Environmental Stewardship In The 21st Century

Mayor Michael B. Coleman
City of Columbus
January 28, 2005

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Friends, Partners and Community Leaders:

As we continue our efforts to build Columbus as America's 21st Century City, there lies ahead a series of challenges that must be addressed to ensure our success. Key among these is the challenge of driving forward our economy, creating jobs and making Columbus more attractive for businesses, while also protecting our environment and ensuring that future generations are left with a City that is cleaner and healthier.

For far too long, the conventional wisdom has been that strong environmental policy is automatically "anti-business," and that being "pro-business" is bad for the environment. I reject that simplistic view because I know we can do better. We've already begun to prove that by bringing together the private sector, environmental advocates and area governments to protect the Darby Watershed, to plan for regional growth and to put forward strategies to better manage transportation challenges. It is clear that we can do far more together than any one group can accomplish alone.

The following document, which we call "the Green Memo," outlines a series of realistic and doable strategies to both meet economic development goals and ensure a healthier environment. My administration has spent several months researching these topics, and we are sharing them publicly to engage our business community, regional partners and our residents in the "Get Green" campaign, and I hope that you can join us in the effort.

Together we can continue the momentum that is making Columbus not only the best, but also the *greenest* place in the nation to live, work and raise a family.

Sincerely,

Michael B. Coleman
Mayor

GET GREEN Columbus 2005

Environmental Stewardship In The 21st Century

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Pursuing Responsible, Sustainable Growth

For Columbus and Central Ohio to prosper in this new century, we must take measures today to assure responsible, sustainable growth for our community.

To meet this challenge, my Administration has taken several actions over the past five years to guide development in a manner that promotes a better future for our residents. Our initiatives to promote affordable housing, homeownership and downtown development, as well as, our efforts to merge our two airport authorities, revamp our economic development incentives, and use public infrastructure funding to create stronger neighborhoods and good jobs all take aim at achieving more responsible, sustainable growth for our City.

On November 18, 2003, I issued a memorandum, entitled "**Assuring a Vibrant 21st Century City**," directing this Administration to establish new polices to set the stage for fostering dynamic job growth, sustainable neighborhoods, and stronger cooperation in Central Ohio.

As I stated in this growth policy memorandum, the fundamental motivation for these directives is as follows:

…Growth projections make it an imperative for Columbus to adopt policies to set the stage for this sustainable growth. By 2030, the population of Central Ohio is projected to grow by nearly 600,000, bringing the region's population to more than 2 million residents. Nearly half of these residents will live in Columbus. As such, we must prepare our City and region to create jobs and provide for sustainable growth; address transportation, schools, infrastructure, healthcare, recreation, and municipal service issues; and protect our drinking water and natural resources.

— (11/18/03 Memorandum, p. 1)

This "growth memo" also instructs my Administration to set a growth framework that strikes the balance between job growth and sustainable neighborhoods. It also emphasizes that we develop growth plans for our inward and outward growth corridors that provide for adequate public facilities and services, hold new neighborhood development to a new standard of "pay as we grow," and challenge ourselves to set higher standards concerning environmental issues like water quality and conservation.

Taking Strong Environmental Action

Building on these directives, as well as our City's 10-year record of leadership in the Darby Watershed, last June, Columbus City Council President Matt Habash and I called upon the county, municipalities, and townships to join us in a moratorium on development in the Darby, through the end of 2005 and participate in a historic, multi-jurisdictional planning process to protect the Darby. To achieve this goal, the City is willing to put every public service and tool we have on the table to promote the most responsible growth in the watershed. To date, Columbus and nine other jurisdictions have adopted a common mission statement for this "Big Darby Accord" effort and are pursuing the goal of adopting a comprehensive plan for the watershed by the end of 2005.

The Big Darby Accord is one of our several efforts in environmental leadership. Three years ago, we adopted the strongest environmental standards for development in the Midwest for the eastside Hellbranch tributary of the Darby. We've revised our EPA 208 facilities management plan that protects water quality and growth for Columbus and all of Central Ohio. The City has focused on brownfield redevelopment, creating jobs and securing millions in investment throughout the City. We have led an effort to redevelop the Whittier Peninsula, reclaiming this old industrial area as a model for responsible environmental development. We voluntarily entered into two consent decrees with the Ohio EPA to address water quality issues that have existed for decades. Finally, we also stepped beyond our legal duty, last year, and launched "Project Dry Basement" to help residents who suffer from basement sewer back-ups during heavy rains.

