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***Robert A. Ginsburg***  
*County Attorney*

***The Honorable Harvey Ruvin***  
*Clerk of the Board*

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## **METRO-DADE'S CO<sub>2</sub> REDUCTION PLAN**

On December 14, 1993, Metro-Dade's Board of County Commissioners approved a plan entitled "A Long Term CO<sub>2</sub> Emission Reduction Plan for Metropolitan Dade County" recognizing the threat of global warming. The plan was developed as part of an international effort to reduce carbon dioxide (CO<sub>2</sub>) emissions through the implementation of local actions and encouragement of needed state and federal actions. The plan was sponsored by the International Council for Local Environmental Initiatives (ICLEI), comprised of local governments, of which Dade County is a founding member. The council seeks to address international environmental problems such as global warming through local actions. In 1995, Dade County Department of Environmental Resources Management Office of Sustainable Environment and Education (OSEE) was established to oversee this project. Project funding has been provided in part by the Urban Consortium Energy Task Force.

The goal of the project is to reduce countywide CO<sub>2</sub> emissions to 80% of 1988 levels by the year 2005. Metro-Dade has initiated CO<sub>2</sub> reduction measures, such as energy efficiency measures, conservation in transportation by improving urban design and promoting mass transit, and providing for renewable and recycling programs, to reach this goal. The development of this plan was guided by a broad-based steering committee, chaired by County Clerk Harvey Ruvin, who is an elected member of ICLEI's executive committee and serves as President of ICLEI-USA, Inc.

Project analysis showed that in 1988, Dade County's CO<sub>2</sub> emissions totaled over 23 million tons. The largest sources of emissions came equally from transportation (45%) and electricity production (45%). Dade County's plan includes measures in the following sectors: transportation, electrical production/use, solid waste management and land use patterns/urban design.

### **BACKGROUND**

Carbon dioxide has special significance as a greenhouse gas. Greenhouse gases accumulated in the atmosphere can interfere with the Earth's albedo: the fraction of incident electromagnetic radiation reflected from it's surface. Greenhouse gases trap the incoming sunlight and prevent it from escaping during the evening, causing a general warming of the environment. Carbon dioxide is important to the greenhouse effect since it comprises approximately 50% of the greenhouse gases.

There is now a well established consensus that CO<sub>2</sub> concentrations are increasing as a result of human activities and that such an increased concentration of greenhouse gases poses a potential threat to climatic stability. It is estimated that temperatures may rise several degrees higher and at a faster rate than has been experienced within the last million years. Scientific members of the United Nations Intergovernmental Panel on Climate Change (IPCC) concluded that burning fossil fuels and deforestation, both human activities, are substantially increasing the atmospheric concentration of greenhouse gases. Dade County, a low lying coastal community, would be particularly vulnerable to the

potential impacts of global warming. Certain effects may include, but are not limited: flooding, water shortage, destruction of ecosystems, infrastructure damage, and sea level rising. Clerk Ruvins continued involvement and the County's participation in ICLEI's Cities For Climate Protection is an integral part of the County's strategy to reduce greenhouse gas emissions.

## **PLAN UPDATE**

Most of the plan's recommendations fall under the jurisdiction of eight county departments, including DERM. This annual report reviews the progress made in terms of implementing the plan's recommendations during 1996. It is important to remember that although a number of measures can be directly implemented by Metro-Dade, there are a number of recommendations that fall under the jurisdiction of either the state or federal government or involve changing the attitudes and behaviors of individuals; therefore, it will be difficult to guarantee the full implementation of those measures. Also, many recommendations in this plan are concepts or measures that will evolve and improve continuously in order to meet the needs of Dade's growing population. For example, the recommendation to increase traffic demand management programs will not have a final date of completion because it is a continuing effort. This particular report does not attempt to quantify all CO<sub>2</sub> levels for those measures that have been implemented. The quantification of greenhouse gas reduction for those measures implemented will be completed every five years. The next anticipated date for reporting quantified CO<sub>2</sub> levels will be in 1998.

## **NEW OPPORTUNITIES**

Since the beginning of the Long Term CO<sub>2</sub> Emission Reduction Plan for Metropolitan Dade County, new opportunities for the reduction of CO<sub>2</sub> have become available. The following illustrates some opportunities that were implemented prior to the completion of the progress report:

### **Brownfield Task Force**

A Task Force authorized by the Board of County Commissioners is currently developing a policy to redevelop inner city abandoned industrial and commercial properties in Dade County. Brownfield are abandoned or underutilized properties which are considered to have limited redevelopment potential due to actual or perceived contamination. Of more than 3000 contaminated sites in Dade County, DERM records suggest that at least 60 may be considered "Brownfield". Brownfield redevelopment initiatives are intended to help reduce urban sprawl while encouraging development and maintaining environmental protection standards.

## **Governor's Commission on Sustainable South Florida**

In March 1994, Governor Lawton Chiles created the Governor's Commission on Sustainable South Florida, which is comprised of South Florida interests to explore the issue of sustainability. The Governor appointed a 40 member commission consisting of representatives of the business community, public interest and environmental organizations; county and city officials; tribal; and federal, state, and local regulatory agencies. Its goal is to make recommendations to assure a healthy Everglades ecosystem which can coexist and be mutually supportive of a sustainable South Florida economy.

The commission recommended a five year plan containing strategies, actions and measures of success for achieving positive change that enhances the ecological, economic and social systems upon which South Florida and its communities depend. One of the issues that are being discussed for recommendation is the electric utility deregulation which is an occurring issue that deals with the separation of production and distribution of energy. Since Dade County is one of the largest consumers of energy in the Southeast, it is recommended that the County make this issue a priority and establish a relationship with the local utility company allowing for wheeling of electricity to large commercial facilities. Implementation of the plan will help bolster the regional economy, promote quality communities, and secure a healthy ecosystem. Through various committees (i.e. Energy, Transportation, Water Quality, etc.) and technical advisers, the commission will develop an action plan and set of recommendations.

