculating current carbon footprint, tracking carbon footprint reductions, and evaluate effectiveness of "Green" initiative activities. Beginning in July 2009, the Flood Control Agency of Public Works will provide an annual report that measures progress in reducing carbon footprint and identifies overall program results.

Measure: By July 2008, the Facilities Management Agency of Public Works will prepare and implement a program whereby 100% of new county owned/managed facilities will meet LEED certification standards (the County will not seek the certification in an effort to conserve resources). Beginning in July 2009, Facilities Management will provide an annual report that measures progress towards implementing the LEED certification standards program and identifies overall program results.

Measure: By July 2012, the Facilities Management Agency of Public Works will develop and implement a program whereby Facilities Management will mix 30% of the natural gas heating systems with hydrogen to reduce the carbon emissions and increase fuel efficiency. Beginning in July 2009, Facilities Management will provide an annual report that measures progress towards achieving the target goal and identifies overall program results.

Measure: Beginning in July 2008, Equipment Services will provide written direction on an ongoing basis to county agencies and departments regarding the responsibilities Maricopa County has in relation to the vehicles that the county operates and their impact to the environment. Beginning in July 2009, Equipment Services will provide an annual report that measures progress in providing ongoing written direction to county agencies and departments and identifies overall program results.

Measure: By July 2010, the Solid Waste Agency of Public Works Agency of Public Works will purchase at least five fuel efficient "Green" cars and fuel efficient "Green" trucks. Beginning in July 2009, the Solid Waste Agency of

Public Works will provide an annual report that measures progress towards achieving and maintaining the target purchase and identifies overall program results.

Measure: By July 2012, Planning and Development will replace at least 20% of its vehicle fleet with hybrid or alternative fuel vehicles. Beginning in July 2009, Planning and Development will provide an annual report that measures progress towards achieving the target replacement rate and identifies overall program results.

Measure: By July 2012, Planning and Development will develop and implement a system whereby 85% of all applications for change in entitlement will be submitted electronically. Beginning in July 2010, Planning and Development will provide an annual report that measures progress in achieving and maintaining the electronic submittal target and identifies overall program results.

All County Departments

Measure: All Maricopa County agencies and departments will implement the *County Vehicles and Environmental Responsibility Policies* to increase the use of hybrid vehicles, reduce fuel consumption, reduce the county's carbon footprint, and save money. Beginning in July 2010, each agency will provide an annual report that identifies how it has complied with these policies.

Action: *Advocate programs that increase indoor air quality to reduce the potential for adverse health effects*

Measure: By July 2011, the Facilities Management Agency of Public Works will develop and implement a program whereby all new county-owned / managed facilities will meet ASHRE standards. Beginning in July 2012, Facilities Management will provide an annual report that measures progress towards achieving and maintaining the target design rate and identifies overall program results.

Measure: By July 2011, the Facilities Management Agency of Public Works will develop and implement a program whereby all new county-owned / managed facilities will locate makeup air inlets away from contaminant sources such as cooling towers, sanitary vents, and vehicular exhaust from parking garages, loading docks, and street traffic. Beginning in July 2010, Facilities Management will provide an annual report that measures

progress towards achieving and maintaining the target design rate and identifies overall program results.

Measure: By July 2010, the Facilities Management Agency of Public Works will complete a study of the viability of installing a permanent carbon dioxide (CO₂) monitoring system to monitor air ventilation in a form that allows for operational adjustments. If viable, then by July 2011, Facilities Management will complete a study that outlines the timeline for installation of the permanent carbon dioxide monitoring systems, and provide an annual report that measures progress towards achieving installation and identifies overall results.

Measure: By July 2009, the Facilities Management Agency of Public Works will develop and implement a program whereby all County construction projects - new or remodel - will require use of low-emitting (low VOC) adhesives and sealants to reduce the amount of indoor contaminants that are odorous and potentially irritating or harmful to the well-being of installers and occupants. Beginning in July 2009, Facilities Management will provide an annual report that measures progress towards achieving compliance and identifies overall program results.

Measure: By July 2009, the Facilities Management Agency of Public Works will develop and implement a program that requires all janitorial vendors or custodial divisions to use "Green" cleaning supplies and products where available. Beginning in July 2009, Facilities Management will provide an annual report that measures progress towards achieving compliance and identifies overall program results.

