

WE'RE AT THE CENTER OF EVERYTHING  
SUSTAINABLE

LIVE, WORK, PLAY & PROSPER  
RESOURCE

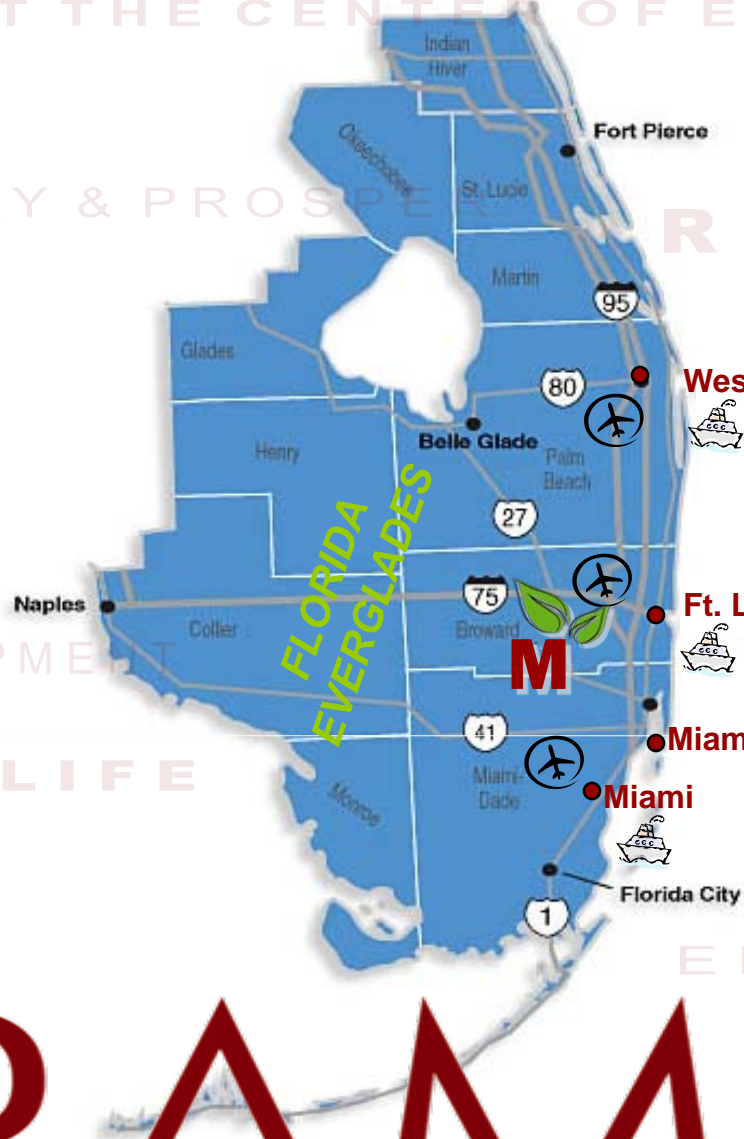
REVITALIZATION

ENVIRONMENT  
VISION

ECONOMIC DEVELOPMENT

QUALITY OF LIFE  
CULTURE

EDUCATION



# MIRAMAR

sustainable initiatives

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PROGRAMS

CULTURE

What have we done?



**MIRAMMAR**

**sustainable initiatives**



# MIRAMAR

## Sustainable Initiatives

- **Smart Building Energy Management Systems:** at selected City facilities for heating and cooling, to allow for air conditioning and lights to be shut off during nights and weekends (10% savings in energy cost)
- **PV Systems:** All City bus shelters are equipped with solar lighting photo voltaic systems
- **Geothermal Heating:** for pools at both Aquatic Complexes
- **Methane-to-Energy:** Biogas generated at the Waste Water Reclamation Facility is used to fuel boiler systems which provide heating necessary to operate Sludge Digesters. Biogas has been used as a sustainable substitute for natural gas at significant cost savings

Energy Efficiency



# MIRAMAR

## Sustainable Initiatives

- **Residential Plumbing Fixture Replacement Program** funded by a WaterSIP grant for an estimated 6.6 million gallons per year by retrofitting 125 single-family homes in Historic Miramar with low flow 2-gpm showerheads and dual-flush valve water closets
- **Rain Sensors:** Irrigation pumps are equipped with rain-sensors to prevent the system from activating when there is enough rainfall and City's irrigation systems use low-volume nozzles to minimize water usage
- **Reuse Water “Purple Pipe” System:** Currently used to irrigate selected residential properties, roadway medians, Waste Water Reclamation Facility (WWRF) landscape and plant operations. Completing the design of 2 million gallons per day (MGD) of additional reuse water production and storage capacities at the WWRF