Providing Environmental Stewardship

As we have worked to improve our growth policies it has become increasingly clear that for our City to thrive in this new century, Columbus needs to serve as a greater steward of the environment in Central Ohio. This role is driven by our fundamental responsibility to provide essential municipal services like clear water, sanitation, and public health in a safe and fiscally responsible manner, as well as our commitment to promote a high quality of life for our citizens and to foster economic development in a responsible, sustainable manner.

Our environmental challenges are immediate. Last year, Central Ohio's air quality was declared in "nonattainment" of federal environmental protection standards, posing health risks to our citizens, threatening economic development opportunities, and exposing us to the possibility of federal sanctions. Our existing landfill has just 25 years of life left and the cost of closing this facility, siting a new one, or transporting our garbage out of county will cost our taxpayers tens of millions of dollars. Our region's poor recycling efforts waste valuable materials that stunt economic opportunities. Our cost of operating public facilities and motor vehicles are challenged by ever-rising fuel costs that are driven all to often by international events beyond our control. Finally, our region's current commercial and residential development practices promote sprawl, strain the provision of governmental services, and impact upon our natural resources.

For these reasons, Columbus must meet these challenges, now.

For too long, conventional wisdom has been that a strong environmental policy is bad for the economy and a strong growth policy is bad for the environment. I reject that simplistic view.

In fact, I believe that responsible environmental policy can strengthen our economy and improve our quality of life. Not only does such policy improve our air and water quality and environment, it creates jobs, promotes entrepreneurship, and expands business opportunities. Thus, environmental stewardship goes hand and hand with our growth policy and further positions us as America's 21st Century City.

Across the nation, local governments and businesses, large and small, are facing similar challenges and they are demonstrating that the adoption of more environmentally sensitive measures are not just motivated by "community spirit, but by the "bottom line" of fiscal responsibility and the potential for economic growth."

Columbus will lead by example. We will improve our operations, promote better development practices, and help create jobs for our citizens.

On the following pages, I present my Administration's policy guidance on environmental stewardship that I refer to as the "Green Memo."

This guidance document lays out how we will change city operations to improve efficiency and environmental sensitivity. It also directs our agencies to use the City's purchasing power and investment incentives to encourage job creation and it provides a framework for our entire community to come together and solve these challenges. It's presented in the following sections:

1) Collaborating with City Agencies and Community Leaders;
2) Improving recycling efforts;
3) Improving outdoor and indoor air quality;
4) Improving water quality;
5) Promoting green businesses development; and
6) Fostering the "greening" of Columbus by encouraging tree plantings, natural storm water practices, and park and greenway development.

Water and air pollution, drought, flooding, youth unemployment, urban blight are some of the challenging issues that a coalition of Los Angeles government agencies and environmentalists are addressing through the T.R.E.E.S project. T.R.E.E.S., an acronym for Trans-Agency Resources for Environmental and Economic Sustainability, uses an innovative, inexpensive, and integrated approach to address these issues simultaneously. Working together, the groups involved developed a series of Best Management Practices (BMPs) for industrial sites, commercial buildings, schools, and single family homes that create a "blueprint for an ecologically, socially, and economically sustainable Los Angeles."

Collaborating with City Agencies and Community Leaders

Recognizing that excellence in environmental stewardship will best succeed with a systematic view and close, cross-departmental collaboration, I hereby appoint the Mayor's Environmental Policy Working Group, comprised of the Directors of the Departments of Development, Public Service, Public Safety, Health, Public Utilities, Recreation and Parks, Community Relations, Finance, Equal Business Opportunity, and the Mayor's Office.

The working group is charged with examining and recommending actions that the City can take to mitigate or reduce adverse environmental impacts of its operations and to promote preservation and restoration of our community's natural resources. Additionally, it will work to establish performance measures and monitor our progress. The Working Group also will guide our discussions with local, state, and federal officials to gain cooperation on these important initiatives. The group will provide an Annual Report detailing our Administration's progress in moving the City and our community toward advancing an environmental agenda.

I also will create the Mayor's Public Environmental Advisory Council consisting of community leaders from neighborhood, community, environmental, business, and labor groups. This Council will advise the Administration on environmental policy and help identify new partnerships and resources for our environmental initiatives.