### **Eastward Ho!**

The Eastward Ho! initiative was recommended by the Governor's Commission on Sustainable South Florida in 1995. It is represented by various private and public organizations, regulatory agencies, and private companies seeking to revitalize Southeast Florida's Urban core by encouraging infill and redevelopment of lands within the transit corridor. This initiative will encourage compact efficient development patterns; and will forge a public/private partnership to promote compact urban density, which can result in an overall cost reduction of up to 50% and is nearly 30% more energy efficient.

### **Cutler Ridge Mall Busway Project**

On February 3, 1997, the new Cutler Ridge Mall Busway was opened for Metro Dade citizens. The two-lane busway runs along U.S. 1 (South Dixie Highway) to the west, between Cutler Ridge and the Dadeland South Metrorail station. The project was established to entice commuters out of their vehicles onto the Metro Dade Transit System (Buses and Train). This would reduce traffic congestion on South Dixie Highway. Other features of the project include a bike path along the west side of the busway road and bike racks on the front of the bus. As an incentive to attract commuters, the Metro-Dade Transit Agency provided free bus rides which included transfers to and from Metrorail (February 6 - 16, 1997). [see attached newspaper clipping]

## **Clerk of the Courts**

A Voice Response System was established in 1995 under the direction of Harvey Ruvin, Clerk of the Courts. The system has received approximately 2.1 million calls, and is constructed to provide an avenue of information to Dade County citizens in regards to the court system, without having to leave their homes. Citizens can pay for traffic and parking tickets, make court dates (civil and criminal), or make inquiries on child support payments.

The system receives approximately 3600 calls per month alone on individuals paying for traffic and parking tickets. This concept coincides with our CO<sub>2</sub> reduction strategy since it reduces Vehicles Miles Travel (VMTs) and all of the pollution associated with it. **(The annual reduction of CO<sub>2</sub> is estimated to be 140 tons/ 281,739 lbs, for individuals making payments over the phone).**

## **Environmental Advisory Task Force Subcommittees**

### **1) “Green Fleets”**

The “Green Fleets” subcommittee was established by the Environmental Advisory Task Force (EATF) to address the energy and environmental dimensions of transportation and benefits extending to economic development, and a livable community, and to establish programs in Metro Dade to reduce air pollution, VMTs, and traffic congestion,. Topics of interest include, but are not limited to: telecommuting, investigating established car idling ordinance, and providing educational awareness and incentives for use of urban mass transit and car pooling/van pooling.

The subcommittee is in the process of preparing an Administrative Order to be presented to the Dade County Commission to establish a telecommuting program for Metro-Dade employees. The advantages of telecommuting provides workers with alternate work schedule, while decreasing traffic congestion, VMTs, and pollution associated with transportation. This project will work towards reaching the plan’s goal in reducing CO<sub>2</sub> emissions.

### **2) “Dade Green Coalition”**

The EATF has recommended that the County take a proactive role to encourage the development of more environmental friendly buildings commonly referred to as “Green Buildings”. This begins with the reuse of buildings and building materials as well as the specification and product approval of building products made from recycled and energy efficient materials. Building design and operation are essential to fulfill the concept of sustainable development.

The "Dade Green Coalition", which consists of county departments and many outside groups, was established to coordinate the First South Florida Sustainable Building Conference & Exhibition in Miami, Florida. The conference date has been set for April 10 - 12, 1997. Topics to be discussed are sustainability in the planning, design, construction, rehabilitation, operation, and demolition of commercial and residential

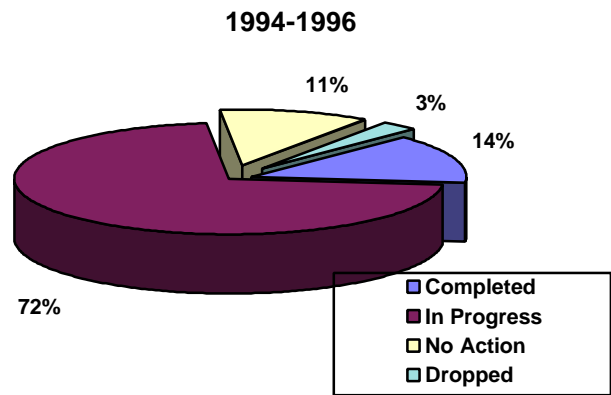
buildings. The Conference will explore the obstacles to sustainability in the built environment in South Florida today and how to plan, build, and operate commercial and residential buildings in the future in a way that it will sustain the natural environment and save energy.

**Team Metro**

Team Metro was established to bring government closer to citizens in their neighborhoods. DERM is in the process of producing educational material and providing certain services such as applications for permits at the several Team Metro sites. In order to provide better services, DERM is training Team Metro staff. The training will include a description of DERM’s complaint system and plan review requirements for businesses and residential facilities.

**Status of the Plan's Recommendations**

<b>ACTIVITY</b>	<b>1994-1996</b>
Measures Completed	5
Measures in Progress	25
No Action	4
Dropped	1



The following list of recommendations has been organized according to departmental authority over the plan’s recommended actions. Next to the action is the corresponding sector, section and number of the action as it is listed in the December, 1993, approved plan.

**ENVIRONMENTAL RESOURCES MANAGEMENT**

**MEASURES IN PROGRESS**



**1) Reduce annual electricity consumption by 5,359 kWh in 35,000 rebuilt homes in South Dade through promotion of energy efficient measures.**

(Electrical, Section B, #1)

**Jordan Commons**

⇒ **Construction**

**Status:** Financial problems have slowed construction on the planned 200 model home sustainable community. Currently, discussions are underway between Homestead Habitat for Humanity and several community development corporations to explore partnership opportunities to complete the project.

As of December 27, 1996, construction activities were concentrated on American Baptist #807, #908, and Silver Palm #904. Houses #806, #704, #705, #907, and #913 are currently fitted with doors and steps. #703 and #704 will be installed by Habitat's subcontractors upon receipt of the metal roofs. Bank Atlantic House #911 will be the next steel frame house to complete. The fifteen housing starts are 55% complete, and is expected to finish by mid 1997.