Action: *Advocate renewable energy programs and energy conservation and efficiency in construction of buildings, building design, community design and land use patterns*

Measure: By July 2010, the Facilities Management Agency of Public Works will develop and implement a program whereby 75% of all new County owned / managed facilities will have a renewable energy resource (solar, wind, or hydrogen fuel cell) as part of the building's design and construction. Beginning in July 2010, Facilities Management will provide an annual report that measures progress towards achieving the renewable energy source target and identifies overall program results.

Measure: By July 2009, the Facilities Management Agency of Public Works will complete a viability study of using solar panels and fuels cells at County

buildings that have the greatest natural gas and electricity usage. If determined to be viable, then by July 2010 Facilities Management will develop a plan that outlines the timeline for installation at such buildings, and provides an annual report that measures progress towards achieving installation and identifies overall program results.

Measure: By July 2012, the Facilities Management Agency of Public Works will develop and implement a program that uses the 2007 solar study completed by Arrington Watkins Architects to install photovoltaic panels on parking structures. Beginning in July 2011, Facilities Management will provide an annual report that measures progress towards achieving installation targets and identifies overall program results.

Measure: By July 2010, the Facilities Management Agency of Public Works will complete study on the feasibility of converting Food factory cooking oil into Bio Diesel. If deemed viable, then by July 2011 Facilities Management will complete a study that identifies a time frame for implementation. Beginning in July 2009, Facilities Management will provide an annual report that measures progress towards that goal.

Measure: By July 2012, the Facilities Management Agency of Public Works will develop and implement a program whereby Facilities Management will do the following:

- Prioritize and fund the following projects and operations using a Board of Supervisors-approved Energy Program budget;
- Commission each new building to ensure that Facilities Management operational needs are met, building systems perform efficiently, and building operators are properly trained;
- Perform energy audits and retro-commission existing buildings;
- Use the Facilities Automation System to provide comfort to building occupants with minimum usage of energy;
- Use high efficiency motor replacements;
- Install variable frequency drive systems for pumps, motors, and chillers;
- Use fuel-efficient landscape maintenance equipment and ban all two-cycle pieces as technology permits transition;
- Use high-efficiency evaporative cooling where applicable;
- Retrofit meters for connectivity through the Internet for improved energy management

Beginning in July 2011, Facilities Management will provide an annual report that measures progress towards achieving and maintaining the noted activities and identifies overall program results.

Measure: By July 2008, the Facilities Management Agency of Public Works will complete a preliminary study to determine the best delivery method for Downtown cooling to existing buildings and the proposed Court Tower project. Based on study results, by July 2009, Facilities Management will prepare a final study as necessary and provide a report in July 2009 that identifies final results.

Measure: By July 2011, the Facilities Management Agency of Public Works will develop and implement a program to install in all county-owned/managed buildings 25-W four-foot fluorescent lamps in place of existing 32-W lamps. Beginning in July 2010, Facilities Management will prepare an annual report that measures progress towards achieving and maintaining its installation goal and identifies overall program results.

Measures: By July 2010, the Facilities Management Agency of Public Works will complete a study that identifies the viability of effectively using solar power for electricity, air conditioning, pressure pump, and water heating at county-owned / managed facilities. If viable, then by July 2011 Facilities Management will complete a study which identifies a time frame for implementation. Beginning in July 2009, Facilities Management will provide an annual report that measures progress towards completing the study and identifies program results.

Measure: By July 2009, the Solid Waste Agency of Public Works Management Department will pursue establishing a solar energy project at Maricopa County Waste Transfer Stations. Beginning in July 2009, the Solid Waste Agency of Public Works will provide an annual report that measures progress towards achieving and maintaining the solar energy project and identifies overall program results.

Measure: By July 2009, the Solid Waste Agency of Public Works will complete research about practical uses and potential implementation time frames for the County's closed landfills. Beginning in July 2009, the Solid Waste Agency of Public Works will provide an annual report that measures progress towards completion of the research, implementation of identified solutions and timelines, and overall program results.

Measure: By July 2010, the Transportation Agency of Public Works will develop and implement a program whereby the Transportation Agency of Public Works upgrades all traffic signals to LED (light emitting diode) indications. Beginning in July 2009, the Transportation Agency of Public Works will provide an annual report that measures progress towards achieving and maintaining its upgrade target and identifies overall program results.