Both of these groups also will advise the Administration on how best to use public information resources within our City agencies, and other community organizations, to mount a public education effort on environmental matters, so that our citizens understand and contribute to our environmental stewardship efforts.

Improving Recycling Efforts and Reducing Solid Waste

One of the most important environmental challenges facing large metropolitan areas across the United States is the deposal of garbage in a safe, economical, and visionary manner. Generally speaking, in North America, the simple answer has been to bury garbage in landfills. The major population centers on our east coast and in Canada are exhausting their landfill capacity and are shipping more and more of their garbage away from their jurisdictions. Places like Ohio are becoming the dumping ground for these communities.

In addition to the threat of out of state garbage, a recent Ohio Department of Natural Resources study estimates that 66% of the waste going into our region's landfill, operated by the Solid Waste Authority of Central Ohio (SWACO), is recyclable materials.

Having an affordable, local landfill is advantageous. SWACO estimates that because our region has a local landfill, Central Ohio communities save nearly $9 million a year through its use. SWACO also estimates that the landfill only has about 25 years of capacity left. Once it is full, the cost to close the site and either build a new facility or ship the waste of our region somewhere else will cost our citizens, businesses, and local governments tens of millions of dollars.

Thus, it's in Columbus' vital interest to take various steps to reduce waste and prolong the life of the landfill.

To Improve Recycling and Reduce Solid Waste, Columbus Will:

1) ***Launch "Blue Bag" recycling*** to improve our community's recycling efforts. At best, I would call our City's recycling efforts "pitiful." Our current program has been in place since September 1994 and, to date, only has 11,342 city subscribers out of a total of 320,232 eligible Columbus households – or just over three percent. In partnership with SWACO, this Spring, we will launch a targeted joint effort to recruit an additional 10,000 new households in a new "blue bag" recycling initiative.

Blue bag is a convenient and efficient way for residents of the City of Columbus to recycle. When residents dispose of their household waste they simply place recyclables in a designated blue bag and their other trash in a standard trash bag, then both bags are placed into their standard garbage containers (90-gallon, 300-gallon or a dumpster). When City crews collect the container both recyclables in the "bluebags" and refuse are taken to a transfer station. Once the truck dumps its load the blue bags are segregated and sent to a recycling processing facility.
We will grow our recycling initiative throughout the City in a deliberate manner as we evaluate its effectiveness, monitor the nation for best recycling practices, and determine the best way to enhance our recycling efforts. Our goal is to have a citywide effort by the end of 2006.

2) ***Practice what we preach*** by setting a better community example through improvement in our City departments recycling efforts. Some examples include: adopting a more comprehensive paper, plastic, and metals recycling program at City Hall and in City facilities; recycling road construction materials like cement and asphalt for reuse on City streets; and partnering with SWACO to develop a program that would divert organic waste, like restaurant waste, and sludge from our sewer operations and dedicate those resources to more productive use.

3) ***Buy Green products*** by adopting changes to our procurement code to assure that when practical, we are purchasing materials that are recycled and that can be recycled. Purchasing these materials not only will preserve natural resources, help keep materials out of our landfill, but it also will leverage our buying power to help nurture the marketplace for recycled products.

4) ***Help our community become better recyclers*** by initiating dialogue among businesses, private garbage haulers, and governmental and community leaders to determine what steps are necessary to improve recycling rates with businesses, property managers, building owners, non-profit organizations, and other groups who delegate their refuse collection to private companies.

5) ***Stop Others from Dumping in Ohio*** by working with SWACO, federal and state officials to implement strategies to assure that the long-term solid waste plans developed on behalf of Franklin County and Ohio residents will not be devastated by irresponsibly-managed out of state garbage being dumped in Ohio.

The Columbus Dispatch — Statewide Report

Most of the trash in Ohio's landfills deemed recyclable
Wednesday, January 05, 2005 Spencer Hunt

Plastic foam, paper, cardboard, plastic, metal and glass make up 66 percent of the thousands of tons of trash trucked daily to Ohio landfills, according to a first-ever state report

TYPE OF TRASH	OHIO	SWACO
Paper/cardboard	41.6%	41.8%
Plastics	15.6%	15.1%
Food	15.0%	15.0%
Yard Waste	9.1%	7.8%
Textiles	5.7%	5.5%
Glass	4.7%	5.4%
Metals	3.9%	3.4%
Diapers	3.7%	3.0%
Aerosol Cans	0.3%	0.2%
Medical Waste	0.3%	0.2%

Sources: Ohio Department of Natural Resources, The Solid Waste Authority of Central Ohio

Did you know that in 2001, people in the United States threw away almost 230 million tons of trash? That's about 4.4 pounds from each person every day!