The lift station design issues continues to be reviewed by the Water and Sewer Authority (WASA). Tower construction and Don Mahoney Associates are actively involved in addressing issues relating to the pump horsepower design. A response from WASA may arrive in the beginning of 1997.

The paving of access roads has been completed through phase III. Handicapped ramps, curb cuts, tree cuts-outs and swales are expected to be completed before the first quarter of 1997.

Homestead Habitat for Humanity (HHFH) paid \$49,191 to secure the purchase of 40 streetlights and solar panels. The streetlight and solar panels will be delivered and installed pending full payment. The

The anticipated start dates for the construction of the Child Care and Resource Center is March 1997.

⇒ **Greywater Project**

**Status:** The County intends to construct and monitor a graywater aquifer recharge demonstration project in forty homes to determine the feasibility of utilizing such systems county wide and through the State. This project relates directly with water conservation and reuse goals which are increasingly integral to the broader mission of maintaining and restoring ecosystems and meeting urban and agricultural supply needs. It is also consistent with the emphasis on finding least-cost and energy efficient solutions. If this graywater demonstration project proves feasible, on-site reuse of urban water supplies can be dramatically increased for new developments at relatively low cost.

2) **Integrate “Cool Communities” with community-wide tree planting program.**  
(Electrical, Section D, #1)

⇒ **Dade County Urban Canopy Analysis Completed**

**Status:** American Forest completed a study of the value of Dade County's urban forest, commissioned by DERM, with funding from a grant for the Florida Division of Forestry. Dade's trees were found to save millions for County residents - \$5.3 million/year in reduced air conditioning costs and \$4.8 million in removing carbon dioxide from the air. The urban canopy, covering 10% of Dade's surface, also reduces storm water run-off by 15%. The study also finds that savings could be increased two and half times - to \$14.4 million/year - if every homeowner would plant just one shaded tree to shield the sun from their home. **(The annual reduction of CO<sub>2</sub> was estimated to be 42,948 tons/85,896,000 lbs, depending on the size, age, and rate of planting vs. removal of trees).**

⇒ **Cool Communities Day was Launched in Dade County on April 26, 1996**

**Status:** On Friday, April 26, 1996, more than 60 people attended a kick-off event at the Metro-Dade Government Center. Among the attendees was Commissioner Katy Sorenson who proclaimed National Arbor Day as a Cool Communities Day in Dade County. Cool Communities is a county-wide tree planting program focused on educating the public about saving energy while combating global warming.

More than 540 volunteers planted 398 trees at two Cool Communities demonstration sites from April 26 to May 18, 1996. During three Saturdays, 220 trees were strategically sited to shade 86 homes in the Richmond Heights area. On the fourth Saturday, 178 native trees were planted at Jordan Commons. The trees were planted to establish a perimeter canopy. Every volunteer was given a tree along with care and energy-siting instructions, to take home and plant for shading.

A simultaneous public service campaign about Cool communities included 50 Cool Communities public service announcements on WFOR-TV (CBS) and three public affairs radio talk shows. Newspaper ads ran in three local papers. The Miami Herald covered Cool Communities as a major story. The Newspaper in Education series ran a feature, "The Seven C's of Cool Communities" and published an accompanying teacher's activity guide. **[See attached newspaper clippings].**

On November 2, 1996, 3,800 square feet of roof was whitened with Cermicoat, a white reflective roof-coating product, in the Specialty Retail district in the City of South Miami. A Cool Communities message on the whitened roof of Roberts Western Wear is seen by 95,000 Metrorail riders each month.

In other public education activities, funded by the Florida advisory Council on Environmental Education, 10,000 educational brochures and a slide show are in production for distribution in 1997.

⇒ **The Local Advisory Committee educated 4 of 5 demonstration communities**



**Status:** With funding from the Florida advisory Council on Environmental Education, the workshop and direct mail were conducted in various neighborhoods. Significant changes in attitude and knowledge were documented by pre- and post- test surveys in the areas of Richmond Heights and South Miami commercial district. The effect of the education was positive for these areas. The effect of the education was at a lesser degree in Weitzer Hammocks and the South Miami residential area. Education at Jordan Commons was not completed because residents have not moved in.

⇒ **Florida Power & Light (FP&L) Research Initiated**

**Status:** FP&L has engaged Resource Management International (RMI) to evaluate the effectiveness of strategic tree planting and roof whitening over time.

**3) Promote the Energy Conservation & Assistance Program**

(Electrical, Section E, #3)

⇒ **Climate Wise**

**Status:** DERM has been offered a grant (Climate Wise) to assist in financing the reduction of greenhouse gas emissions from the County's industrial type operations and from private companies. Climate Wise is a voluntary program that promotes the reduction of greenhouse gas emissions through pollution prevention and energy conservation. DERM offers technical assistance to companies that sign up to Climate Wise in the areas of pollution prevention and energy. This requires the knowledge of the latest technologies in energy efficiency, conservation and renewable energy. DERM's Climate Wise program is divided into two parts: (1) Recruit private businesses into the program; and (2) Assist other county departments to develop energy efficient projects.

DERM has recruited the following 16 private companies to the Climate Wise program: Industrial Equipment and Supplies, Republic Metals Corporation, Adapto, Englehard/ICC, Nautica, Pan American Hospital, Dade International, Pintexs Paint, Perko, Eurobank, Apache, Kendall Plastics, Warner Bros. Publications, Ashland Chemical, Miami Brewing Company, and Zenith Goldline Pharmaceuticals. DERM works with the Small Business Development Centers, located at Florida International University, and Florida Power & Light (FPL) to provide complimentary energy audits for businesses.

DERM is assisting GSA in the construction and expansion of the Downtown and Civic Center cooling loops.

The Office of Sustainable Education & Environment submitted a second RFP to ICLEI requesting the continuation of the Climate Wise in Dade County. This proposal will continue to perform the same tasks as in the previous year.