Measure: By July 2009, Flood Control Agency of Public Works will develop and implement a program whereby the Flood Control Agency of Public Works will distribute one "Green" tip per month to staff to help implement eco-friendly work practices. Beginning in July 2009, the Flood Control Agency of Public Works will provide an annual report that helps determine the impact and utilization rate of such eco-friendly work practices and identifies overall program results.

Measure: By July 2009, the Public Works Professional Support Services will develop and implement a program for Public Works that annually surveys and educates employees on "Green" practices. Beginning in July 2009, the Public Works Professional Support Services will provide an annual report that measures progress in achieving enhanced "Green" practices by Public Works staff.

All County Departments

Measure: Maricopa County will develop and implement a program whereby Maricopa County agencies and departments will reduce overall energy use by at least 5% between July 2008 and July 2013. To achieve this target, Maricopa County agencies and departments will, among other actions, employ the following strategies:

- Turn off non-critical electric equipment, including computers and computer monitors, copy machines, and other miscellaneous personal and business equipment after business hours, and unplug or switch off wall adapters/power cubes during non-business hours
- Replace electric equipment with *Energy Star* qualified equipment where possible
- Manually turn off lights and/or use occupancy sensors to turn off lights automatically when not in use
- In county-owned / managed buildings, replace older HVAC systems with higher efficiency units as necessary
- Provide overhead shade of A/C condensers
- Use automatic and/or programmable thermostats to regulate room temperatures where possible.
- Develop staff training and education programs about ways to save energy in their specific work areas and in their buildings.
- Use fluorescent light bulbs instead of incandescent light bulbs in overhead and desk lamps

Beginning in July 2009, each county agency and department will provide an annual report that measures progress towards achieving and maintaining the target energy savings goals, identifies these and other

strategies employed to date and identifies overall program results for their agency.

Measure: By July 2009, Maricopa County agencies and departments will prepare reward and incentive programs for employees and/or groups of employees that demonstrate leadership in furthering Maricopa County's energy reduction goals. Beginning in July 2010, each county agency will provide an annual report that identifies the recipients of such rewards.

Action: *Advocate developing partnerships with public, private and non-profit organizations to implement Maricopa County's Green Government Program and its comprehensive plan*

Measure: By July 2009, the Public Health Department will establish a small unit of skilled professionals and develop protocols for working with the Maricopa County Planning & Development Department to conduct Health Impact Assessments as described by the Centers for Disease Control. Beginning in July 2009, the Department of Public Health will provide an annual report that measures progress towards establishing and maintaining the described work unit and identifies overall program results.

Measure: By July 2010, the Public Health Department will begin conducting rapid Health Impact Assessments that provide real value to the Maricopa County Planning and Development Department and policy makers. Beginning in July 2009, the Public Health Department will provide an annual report that measures progress towards establishing and maintaining rapid Health Impact Assessments and identifies overall program results.

Measure: By July 2011, the Public Health Department will begin conducting intermediate Health Impact Assessments for the Planning and Development Department. Beginning in July 2010, the Public Health Department will provide an annual report that measures progress towards establishing and maintaining intermediate Health Impact Assessments and identifies overall program results.

Measure: By July 2012, the Public Health Department will begin conducting comprehensive Health Impact Assessments for the Maricopa County Planning and Development Department. Beginning in January 2011, the Public Health Department will provide an annual report that measures progress towards establishing and maintaining intermediate Health Impact Assessments and identifies overall program results.

Measure: By July 2012, the Flood Control Agency of Public Works will develop and implement a program where the Flood Control Agency of Public Works will enter into intergovernmental agreements with municipalities to incorporate multi-use features in all flood control projects where feasible. Beginning in July 2011, the Flood Control Agency of Public Works will provide an annual report that measures progress towards achieving and maintaining its intergovernmental agreement program target and identifies overall program results.

Measure: For FY 2009, the Solid Waste Agency of Public Works will maintain membership in the Arizona Recycling Coalition to expand the Solid Waste Agency of Public Works' knowledge on national and local recycling issues, and identify opportunities to work with other local and state agencies. Beginning in July 2008, the Solid Waste Agency of Public Works will provide an annual report that measures progress towards achieving and maintaining membership and identifies membership benefits and results.

Measure: By July 2009, the Solid Waste Agency of Public Works will develop and implement a program whereby the Solid Waste Agency of Public Works will establish, via the Internet, a promotion and education of "Green" purchasing to County residents and County employees in collaboration with other agencies inside and outside of the County. Beginning in July 2009, the Solid Waste Agency of Public Works will provide an annual report that measures progress towards establishing and maintaining the promotion and education program and identifies overall program results.