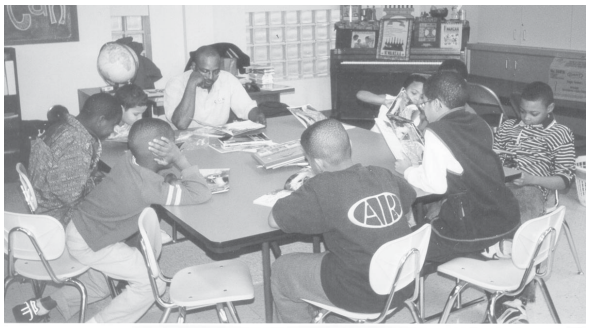
Ohio EPA Web Site

Addressing Outdoor and Indoor Air Quality

A second major environmental challenge facing large cities across the nation is the need to improve air quality. Last year, the U.S. EPA declared that Franklin County and its contiguous county neighbors are in "nonattainment" with air quality standards. Nearly 39 % of our nation's population now lives within nonattainment areas. This designation essentially declares that our air is unhealthy, and if our community fails to act, we will experience serious health consequences, loss of jobs and development opportunities, and may result in penalties and loss of federal funding.

Numerous studies have shown that air quality can affect personal health. Ground level ozone and particulate matter are two significant air pollutants that can result in a variety of respiratory impacts to those persons exposed. These health impacts can include decreased lung function and lung damage. While children, the elderly and sensitive populations may be most impacted by poor air quality, evidence suggests that air pollution affects all of us to some degree. The Centers for Disease Control estimates that, annually, as many as 120,000 premature deaths in the U.S. are associated with exposure to air pollution. Approved EPA modeling estimates at least 1,700 premature deaths occur in Ohio, annually.

Evidence also suggests that air pollutants can play a significant role as an asthma trigger and may increase the incidence of asthma attacks. Asthma is a major public health problem, and asthma prevalence among children is increasing. Asthma prevalence among children in the United States increased from 3.6% to 6.2% from 1980 – 1996. Locally, 9.2% of Franklin County parents report that their child has been diagnosed with asthma – up slightly from 8.5% in 2000.



Against this backdrop, evidence shows that air quality in Franklin County has declined in recent years as compared with previous years. The number of "Good" air quality days has dropped from 80% to 50% between 1998 and 2003, and the number of ozone action days has increased by 50% from 1996 to 2002. Hazardous Air Quality Index levels can lead to decreases in lung function, aggravation or onset of asthma, throat irritation and cough, chest pain and shortness of breath, inflammation of lung tissue, and a higher susceptibility of respiratory infection.

The economic impact of nonattainment also may prove significant. Nonattainment areas face enhanced environmental regulation, carries greater restrictions on businesses and citizens, and may jeopardize federal funding. It also challenges community economic development efforts. A leading cause of poor air quality is diesel engine emissions. For the past several years we have been working with the Chamber of Commerce, Ohio State University, Columbus Airport-Rickenbacker Airport Authority and other community leaders to make Columbus a national logistics and distribution center. Thus, it is critical that the City take steps to address air quality issues and continue to with work with businesses, institutions, and community leaders to address these challenges in a manner that improves public health and protect our economic future.

To Address Outdoor Air Quality, Columbus Will:

1) ***Stop unnecessary vehicle emissions*** by conducting a review of our City's on-road and off-road vehicle operation and maintenance procedures to reduce vehicle emissions by developing an anti-idling policy, readjusting equipment to burn more efficiently, and seeking grant opportunities to retrofit refuse trucks with oxidation converters.
2) ***Purchase better performing vehicles*** by assuring that as we let bids for new on-road and off-road vehicles, we seek vehicles that are fuel-efficient and reduce emissions, and that we evaluate and pursue vehicles that operate on alternative or renewable fuel sources, when possible and practical.

3) ***Encourage Contractors to improve their operations*** by using our construction contracting procedures to encourage our contractors to purchase or retrofit their on-road and off-road vehicles to reduce emissions.