## **SOLID WASTE MANAGEMENT**

### **MEASURES IN PROGRESS**



**1) Continue to implement and promote the following recycling programs:**

- **Single Family residential**
- **Multi-family residential**
- **Commercial**
- **Yard waste**
- **Disposal facilities**
- **Metro-Dade government facilities.**

(Solid Waste, Section A, #1)

**Completion Date:** The County has achieved a 32% recycling rate during 1996 which exceeds the state's 30% recycling goal for counties, however, efforts are ongoing. Based on the 1995 Urban CO<sub>2</sub> progress report, the recycling rate has increased by 1%.

**Status:** Dade County is currently recycling 32% of the municipal solid waste stream.

**Next Step and Date:**

1. In 1997, monitor recent expansion of residential curbside recycling program which now includes aseptic containers (juices boxes, poly-coated gable top containers including milk and juice cartons) and corrugated cardboard.
2. In 1997, continue multi-family/commercial recycling program including monitoring over 32,000 waste locations for recycling compliance, providing information and technical assistance, and enforcement.
3. In 1997, the County's Trash-to-fuel component of the Resources Recovery Facility will begin processing 270,000 tons of trash annually to create a biomass fuel product.
4. In 1997, continue to promote recycling in Metro-Dade government facilities.
5. The Department's yard trash mulching program has been suspended indefinitely due to Citrus Canker infestation.

**2) Recover and process methane gas to generate electricity for the South District Waste Water Treatment Facility.**

(Solid Waste, Section A, #2)

**Completion Date:** Summer of 1998

**Status:** During the first quarter of the program, a Request For Proposal (RFP) was opened to the public. The proposal required the bidder to convert landfill gases to electricity or to channel and refine methane gas for retail purposes. Additionally, the bidder is responsible for the design, finance, construction, and operation of system. No responses were received. A contract was signed between Dade County's Solid Waste Management District (SWMD) and the EcoGas Corporation on December 31, 1996 to operate the methane recovery and clean-up units. **(Upon completion of the methane recovery process, it is estimated to have a potential reduction of up to 177,000 tons of CO<sub>2</sub> over the life of the landfill).**

**Next Step and Date:**

In 1997, actions will focus on gas collection and plant design, permitting, equipment procurement, and gas collection system installation. Plant construction and start-up is scheduled for 1998. Once implemented, the gas will be collected, processed and marketed.

**3) Implement community-wide waste reduction programs.**  
(Solid Waste, Section A, #3)

**Completion Date:** Ongoing.

**Status:** Continuing to educate and promote waste reduction measures. 1996 activities included:

- ⇒ Distributed waste reduction brochures at community events and via mail. Brochures promote environmental sound buying and reduction of waste through reuse and buying in bulk.
- ⇒ Participated in special events, and made presentations to school age children and to the general public which encourage waste reduction.
- ⇒ Developed a video for use in public school presentations designed to educate students on the importance of recycling and waste reduction.

**Next Step and Date:** In 1997, continue the above mentioned educational program.

## DEPARTMENT OF PLANNING, DEVELOPMENT AND REGULATION

### MEASURES COMPLETED

(Note: Measure may have been completed, however additional task may still be on-going)

- 1) Revise Dade County's landscape code to require strategic tree planting, street trees and parking lot trees.**  
(Land Use, Section A, #5)

**Completion Date:** February 1996; and continuing

**Requires Commission Action:** The Board of County Commissioners adopted new Chapter 18A (Landscape Ordinance) of the Code of Metropolitan Dade County in December 1995.

**Status:** In December 1995, the Board of County Commissioners adopted a new Chapter 18A (Landscape Ordinance) of the Code of Metropolitan Dade County, requiring landscape planting standards and criteria for all development types. The new ordinance promotes xeriscape principles through the use of drought tolerant species, street trees that visually define the hierarchy of roadways and provide shade and a visual edge along roadways. The Planning Department prepared a Landscaped Manual to accompany the ordinance illustrating examples which apply the new landscape to accompany the ordinance illustrating examples which apply the new landscape criteria in ways that enhance the aesthetic appearance of commercial, industrial and residential developments. The ordinance is currently being applied to both the incorporated and unincorporated areas of Dade County. The municipalities are responsible to implement and enforce the code.

**Next Step and Date:** Continuing implementation and enforcement of the Landscape Ordinance, Chapter 18A, ; Code of Metro-Dade County, Florida; Enforcement commenced February 1996.

## MEASURES IN PROGRESS

### 1) **Review and amend regulations to encourage the implementation of transit and pedestrian oriented development (TOD) principles in new developments.**

(Land Use, Section A, #1)

**Completion Date:** October 1997; and ongoing

**Status:** In October 1996, the Board of County Commissioners adopted amendments to the Metro Dade Comprehensive Development Mast Plan (CDMP), based on recommendations contained in the State mandated Evaluation and Appraisal Report (EAR). The Land Use Element has been amended to include new and revised Land Use objectives and policies to:

- Promote a diversity of housing types within new residential developments to enhance community character through architecture;
- Update land development regulations and planning programs to encourage the development of better planned communities and well designed buildings and developed an urban design manual containing guidelines and criterities for use in review of all new development types in unincorporated Dade County;

- Authorize accessory apartments in single-family homes to provide affordable housing for elderly, young couples or singles, and encourage home occupations to provide residents with employment opportunities within their homes, thereby reducing the number of home-to-work automobile trips;
- Set guidelines for a new urban form which establishes within each square mile section, neighborhood development patterns incorporating an interconnected network of vehicular and pedestrian paths, variety in residential typology, and nodes of activity at and around major road intersections to serve the needs of the immediate neighborhoods;
- Provide opportunities to allow convenience business in residential neighborhoods;
- Formulate and adopt zoning overlays to implements policies to promote the developments of Regional, Metropolitan and Community Urban Centers characterized by cohesiveness of urban context, direct accessibility to mass transit service and high quality urban design; and
- Initiate the review and revision of the zoning code and subdivision regulations to facilitate the development of better planned communities incorporating principles of urban design.