Measure: By July 2009, the Solid Waste Agency of Public Works will develop and implement a program whereby the Solid Waste Agency of Public Works joins the Valley-wide Recycling Partnership and works with municipalities on promoting recycling efforts to Maricopa County residents at a small fraction of the actual media and advertisement costs. Beginning in July 2010, the Solid Waste Agency of Public Works will provide an annual report that measures progress towards establishing and maintaining the partnership program and identifies overall program results.

Measure: By July 2008, the Facilities Management Agency of Public Works will have established membership, and be an active participant in, the following organizations:

- US Green Building Council
- Association of Energy Engineers
- Distributed Energy Association of Arizona
- Illuminating Engineering Society
- Municipal Energy Alliance of Greater Phoenix

Additionally, Facilities Management will continue participating in regular meetings with energy managers from local City, County, and State energy offices to share ideas and keep abreast of the latest developments in technology and legislation regarding energy policy. Beginning in July 2009, Facilities Management will provide an annual report that measures progress toward achieving and maintaining participation and identifies overall program results.

Measure: By July 2010, Planning and Development Department will complete an analysis regarding the feasibility of expedited permitting for buildings that meet "Green" building standards. If deemed feasible, by July 2011, Planning and Development will complete a time frame for implementation. Beginning in July 2009, Planning and Development will prepare an annual report that measures progress towards completion of the feasibility study and implementation and identifies overall program results.

All County Departments

Measure: By July 2009, Maricopa County will prepare a community outreach plan that identifies short- and long-term strategies that county agencies will use to solicit community input and participation in the implementation of the "Green" Government program. Beginning in July 2009, each agency will provide an annual report that summarizes outreach efforts and identifies overall results.

Action: *Advocate volunteer efforts for community clean up, tree planting, and other programs that implement the Green Government*

Measure: By July 2009, the Transportation Agency of Public Works will add 20 miles of new road segments to the existing Adopt-a-Highway Program. Beginning in July 2010, the Transportation Agency of Public Works will provide an annual report that measures progress in achieving and maintaining the existing and additional miles of Adopt-a-Highway and identifies overall program results.

Measure: In FY 2009, the Transportation Agency of Public Works will continue its program to contract with a private company to remove litter along 800 miles of roadway. Beginning in July 2010, the Transportation Agency of Public Works will provide an annual report that measures progress in achieving and maintaining litter removal along the 800 target miles of roadway and identifies overall program results.

Measure: By July 2010, Planning and Development, in coordination with a county-wide program, will prepare an outreach program that advocates for community volunteer efforts for neighborhood clean up, tree planting, and other efforts that help implement the Maricopa County "Green" Government program. Beginning in July 2009, Planning and Development will prepare an annual report that measures progress towards program implementation and identifies overall program results.

All County Departments

Measure: By July 2009, Maricopa County will develop and implement a program whereby county agencies help organize at least one annual Board of Supervisors-sponsored clean-up at a county park, on Flood Control Agency of Public Works property, and/or the Transportation Agency of Public Works property.

Action: *Advocate open space in areas that help sustain valuable habitat, serve important recreational and cultural needs, and protect against hazardous conditions*

Measure: By July 2015, the Parks and Recreation Department will add at least 5,000 acres to the Maricopa County regional park system and/or the Maricopa Trail system. Beginning in July 2009, the Parks and Recreation Department will provide an annual report that measures progress towards achieving the target acreage and identifies overall program results.

Measure: The Parks and Recreation Department will develop a program, by July 2009, whereby at least 25% of the identified buffers in the parks and recreation master plan that surround county parks can be protected. Beginning in July 2009, the Parks and Recreation Department will provide an annual report that measures progress towards program development and implementation and identifies overall program results.

Measure: By July 2013, the Flood Control Agency of Public Works will develop and implement a program whereby the Flood Control Agency of Public Works will track the number of acres of open space preserved or created by delineating floodways, earthen channels, and basins. Beginning in July 2011, the Flood Control Agency of Public Works will provide an annual report that measures progress towards achieving and maintaining its tracking program, identifies the number of acres of open space preserved,

and identifies overall program results.

Measure: By July 2009, the Flood Control Agency of Public Works will implement a District Context Sensitive Solutions Program that will guide the development of flood hazard mitigation projects in ways that are sensitive to the context of the biological, cultural, scenic, open space and recreational environments of Maricopa County. Beginning in July 2010, the Flood Control Agency of Public Works will provide an annual report that measures progress in implementing the District's Context Sensitive Solutions Program and identifies overall program results.