A study by Yale University (2002) showed children on school buses were exposed to 5-15 times the background levels of particulate pollution. This pronounced exposure for developing lungs increases likelihood of developing lung ailments.

Air pollution contributes to asthma prevalence and increases episodes.

According to a news release from the EPA, the average refuse truck emits approximately 8 tons of air pollutants per year through exhaust emissions.

Retrofitting refuse trucks with oxidation converters will cut particulate matter by 30%, hydrocarbons and toxics by 50%, and nitrogen oxides by 40%.

The cost of retrofitting a refuse truck with an oxidation converter is approximately $2,500 for parts and labor according to a similar project funded by a grant from the EPA in Detroit.

An idling piece of equipment gets 0 miles per gallon. Restarting an engine consumes about the same amount of fuel as idling for 30 seconds. When idling for longer periods of time, shut off the engine.

Newer diesel engines and school bus engines only recommend an idling time of 3-5 minutes. Engine manufacturers warn owners that excessive idling will cause carbon to build up in the system and wear on the engine, reduce fuel efficiency, and decrease oil life. Aftermarket parts are available for diesel engines that eliminate the need for any idling time.

4) ***Help everyone do their part*** by working with MORPC, COTA, school districts, our suburban municipalities, the business community, and community leadership to adopt local and regional collective measures to reduce vehicle emissions and improve air quality.
5) ***Approach County, Federal and State Officials*** to work with Columbus and our suburban partners to address air quality issues.

MORPC is coordinating a Clean Air Challenge with the goal to register 10,000 individuals, organizations and businesses to commit to one or more voluntary actions that improve our air quality.

6) ***Help our at risk Citizens during air quality alerts*** by creating an Air Quality Index Communication and Action Plan to provide our citizens with information on air quality issues, their links to personal health, and recommended actions when pollution levels are high.

Addressing Indoor Air Quality

While most people are aware that outdoor air pollution can damage their health, many may not know that indoor air pollution can also have similar significant harmful effects. U. S. EPA studies of human exposure to air pollutants indicate that indoor levels of many pollutants may be 25 times, and occasionally more than 100 times, higher than outdoor levels. These levels of indoor air pollutants are of particular concern because it is estimated that most people spend as much as 90% of their time indoors.

Thus, for many people, moving indoors to avoid exposure to outdoor air pollution may also pose significant risk. Such groups that are more susceptible to the effects of air pollution include the young, the elderly, and the chronically ill, especially those suffering from cardiovascular or respiratory disease such as asthma.

According to the Columbus Health Risk Assessment (CHRA), Healthy Homes program area asthma prevalence rate is at least 11% compared to 7% for Ohio.

Asthma is an epidemic that has no boundaries, effecting every income level, race, and culture in Columbus and the United States. However, this disease disproportionately affects children, low-income and African American populations, especially those living in urban areas.

To Address Indoor Air Quality, Columbus will:

1) ***Launch a new Healthy Homes Program*** in our Department of Health to demonstrate practical and affordable measures to reduce preventable household hazards associated with asthma, lead poisoning, and physical injuries. The Health Department recently received a three-year grant, totaling nearly $1 million, to work with 220 homes with a goal a 50% reduction in associated household diseases, injuries, and symptoms. This initiative also will allow us to provide direct services and materials to improve air quality and reduce asthma triggers in the home. This includes partnership with Lead Safe Columbus to provide lead hazard control services.
2) ***Provide available healthy home assessments*** for families with asthma to identify health hazards in the home and to supply them with information so that they can make informed decisions about health risks in their homes and steps to take during periods of high air pollution outside.
3) ***Award financial grants to our health partners*** to help community-based organizations to provide outreach and hazard control services and to promote prevention and control of asthma triggers.
4) ***Help all Citizens make their homes healthier*** by developing general publications on indoor health issues for the public.

Protecting Our Water

Over the past five years, my Administration has focused substantial efforts and resources on clean water. We updated our regional sewer facilities plan to set the framework for the next 20 years. Columbus has committed to hundreds of millions of dollars in investment for public infrastructure to eliminate sanitary sewer overflows and to reduce combined sewer overflows to our region's rivers and streams. We have initiated Project Dry Basement to help our residents avoid the mess and health threat from sanitary sewer back-ups into their basements. We have adopted the most comprehensive, watershed-based development standards inside the Big Darby Watershed and are engaging in the first-ever comprehensive land use planning effort inside of the Big Darby Watershed. The City has partnered with the federal government to promote environmentally protective farming practices upstream from our drinking water supply to reduce herbicides and pesticides in our water. Finally, we have established nature preserves within our park system to protect wetlands.