The Department of Planning, Development and Regulation has initiated the drafting of ordinances addressing commercial, residential and urban center zoning districts. The Business District Design and the Neighborhood District overlays will promote quality commercial and residential development through the use of urban design principles which focus on such issues as street connectivity, architectural quality and compatibility between new and proposed developments. The Metropolitan Urban Center overlay and Community Urban Center overlay will establish compact and high intensity development having pedestrian qualities, direct accessibility to mass transit and high quality urban design.

The Department of Planning, Development and Regulation is currently participating in a study entitled “South Dade U.S. 1 Corridor Comprehensive Planning and Design Strategy.” This study is investigating means to promote mixed use transit oriented developments at important nodes along the new busway currently under construction along U.S. 1 at this time.

**Next Step and Date:** Drafting of codes and regulations; October 1997 and ongoing.

**2) Encourage infill development by requiring utilization of TOD principles within activity centers and along major corridors.**

(Land Use, Section A, #2)

**Completion Date:** December 1997

**Status:** In October 1996, the Board of County Commissioners adopted amendments to the Metro-Dade CDMP, based on recommendations contained in the State mandated EAR. Among the recommendations adopted by the Board of County Commissioners are the following:

- Priority will be given to infill development on vacant sites in currently urbanized areas and redevelopment of suitable urban areas where all necessary urban services and facilities are projected to accommodate the additional demand; and
- A study examining means of fostering the development of bypassed infill sites and redevelopment of underutilized land in the County's Urban infill area and vicinity will be undertaken by Metro-Dade County in association with affected municipalities.

The Board of County Commissioners passed a resolution in December 1996, to establish a Dade County Task Force composed of representatives from incorporated and unincorporated Dade who will investigate and recommend means to promote urban infill and appropriate redevelopment. Recommendations from the Task Force committee are scheduled to be completed and presented by the end of 1997.

The Department of Planning, Development and Regulation has initiated the preparation of several new ordinance addressing commercial, residential, and urban centers which embody TOD urban design principles. (Refer to response No. 1, above). Additionally, the department is preparing an urban design manual that will provide a set of guidelines and site planning techniques promoting urban design principles to improve the quality of redevelopment in unincorporated Dade County.

The Department of Planning, Development and Regulation is currently participating with FDOT consultants in a study entitled SAADD (Station Area Aesthetic Design Development), to prepare station area plans for the Metrorail East-West Corridor Extension. These plans will include recommendations addressing transit suggestive land use and area design.

**Next Step and Date:** Draft of codes and regulations; October 1997 and ongoing.

**3) Continue to promote the evolution of sub-centered urban form, comprised of major, intermediate and local activity centers; activity corridors; enterprise/employment centers and transit network. In appropriate locations in intervening areas, promote applicable TOD principles and the balanced provision of convenience retail, personal services and various types of residences.**

(Land Use, Section A, #3)

**Completion date:** December 1997.

**Status:** In October 1996, the Board of County Commissioners adopted amendment to Metro-Dade CDMP, based on recommendations contained in the State mandated EAR report to:

**4) Encourage provision of civic buildings within urban neighborhoods through site planning and capital improvements programming.**

(Land Use, Section A, #4)

**Status:** In October 1996, the Board of County Commissioners adopted amendments to the Metro-Dade CDMP, based on recommendations contained in the State mandated EAR report to:

- Promote density increase in lower density land use plan categories under the condition that the development addresses urban design principles that consider among other things, the allocation of sites for civic uses; and
- Develop a manual illustrating methods of site planning that encourages better community design through the use of urban design principles. The manual will address various elements of urban design including the creation of formative open spaces and areas dedicated to civic uses.

The Department of Planning, Development and Regulation has initiated preparation of a neighborhood district ordinance patterned after neo-traditional site development models. The ordinance will require residential subdivisions to develop an urban framework containing housing diversity, connectivity of streets and blocks that physically define open space. Open space can be in the form of squares, plazas or greens and may include areas for the establishment of civic institutions. Furthermore, the department scheduled to conduct a review and revision of the adopted Traditional Neighborhood Development (TND) ordinance to generate a more adaptable, user-friendly district which retains the essential principles of traditional neighborhood development. The County's TND ordinance will retain requirements for physically defined open spaces and areas for the establishment of civic institutions.

**Next Step and Date:** Drafting of code regulations; December 1997 and ongoing.

**TRANSIT AGENCY**

**MEASURES COMPLETED**

(Note: Measure may have been completed, however additional task may still be on-going)

**1) Extend Transit**

(Transportation, Section A, #2)

⇒ **Cutler Ridge Mall Busway Project**

**Status:** Walk-thru was done January 6, 1997. The contractor is doing the punchlist items. Buses began revenue service on February 3, 1997.

**Next Step:** Once the project is complete, MTDA will make inspection of the project before turn over to the County.

**Action Date:** March 1997.

## **MEASURES IN PROGRESS**

### **1) Extend Transit**

(Transportation, Section A, #2)

⇒ **North Corridor extension**

**Status:** Currently preparing Environmental Impact statement for 9.5 mile on N.W. 27th Avenue for N.W. 79th Street to Broward County Line.

**Next Step:** Pursuing heavy rail on N.W. 27th Avenue. Will prepare a preliminary design and a final Environmental Impact Statement.

**Action Date:** April of 1998

⇒ **Metrorail extension to the Palmetto Expressway**

**Status:**

- Roadway (North-South Connector & N.W. 79th Street Access) - 60% complete.
- Transit Way - (50% at grade - 50% elevated) - 30% complete.
- Passenger Station at Grade - 40% complete.