Measure: By July 2011, the Facilities Management Agency of Public Works will prepare and implement a program whereby 75% of new facilities will be designed with open space areas. Additionally, all existing facility remodel projects will incorporate open space where feasible. Beginning in July 2011, Facilities Management will prepare an annual report that measures progress towards the target percentage and identifies overall program results.

Measure: By July 2010, Planning and Development will prepare criteria for Board of Supervisors consideration and adoption that addresses open space in new development, open space connections, and trails. Once approved by the Board of Supervisors, Planning and Development will provide an annual report that measures progress in achieving compliance with the Board-adopted criteria and identifies overall program results.

Action: *Advocate balanced land use patterns and other efforts to reduce vehicle trips, vehicle miles traveled, and reduce air pollution*

Measure: By July 2012, the Parks and Recreation Department will administer a process to add at least 15 miles annually to the Maricopa County Regional Trail System. Beginning in July 2009, the Parks and Recreation Department will provide an annual report that measures progress towards achieving the target acreage and identifies overall program results.

Measure: By July 2008, the Facilities Management Agency of Public Works will complete the following:

- Use local building supply contractors and local suppliers of "Green" products as contained in approved County contracts
- Establish regional maintenance centers which help reduce the amount of mileage traveled by maintenance staff to work sites.

Beginning in July 2009, Facilities Management will provide an annual report that measures progress towards implementation and identifies overall program results.

Measure: By July 2010, Planning and Development will prepare criteria for Board of Supervisors consideration and adoption that outline recommended land use ratios, mass transit guidelines, and other land use efficiency principles for various types and sizes of new development. Once approved by the Board of Supervisors, Planning and Development will provide an annual report that measures progress in achieving compliance with Board-adopted criteria and identifies overall program results.

All County Agencies & Departments

Measure: Maricopa County will develop and implement a program whereby an average of at least 5% of each county agency's full-time employee work hours are done via telecommuting on a daily basis by July 2011. Beginning in July 2009, each agency will provide an annual report that measures progress towards achieving the target rate, identifies approximately how many vehicle miles are reduced on an annually due to telecommuting, and identifies overall program results for their agency.

Measure: Maricopa County will develop and implement a program that provides for a compressed work week (9/80) option for each county agency's eligible employees, including management, by July 2011. Beginning in July 2009, each agency will provide an annual report that measures progress towards achieving program implementation, identifies how many of their employees use the compressed work week option, identifies approximately how many vehicle miles are reduced on annually due to the compressed work week program, and identifies overall program results.

Action: *Advocate tree and other flora planting programs*

Measure: By July 2010, the Flood Control Agency of Public Works will develop and implement a program whereby the Flood Control Agency of Public Works will incorporate tree and vegetation planting into at least 50% of flood control projects in its five-year CIP where hydraulically feasible. Beginning in July 2009, the Flood Control Agency of Public Works will provide an annual report that measures progress towards achieving and maintaining its planting target and identifies overall program results.

Measure: By July 2010, the Transportation Agency of Public Works will develop and implement a program consistent with the existing Storm Water Pollution Prevention Plan (SWPPP) program that applies native hydro-seeding to 100% of disturbed river embankments resulting from the Transportation Agency of Public Works projects to reduce erosion, assist with ground water recharge, and encourage natural habitats. Beginning in July 2011, the Transportation Agency of Public Works will provide an annual report that measures progress in achieving and maintaining the 100% target compliance, and which identifies overall program results.

Measure: By July 2009, the Facilities Management Agency of Public Works will develop and implement a program whereby Facilities Management will remove all feral plants at all new construction project sites and replace these plants with low water use trees and plants. Further, by July 2015, Facilities Management will convert all existing county facilities to low water use trees and plants. Beginning in July 2011, Facilities Management will prepare an annual report that measures progress towards achieving and maintaining the plant replacement target and identifies overall program results.

Action: *Advocate programs that mitigate and reverse the urban heat island effect*

Measure: By July 2010, the Facilities Management Agency of Public Works will prepare a study of the viability of using garden roofs with xeriscape landscaping for County buildings. If determined to be viable, then by July 2011 Facilities Management will prepare a program that outlines the steps, methods, and time frames to establish such projects in both new and existing county buildings.