As we continue to work on these important efforts, we now are going to better manage our water quality efforts in each of our watersheds, promote practical measures that property owners can take to reduce storm water run off, and promote wetland protection and reconstruction.

To Protect Our Water, Columbus Will:

1) ***Help restore the health of the Olentangy*** by evaluating the ecological benefits of removing or modifying urban low head dam located on the Lower Olentangy River at Fifth Avenue.
2) ***Protect our water quality and reduce flooding*** by updating storm water management requirements to move beyond traditional water quantity management goals to safeguard water quality through such measures as riparian buffer protections.
3) ***Educate our citizens on water quality issues*** by creating a clearinghouse of meaningful and accessible water quality data available to City managers and the members of the public to improve community decisions impacting water quality.
4) ***Improve water quality in all of our watersheds*** by partnering with grassroots watershed-based organizations and residents to support and leverage our strong and knowledgeable citizen base to engage in water quality protection efforts.

A greenway commonly refers to a linear open space or natural area along a watercourse. It can be used to connect people with parklands, natural or historical sites and enhance and protect recreational opportunities, natural habitat and scenic areas.

USEPA web site

Wetlands are the link between land and water, where the flow of water, the cycling of nutrients and the energy of the sun meet to produce highly productive ecosystems. Wetlands may not be wet year-round. In fact, some of the most important wetlands are seasonally dry transition zones. They are among the most valuable but least understood of all natural resources. They are an important transition zone in our Nation's watersheds - the vital link between land and water.

USEPA web site

Promoting "Green" Businesses

As the City works to improve its practices, encourage recycling, leverage its purchasing power, and promote more responsible business practices, we have an opportunity to support the development of one of the fastest growing sectors in our economy, commonly referred to as "green" businesses. Ohio firms are among industry leaders in research and development of recycled-content products and mechanical and chemical systems for recycling material into new products. As of 2000, almost 100,000 jobs in Ohio were directly dependent on recycling. Ohio recycling resulted in $22.5 billion in sales and an annual payroll of $3.6 billion. Columbus and Central Ohio needs to develop a bigger market share in these emerging businesses.

Certainly, the spike in oil prices this summer and the problems with electricity and natural gas prices in the past few years point to the very practical need for Columbus to become a leader in boosting energy efficiency and alternatives for our buildings, vehicles, and equipment. We also must leverage our market position and procurement policies to foster markets in recycling and alternative and renewable energy.

Whether it is recycling waste to reuse as construction materials or to promote and alternative energy, Columbus can encourage companies to develop these new markets which will create jobs and also address issues such as the life of our landfill, reducing emissions, and promoting energy efficiency.

To Promote Green Businesses, Columbus Will:

1) ***Create a Green Business Development Plan*** by collaborating with SWACO, business, and community leaders to guide us in the recruitment, development, and retention of green industries.
2) ***Foster Green Businesses*** by establishing a specific set of economic development incentives for green businesses and develop a pilot green business park to site and nurture green industries.
3) ***Develop the old Lazarus Downtown complex as an anchor for Green Development*** by working with the Downtown Development Corporation and our state and local partners to refurbish the facility as a green building, a community education center, and incubator for emerging green research and business development.

4) ***Help build a Green Market*** by adopting changes to our revised purchasing and construction code to promote, when practical, the purchase of green products, particularly those which are locally produced, and assure that we are leveraging City expenditures to foster development of this important sector of our economy.
(5) ***Work with the Community*** by launching a public awareness campaign with public and private sector procurement offices to promote the use of green products and processes.

Fostering the Greening of Columbus

As this policy directive illustrates, Columbus is at a critical point in addressing a number of environmental challenges and setting the foundation for a responsible, sustainable future. It's time to look at many city and community practices in the context of how they impact upon air and water quality, energy efficiency and independence, the reduction of solid waste, and the promotion of green industries.

Our community must examine how we build and operate buildings, design and construct public improvements, residential, and commercial developments, and revitalize abandoned, or underutilized brownfields. We must promote more natural storm water management practices, protect and create more green space, and plant more trees.