**Next Step:** Completion of Construction plan.

**Action Date:** June of 2000.

## **GENERAL SERVICES ADMINISTRATION (GSA)**

## **MEASURES COMPLETED**

(Note: Measure may have been completed, however additional task may still be on-going)

### **1) Institute waste reduction purchasing practices in Metro-Dade.**

(Solid Waste, Section C, #2 )

**Completion Date:** Ongoing

**Status:** The Recycling Management Committee was established in 1992 via Resolution #214-92. Accomplishments to date include:



## **Expansion of Metro-Dade's Internal Recycling Program**

Under the direction of the committee, the County's employee recycling program has significantly expanded. A strong educational program combined with more comprehensive bid specifications have resulted in the following:

- As of 1994, a number of new materials types were added to the program, including aluminum and steel cans, plastic bottles, wood pallets, corrugated boxes, and a broader array of paper products (colored office paper, magazines, catalogs, phone books, and many other products made from paper contents).
- The number of facilities participating in the project has also expanded, from 30 locations in 1985 when the office paper recycling program started to over 200 location today. The recycled material tonnage collected from the program has increased from 2.6 tons annually in 1985 to 2,088 tons annually. Based on pick-up of 2088 tons of material collected from county occupied facilities, tipping fees at \$27 per ton and hauling fees averaging \$59 per ton: the county would have paid \$179,400 to dispose of the tonnage, with no revenue collected. Under the new structure, the county saved \$123,120 in tipping fees, and \$56,280 in hauling fees, and earned \$65,628 in revenue, totaling a benefit to the county of \$255,028.
- Additionally, the Committee has worked with Procurement to establish vendors for recycling batteries, fluorescent bulbs and wood pallets.
- A recycling program was established for Holiday Greeting Cards

**Educational and Promotional Efforts** including a Fluorescent Bulb Recycling Educational Campaign, the design and distribution of a Solvent Alternatives Brochure, and posters to promote recycling at the department of Corrections.

**Sponsorship of County and Community Environmental Programs** including annual Earth Day activities, the Chamber of Commerce Environmental Awards Breakfast, and the Green Coalition Green Buildings Conference.

**Purchasing of Equipment to Kick-off Specialized Recycling Programs** including aluminum can recycling bins in Commissioner Offices, and specialized dumpsters for Vendors participating in the Aviation Department's Business Partners Recycling Program.

## **Establishment of Budgetary Guidelines**

In October 1995, the Recycling Management Committee approved a budgetary guideline for the distribution of funds generated through the sale of recyclable materials. The guideline identifies 7 budget categories that broadly support the goals and objectives set by the committee and Resolution #214-92.

**Next Step:**

1. Develop HUD Multi-Family Recycling Educational Campaign/Recycling Program.
2. Develop Recycling Program to refurbish computer equipment.
3. Develop Recycling Program to train “New Hires” and refresh training for all employees.

**Date of Action:** October 1997.

**MEASURES IN PROGRESS**

**1) Utilize more fuel efficient cars in the Metro-Dade fleet.**

(Transportation, Section D, #1)

**Completion Date:** On going

**Requires Commission Action:** Commission approval of vehicle purchases.

**Status:** GSA will purchase 150 Dodge Neons with a combined fuel economy of 25/36 MPG. Purchase was approved by the Board of County Commissioners. **(The annual CO<sub>2</sub> reduction is estimated to be 1,242,472 lbs/621 tons a year, if 150 Dodge Neons are added to the existing fleet).**

**Next Action and Date:** Receive vehicles and prepare for in-service beginning in May 1997.

**2) Develop a team of local public/private representatives to identify and promote the most practical and cost-effective alternative fueled vehicles.**

(Transportation, Section D, #2)

**Completion Date:** On going

**Requires Commission Action:** Commission approval required for blanket contract for vehicle conversions.

**Status:** Construction of the Compressed Natural Gas (CNG) fuel site at the Miami International Airport has been completed; the system was tested and awaits a Certificate of Occupancy. The contractor (IT Corp.) is waiting for funding from DCAD to revise plans and certify the equipment. This fuel facility will services all Dade County, State of Florida and Federal vehicles requiring CNG. GSA purchased and modified thirty 1994 Chevrolet Caprice to run on CNG and gasoline which are being operated by the Metro-Dade Police Department at the Miami International Airport. **(The estimated net annual CO<sub>2</sub> emissions reduction is 108,365 lbs/55 tons a year, if the 30 Chevrolet Caprice use only CNG fuel all year).**

**Next Step:** Complete all deficiencies in order to obtain Certificate of Occupancy.

**Next Action and Date:** Promote usage by other agencies including the MDWASD, MDTA, Federal GSA, US Post Office and other agencies after CO is obtained. Convert 18 shuttles servicing the Miami International Airport in Fall 1997.

**3) Initiate the "Green Lights" programs and integrate with other County building retrofits for a 20% increase in energy efficiency.**

(Electrical, Section A, #1)

**Status:** Presently replacing incandescent lamps in various ceiling areas and exit signs. Working in five major buildings at an annual savings of 1,458 kWh (**The annual reduction of CO<sub>2</sub> emissions is 2,917,508 lbs.**). Working on RFP to contract and perform survey of building and retrofit all needed lighting equipment. Construction to be paid from reduction of electric billing.

**Next Step:** Work with Energy Conservation Contractor to perform survey of large building complexes and continue over the following months in installing compact fluorescent lamps in major buildings. Start a retrofit program in ceiling lighting using T-8 tubes and electronic ballasts.

**Date of Action:** Mid 1998

**4) Investigate cost effective energy efficient HVAC systems for Metro-Dade facilities.**

(Electrical, Section C, #1)

**Status:** The County has a Master Lease program to replace old non-efficient chillers with more cost effective and energy efficient chillers. Three centrifugal chillers have been replaced with screw type chillers in the South Dade Government Center, the Joseph Caleb Center and the Data Processing Center. The goal was to replace chillers over 100 tons that operated at 1 to 1.2 kWh per ton of refrigeration with chillers that operated at 0.6 per ton of refrigeration. Due to new CFC 11 and CFC 12 phase-out regulations, these old refrigerants were replaced with HCF 123 and HFC 134. However, the new refrigerants caused a 15% loss in cooling capability which reduces the efficiency by the same percentage. GSA/FUMD now has to purchase 115 ton chiller to do the job of a 100 ton chiller. In design stage is a high efficiency low energy district cooling plant for the Civic Center area. Changing out old compressor units that are not economically feasible.