Measure: By July 2010, Planning and Development will prepare criteria for Board of Supervisors consideration and adoption that addresses building materials, building surfaces, building design, solar technology, shading, etc. Once approved by the Board of Supervisors, Planning and Development will provide an annual report that measures progress in achieving compliance with the Board-adopted criteria and identifies overall program results.

Measure: By July 2010, Planning and Development will prepare criteria for Board of Supervisors consideration and adoption that addresses design of parking lots and other hard surface areas. Once approved by the Board of Supervisors, Planning and Development will provide annual report that measures progress in achieving compliance with the Board-adopted

measures and identifies overall program results.

Action: *Advocate water conservation in building design, building fixtures, landscaping, community design, and land use patterns*

Measure: By July 2010, the Transportation Agency of Public Works will develop and implement a program that landscapes 100% of new medians, when deemed economically feasible, with native tree plantings and low-maintenance and low-water using native ground cover to help absorb vehicle emissions. Beginning in July 2011, the Transportation Agency of Public Works will provide an annual report that measures progress in achieving and maintaining the 100% target compliance and identifies overall program results.

Measure: By July 2020, the Transportation Agency of Public Works will replace 80% of turf areas within rights-of-way in Sun City with desert landscaping, drought resistant plants, and/or artificial turf. Beginning in July 2016, the Transportation Agency of Public Works will provide an annual report that measures progress in achieving and maintaining its replacement target and identifies overall program results.

Measure: By July 2011, the Facilities Management Agency of Public Works will develop and implement a program to help Maricopa County recognize a 10% reduction in water usage per sq. ft. from July 2005 baseline levels in county-owned / managed facilities, utilizing techniques such as the following:

- 100% of all water usage will be monitored. Conservation opportunities will be identified and initiated by using water flow submeters installed in 2007 at the three Durango jails.

Beginning in July 2010, Facilities Management will provide an annual report that measures progress towards achieving and maintaining the program targets and identifies overall program results.

Measure: By July 2012, the Facilities Management Agency of Public Works will install, where practical, the following fixtures in all restrooms in county-owned buildings:

- water-free urinals
- low-flow fixtures
- faucets with sensors and automatic controls

Beginning in July 2011, Facilities Management will prepare an annual report that measures progress towards installation targets, and which identifies overall program results.

Measure: By July 2009, the Facilities Management Agency of Public Works will prepare a study of the viability of using non-potable water for landscape irrigation, toilet and urinal flushing, custodial purposes, and building systems. If viability is established, then by July 2011 Facilities Management will prepare a cost-benefit analysis for the program and report to County Management. Beginning in July 2011, Facilities Management will prepare an annual report that measures progress towards study results.

Measure: By July 2013, the Facilities Management Agency of Public Works will prepare and implement a program whereby Facilities Management will reconfigure all air conditioning drainage lines in all County buildings to recycle condensate water from evaporator coils for other uses, including irrigation, cooling towers, and/or toilet flushing. Beginning in July 2013, Facilities Management will prepare an annual report that measures progress towards program implementation and identifies overall program results.

Measure: By July 2010, the Facilities Management Agency of Public Works will prepare and implement a program whereby Facilities Management will certify that all newly proposed construction projects for County facilities incorporate grey water reuse. Beginning in July 2011, Facilities Management will provide an annual report that measures progress towards achieving and maintaining the grey water reuse target and identifies overall program results.

Measure: By July 2010, Planning and Development will prepare criteria for Board of Supervisors consideration and adoption that addresses common space landscaping, water conserving irrigation methods, paving/hard surface limitations, lot coverage, parking lot landscaping, etc. Once approved by the Board of Supervisors, Planning and Development will provide an annual report that measures progress in achieving compliance with the Board-adopted criteria and identifies overall program results.

Measure: By July 2010, Planning and Development will prepare criteria for Board of Supervisors consideration and adoption that addresses methods for water conservation in building design and building fixtures. Once approved by the Board of Supervisors, Planning and Development will provide an annual report that measures progress in achieving compliance with Board-adopted criteria and identifies overall program results.

Action: *Advocate programs that reduce noise pollution*

Measure: In FY 2009, the Transportation Agency of Public Works will continue its program that evaluates the need for noise abatement walls for new construction projects when potential noise impacts are determined. This analysis will be in accordance with criteria identified in the Transportation Agency of Public Works' "Noise Abatement Policy". If warranted, noise walls will be constructed in conjunction with roadway upgrade projects to reduce noise pollution for adjacent residences. Beginning in July 2010, the Transportation Agency of Public Works will provide an annual report that measures progress in achieving and maintaining this program and identifies overall program results.