For example, in the area of building construction, the City will be looking at the LEED (Leaderships in Energy and Environmental Design) green building ratings system to contribute to the environmental health of our community. This LEED standard developed and managed by the U.S. Green Building Council is a scientific framework for developing strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality—or the elements that make a green building.

Although under current market conditions, constructing a "green" building may cost three to eight percent more upfront, a recent study of 40 California agencies contends that the savings derived from lower operational and maintenance costs on these buildings yield financial benefits over these upfront costs by 10-fold.

To Foster the Greening of Our City, Columbus Will:

1) ***Build green buildings*** by establishing a protocol for our Administrators to follow as the City constructs, remodels, or refurbishes public facilities to assure that we are establishing LEEDS certified "green buildings" that are more fuel efficient and explore alternative energy sources to reduce energy consumption; promote less impervious surface to reduce storm water run off and improve water quality; and reduce the "heat island" effect of urban structures to improve air quality.

Sustainable or "green" building practices can reduce the tremendous impact that building design, construction and maintenance has on both people and nature. According to the U.S. Department of Energy's Center for Sustainable Development, buildings consume 40% of the world's total energy, 25% of its wood harvest and 16% of its water. The building industry is the nation's largest manufacturing activity, representing more than 50% of the nation's wealth and 13% of its Gross Domestic Product. Energy and material consumption in buildings can contribute significantly to global climate change.

On warm summer days, the air in urban areas can be 6-8°F hotter than its surrounding areas. Scientists call these cities "urban heat islands."

Causes of the "heat island effect" include dark surfaces— that absorb more heat from the sun — and less vegetation that would provide shade and cool the air.

The Urban Heat Island Effect results in disruption of weather patterns, increases energy use due to air conditioning and causes health problems related to increased ozone, smog, and general air pollution.

Urban Heat Island Effect remedies include: cooler roofs, cooler pavement, and increased vegetation.

"Without the cooling and moderating effect of trees and greenspaces in our urban environments, urban areas grow hotter and dryer — a heat island effect. Approximately 5 to 10 percent of the current electric demand in cities is spent to cool buildings just to compensate for the heat island effect.
In Los Angeles this translates to $150,000 per hour and in Washington, DC, close to $40,000 per hour during peak times. Nationally the hourly cost may be as high as $1 million."

(Rodbell, Phillip, Greg McPhereson and Jim Geiger. 1991. "Planting the Urban Desert." Urban Forests, June/July.)

2) ***Plant more trees and construct capital improvements that protect the environment*** by evaluating our current practices as they relate to the construction and maintenance of paths, alleys, roadways, right-of-way, traffic calming measures, parks and recreation areas, and water, sewer, and storm water improvements and assure that we adopt best practices to plant more trees and foliage, improve water and air quality, and create and protect more green space. We will commit to plant at least 20,000 trees over the next five years through city, development, and community efforts.

"Trees decrease the amount of water that runs off a site by breaking the impact of the rain and slowing the flow, allowing time for water to infiltrate the soil. Trees can reduce runoff in urban areas up to 17 percent according to a study by the U.S. Forest Service (Ebenreck, 1988). This reduction has implications in the infrastructure costs of storm sewer capacity of sewage treatment plants, flooding of rivers and streams and the loading of sediment and pollutants into rivers and streams."

3) ***Promote "green development" in the private sector*** by working with community leaders in developing an alternative "green building" code and zoning regulations and establishing a set of administrative and economic incentives to encourage private sector development that promotes health, conserves energy and natural resources, green space, and responsible growth. We will work with MORPC in their mapping initiative to identify green businesses and greenways and prioritize these locations for incentives.

In Maryland, businesses that construct or rehabilitate a building that conforms to specific standards intended to save energy and to mitigate environmental impact may take a credit for a portion of the cost.

4) ***Showcase the use of our Whittier Peninsula redevelopment*** a model environmental reclamation and green building efforts.

5) ***Continue aggressive brownfield clean up efforts*** with Clean Ohio funds that are critical to the redevelopment of industrial sites and the rebirth of urban areas with opportunity for business, housing and parks.

Urban Brownfields Redevelopment
The Columbus OBA assists businesses that seek to develop urban sites requiring environmental cleanup. We can provide brownfield technical assistance and, through the Columbus Urban Growth Corporation and the Clean Ohio program, we can help businesses with site acquisition and environmental remediation.