DERM is assisting GSA in the construction and expansion of the Downtown and Civic Center cooling loops. GSA was finalizing the permitting process, however, modeling

activities determined that recharging the water into the ground would not be effective during storm surges, or high cooling demand during summer months. Recently GSA has submitted a permit application with the Florida Department of Environment Protection (FDEP) to discharge the post-condensing water into the Miami River during the above mentioned events. The application permit was approved and bidding was opened to the public. The contract will be awarded in April 1997, and implementation is expected to begin in September 1997. Each chiller unit system is expected to create savings by 15% - 20% in tons/hours.

**Next Step and Action Date:** Complete systems by FY 1999/2000 to convert to HCFC.

## **NO ACTION**

**1) If feasible, purchase the combined cycle cogeneration plant and wheel the current excess capacity of 82,000,000 kWh/yr. to County owned facilities and promote use of cogeneration for other appropriate commercial applications. Design all new facilities' electric systems in a manner to be able to wheel electricity.**

(Electrical, Section A, #2)

**Status:** The plant is owned by Dade County and is presently being leased to Thermal Electric. Dade County buys power from Florida Power & Light (FPL). Pending Energy Law to allow for wheeling of electricity to large commercial users.

**Next Step and Action Date:** Establish key load centers; 2000

**2) Adequately staff the recently established utility management division within G.S.A's Facilities and Utilities Management in order to investigate various rare structures that encourage and reward utilities for energy conservation. Work with Florida Power & Light on New Federal Energy Rates.**

(Electrical, Section E, #2)

**Status** No further action taken to date. Will work with FP&L and other electric suppliers as New Federal Energy Laws are passed allowing Wheeling of Electricity to large commercial facilities.

**Next Step and Action Date:** Federal Energy Laws passed allowing wheeling of electricity; 2000.

## **PUBLIC WORKS**

## **MEASURES IN PROGRESS**



**1) Shift to photovoltaic street lighting.**

(Electrical, Section C, #3)

**Status:** Photovoltaic street lighting does not provide adequate lighting for arterial roadways. The Public Works Department continues to review manufacturers literature and demonstration projects. Efforts will continue to be made in state of the art photovoltaic street lighting. When development of photovoltaic systems reaches a competitive level, the department will seriously consider a pilot project. However, some local street application are in progress such as the Jordan Commons project.

**2.) Integrate “Cool Communities” with Community-wide tree planting program.**

(Electrical, Section D, #1)

**Status:** The Public Works Department has provided funding and personnel to implement tree plantings along the arterial roadways of Dade County. Tree planting expenditures exceeded \$3,000,000 in fiscal year 1996-97. These plantings have had a dramatic aesthetic and environmental impact along our roadway corridors. This funding provided for the installation of approximately 20,000 trees. **(CO<sub>2</sub> emissions reductions are estimated to be 717,000 to 1,656,000 lbs/359 to 828 tons per year depending on the size, age, and rate of planting vs. removal of trees).**

**METROPOLITAN PLANNING ORGANIZATION**

**MEASURES IN PROGRESS**

**1) Construct all road improvements listed in the Long Range Transportation Plan (LRTP) 2010 that are consistent with the other transportation and land use measures in this plan.**

(Transportation, Section A, #3)

**Status:** On the 7th of December 1995, the update to the LRTP (to the Year 2015) was adopted by the Governing Board of the MPO. The twenty-year transportation “Needs” proposal identify nearly one hundred major capacity improvements with a price tag of approximately \$6.1 billion. The funding from the local gas tax, established in Dade County in 1995, provides for funding on improvement projects that would otherwise not be funded by the federal government (i.e. community roadways). Public transportation and ridesharing are emphasized in the projects listed. Identified transit needs call for provision of over 60 miles of exclusive right-of-way priority service along six major travel corridors. Also proposed are approximately 40 miles of High Occupancy Vehicles lanes (HOV) along expressways. Incorporation of the latest electronics technology (Intelligent Transportation System) is also proposed for several

major projects as another means of easing congested traffic conditions. Proposals for new highways are relatively insignificant when compared to other types of projects, reflecting the fact that the urban area has matured and that the necessary space to build new major highways is either no longer available or extremely costly. The plan includes, however, many proposals to widen existing primary and arterial roads that carry heavy loads of traffic between suburbs and to and from city center.

- The HEFT was widened to 8 lanes and interchanges were placed at NW 41 Street, SW 120 Street, and NW 106 Street.
- Interstate 95 underwent significant reconstruction. Improvements were completed between NE 54 Street and NW 186 Street, including a High Occupancy Vehicle (HOV) flyover at Golden Glades interchange.
- Biscayne Boulevard underwent significant reconstruction. Six-laning from NW 123 Street to NE 135 Street was completed during 1995 and the six-laning from NE 135 Street north to NE 163 Street was completed in 1996.

During 1995, several arterial roadways were improved. Examples include:

- SW/NW 27 Avenue: from SW 8 Street to NW 11 Street
- SW 8 Street: from the Palmetto Expressway to SW 137 Avenue
- NW 57 Avenue: from NW 138 Street to NW 183 Street
- NW 135 Street: from NW 27 Avenue to I-95
- NW 79 Avenue: from NW 25 Street to NW 58 Street
- NW 87 Avenue: from NW 122 Street to NW 138 Street
- SW 117 Avenue: from SW 56 Street to SW 72 Street
- NW 151 Street: from US-1 to Main Road

## **2) Increase traffic demand management programs.**

(Transportation, Section B, #1)

### **Status:**

The existing two Transportation Management Associations (TMAs) were officially incorporated in Dade County. These are: The Civic Center Transportation management Organization (CCTMO) and the Miami Beach Transportation management Association (MBTMA). In these particular areas, the following action were taken:

- a. An electric shuttle (called "Electric Waves") will be implemented by 1997. This project was the result of a joint effort between the MBTMA, the city of Miami Beach, the MPO and the FDOT. This project consists of seven electric vehicles providing service as a circulator in the South Beach area.