Measure: In FY 2009, the Transportation Agency of Public Works will continue its program to incorporate the use of rubberized asphaltic concrete into 100% of new roadway construction paving projects to reduce vehicle tire noise. This measure will only apply to projects where benefits to existing residents are deemed feasible. Beginning in July 2009, the Transportation Agency of Public Works will provide an annual report that measures progress in achieving and maintaining the use target and identifies overall program results.

Measure: By July 2009, the Facilities Management Agency of Public Works will develop and implement a program whereby 100% of newly constructed facilities owned by Maricopa County will take advantage of new technologies that allow for greater insulation from sound such as Insulating Concrete Forms, installation of double-glazed windows, and use of roof insulation to assist in reducing noise pollution in our facilities. Beginning in July 2009, Facilities Management will prepare an annual report that measures progress towards achieving program goals and identifies overall program results.

Measure: By July 2010, Planning and Development will complete a reevaluation of the Maricopa County Noise Ordinance to identify recommended changes that strengthen noise reducing provisions. Once an updated ordinance is approved by the Board of Supervisors, Planning and Development will provide an annual report regarding implementation.

Action: *Advocate programs that reduce surface and groundwater pollution*

Measure: By July 2015, the Transportation Agency of Public Works will prepare a

feasibility study regarding the use of porous pavement on new paving projects to supplement storm water management programs and help filter rain water before it percolates into the ground. Beginning in July 2012, the Transportation Agency of Public Works will provide an annual report that measures progress towards completion of the feasibility study.

Measure: By July 2010, the Solid Waste Agency of Public Works will develop and implement a program whereby the Solid Waste Agency of Public Works will organize an Illegal Dumping program and task force of County agencies. Beginning in July 2009, the Solid Waste Agency of Public Works will provide an annual report that measures progress towards achieving and maintaining the program and task force and identifies overall program results.

Action: *Advocate programs that attract clean industries to Maricopa County*

Measure: By July 2009, the Facilities Management Agency of Public Works will develop and implement a program whereby Facilities Management contracts will require at least a 20% participation requirement for co-operative relationships and purchase of locally made products. Beginning in July 2009, Facilities Management will provide an annual report that measures progress towards achieving and maintaining the target participation rate and identifies overall program results.

Measure: By July 2010, Planning and Development, in coordination with the Greater Phoenix Economic Council, will identify policies and strategies for Board of Supervisors consideration and adoption that Maricopa County can implement to help attract and retain environmentally-friendly businesses and industries to Maricopa County. Once approved by the Board of Supervisors, Planning and Development will provide an annual report that measures progress towards implementation and identifies overall program results.

Action: *Advocate land use patterns that promote infill development and Brownfield redevelopment*

Measure: By July 2010, Planning and Development, in coordination with the Greater Phoenix Economic Council, will establish a system to identify high-value county islands and potential incentives for infill development in such islands for Board of Supervisors consideration and adoption. Once approved by the Board of Supervisors, Planning and Development will provide an annual report that measures progress in achieving infill

development in such areas and which identifies overall program results.

Measure: By July 2010, Planning and Development will prepare a system for Board of Supervisors consideration to identify Brownfield locations in unincorporated Maricopa County, a system of shared information with other county departments on Brownfield redevelopment, and Brownfield redevelopment incentives for Board of Supervisors consideration and adoption. Once approved by the Board of Supervisors, Planning and Development will provide an annual report that measures progress in achieving compliance with the Board-adopted standards and identifies overall program results.

Each county agency and department will be responsible for monitoring and reporting their progress towards implementing the measures identified in this program. Therefore, each agency and department must determine how best to allocate staff resources to ensure timely and successful implementation.

Summary

The Green Government program demonstrates Maricopa County's commitment to a regional leadership role in promoting a healthier environment and enhanced quality of life. In addition, the program's "Lead by Example" approach is intended to demonstrate that Maricopa County is working to help achieve a sustainable environment, and to encourage Maricopa County citizens, businesses, and organizations to develop their own "Green" efforts. Maricopa County is excited about the results the Green Government program can achieve and the cooperative partnerships that will help contribute to a healthier and more sustainable future for Maricopa County.