- b. The CCTMO continue promoting transit by selling monthly passes (Tri-Rail and Metro-Rail) at a special rate, to the employees of the organization.
  - c. Three studies were initiated for these TMAs:
    - A Commuter Characteristic study will provide a data bank for employees, visitors, students, and patients in the CCTMO. This information will be used to promote TDM programs within the boundaries of the TMA.
    - A MBTMA Trailblazing Signage study will define the logo and a Signage plan to be used for the "Electric Wave".
    - A Model Private Employer Program will be established for each TMA. In this case, a private company will act as a "model" employers for the implementation of TDM programs. The anticipated results of this program will encourage other companies to establish similar programs to alleviate traffic congestion and improve mobility and air quality.
2. The MPO, Gold Coast Commuter Service (GCCS) and FDOT are working together to form the Airport West TMA and the Downtown TMA.
  3. The Request for Proposal (RFP) for the Vanpool Demonstration Program was approved and the program will start by April 1997.
  4. The Dade County Mobility management Process/Congestion Management System (DCMMP/CMS) was approved by the MPO Governing Board. As part of this study, the Bird Road and the 7th Avenue Corridors were evaluated and several TDM alternatives were recommended for implementation.
  5. The MPO and FDOT are developing an Arterial Investment Study for 107th Avenue. As part of this study, TDM programs will be recommended for implementation along the corridor.

**Next Step:**

1. Initiate the operation of the Dade County Vanpool Demonstration Program.
2. Complete the Model Private Employer Plan to expand the program to other private companies.
3. Implement the recommendations made in the DCMMP/MS regarding TDM alternatives.
4. Establish a comprehensive TDM Program at county level, including but not limited to Alternative Work Hours Program, Telecommuting, Ridesharng, and Parking Strategies, among others.

5. Form the Airport West and Downtown TMAs.

**3) Adopt policy incorporating bicycle facilities in the County's plan for new road construction or reconstruction projects.**

(Transportation, Section C, #1)

**Completion Date:** July, 1995

**Status:** In July 1995, the MPO Governing Board adopted the Bicycle Facilities Plan which incorporates such a policy. Following through on this objective, the Bicycle/Pedestrian Program sent a memorandum in August, 1996, to Public Works Department requesting the status/compliance of accommodating bicycles in new/reconstructed/resurfaced roadway design. Later, the Public Works Department developed their own version, which was subsequently adopted by the County.

In an effort to support non-motorized modes of transportation, the MPO has expressed a commitment to fund bicycle/pedestrian/greenway projects in the Long Range Transportation Plan (the year 2015).

The 1.5% funding set-aside for bicycle/pedestrian/greenway projects is a policy recommendation from the Long Range Transportation Plan Steering Committee. It represents a commitment from this urbanized area toward non-motorized use, such as bicycle, pedestrian, and greenway projects. The set-aside is intended for stand-alone projects of this nature, but not for sidewalks or bike racks. Sidewalks and bikelanes should be incorporated into typical sections during preliminary engineering work phases of roadway projects. Sidewalks not a part of a typical section or roadway project can continue to be funded through secondary programs such as the Road Impact Fee program. The set-aside could be used to fund bikelanes that would fill in "missing links" in existing bikelane projects. The set-aside would be derived by taking 1.5% of all eligible surface transportation capital expenditures, except Interstate, airport, and seaport. This set-aside is separate from, and not to be confused with, the Transportation Enhancement Program.

**4) Adopt a shower facility ordinance for professional office buildings and require that and non-residential and non-retail developments provide bicycle racks at a minimum rate of five bike parking spaces for every 100 automobile parking spaces as stated in the Draft Bicycle Facilities Plan.**

(Transportation, Section C, #2)

**Completion Date:** January, 1997

**Status:** A draft Bicycle Parking Plan is being finalized as of January, 1997 which identifies public buildings to include bicycle parking, recommended allotments of



bicycle parking at various types of establishments. Provisions for shower facilities will be addressed at a future date.

**5) Expand Bikes-on-Train program to include counter-flow and first hour service.**

(Transportation, Section C, #3)

**Completion Date:** September, 1996

**Status:** Bicycles are allowed on-board Metrorail from startup to 6:30 a.m. MDTA is against counter-allowance during rush hours because of lack of assurance that bicyclist will not attempt boarding crowded trains. Additionally, bicycle racks have been installed on 4 Metrobus routes (35, 70, 73, & 87). MDTA has a policy to install racks on every new bus with the entire fleet to be equipped within a decade.

**6) Implement Bikes-on-Tri-Rail.**

(Transportation, Section C, #4)

**Completion Date:** October, 1996

**Status:** Bicycles are allowed on Tri-Rail during off-peak hours, weekends and holidays.

## CODE COMPLIANCE

### NO ACTION

**1) Develop outreach program for contractors/builders on Florida's Energy Code.**

(Electrical, Section B, #3)

**Status:** The Department of Community of Affairs has been contracted to hold seminars this year in order to properly educate contractors of the need of enforcing the energy code. Code Compliance will continue improving the program of awareness of the need to enforce the State Energy Code.

**Next Step:** Information is needed to educate the general public. No action has been taken to address this issue.

**2) Develop strategy with Florida's Department of Community Affairs to improve enforcement of the Florida Energy Code.**

(Electrical, Section B, #4)

**Status:** Based on Chapter 553.907, Florida Statutes, entitled Building Construction Standards, owners of all buildings required to comply with this part, or their agents, must certify compliance to the designated local enforcement agency prior to receiving the permit to begin construction or renovation. No action has been taken at the local level. The Florida Energy Code is a mandatory state law.

## **CONCLUSION**

There is now a scientific consensus that we are experiencing changes in climate attributable to greenhouse gas emissions over past decades. This underscores the importance of maintaining a focus on this global issue. Through local action, the county will continue to emphasize sustainable development, implementation of our long range transportation plan, investment in energy efficiency in our facilities, reforestation and strategic landscaping, and providing information to citizens, businesses, and other governments to encourage their active support of these goals. Dade County is in the forefront of local governments in addressing climate change, and it will be in the long term interest of Dade County citizens to maintain this effort.