Water Conservation



# MIRAMAR

## Sustainable Initiatives

- **Paperless City Commission Agenda:** Estimated reduction of 819,000 copies/yr; a reduction of 6,500 lbs. of paper/yr; a reduction of ink, paper, energy, staff time; a reduction of mail, pick up & delivery
- **Miramar Regional Park soccer season recycling program:** Over 1000 players in 85 teams of 15 children playing and practicing 3 times a week for 12 weeks; the program has the potential to divert an estimated 43,500 bottles of plastic within one season
- **Miramar Town Center recycling program:** expects to divert 70% of office waste into paper and commingled recycling: Recycled in Jan 2009 = 4,875 lbs; projected recycling in the month of Jan 2010 = 19,500 lbs (the weight of 1 ½ full size elephants) (equivalent to saving 165 trees/month)



# MIRAMAR

## Sustainable Initiatives

- **E-10 Fuel:** The City is now exclusively using E-10 fuel for all its vehicles that operate on unleaded fuels
- **Hybrid, alternative fuel & fuel efficient vehicles:** The city currently owns two hybrid vehicles and plans to obtain more in the future
- **Electric Vehicles:** The city tested a prototype electric utility XEBRA unit
- **Biodiesel:** The city conducted a test on using biodiesel for its fleet of city buses. The test revealed that some modifications to the fuel systems will be required to make biodiesel an effective fuel product
- **Zero emission vehicles:** Police Department operates a T3 Personal Mobility Vehicle, which runs chargeable batteries. PD is restricting idle time for running vehicles



# MIRAMAR

## Sustainable Initiatives

- **Green Incentives:** The Building and Zoning Divisions promote “green” initiatives by offering fast-track permit review to projects seeking LEED (Leadership in Energy & Environmental Design) certification
- **Mixed Use:** The Miramar Town Center has been designed as a mixed use TND development which promotes these sustainable categories: pedestrian uses, increased development density to maximize open space; community connectivity by juxtaposing different uses.
- **Support for green development in public sector:** Vizcaya Park, first city-owned project to seek LEED Silver certification
- **Community Garden Initiative:** to develop sustainable organic edible gardens throughout Miramar as a service to the community

Sustainable Sites



# MIRAMAR

## Sustainable Initiatives

### Support for green development in private sector:

- Toyota-Lexus Training Facility, located at Miramar Park of Commerce, achieved Gold LEED for Commercial Interiors certification
- Liberty Center, located at Monarch Lakes Industrial Park, is a 110,000 SF four-story building seeking LEED for Core and Shell certification
- United Healthcare Systems, per corporate guidelines searched for a sustainable location and is now housed at Liberty Center
- L'Oreal-Parbel Complex, located at Monarch Lakes Industrial Park, is a 82,232 SF facility seeking LEED for New Construction certification
- Riviera Pointe Corporate Centre, 70,000 SF commercial office, retail, and restaurant complex

Sustainable Sites





# MIRAMAR

## Sustainable Initiatives

- **US Mayors Climate Protection Agreement:** to meet or beat the greenhouse gas emission reduction target suggested in the Kyoto Protocol – a 7% reduction from 1990 levels by 2012
- **Green Team:** is a group of city staff members from all city departments who promote city-wide sustainability
- **“Eco Healthy Child Care Centers” designation:** a nationally-recognized award for outstanding commitment to protecting children from environmental health risks
- **Livable Communities Award:** Awarded to the Miramar Town Center for excellence in sustainable design
- **LEED Accredited Professional:** Miramar encourages LEED AP staff accreditation
- **National member US Green Building Council:** and active sponsor of the South Florida Chapter events

Leadership

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What is to be done?



**MIRAMMAR**

**sustainable initiatives**



### **American Recovery and Reinvestment Act of 2009 (ARRA)**

The City of Miramar is actively pursuing State and Federal grants derived from the American Recovery and Reinvestment Act:

- Created an ARRA coordination team to identify stimulus opportunities
- Created an ARRA webpage site with information about Miramar's stimulus projects



### **Some of the categories being explored include:**

- Energy efficiency and renewable energy block grant for technologies focusing on sustainability, efficiency, renewable energy, and smart growth policies
- Firefighter assistance grants for apparatus and equipment acquisition
- Byrne Justice Assistance grants for additional police officers
- Public transportation assistance for additional buses and bus shelters
- Transportation enhancement grants for landscaping and sidewalk construction
- Historic Miramar infrastructure improvements
- Housing and urban development assistance programs
- Neighborhood Stabilization Program for purchase assistance and home repair
- Child care & development block grants services through Family Central

In total, the City is petitioning for over \$27 million in assistance

ARRA



### Energy Efficiency Conservation Block Grant

- **Energy Audit** - energy efficient and conservation strategy for all City facilities including HVAC and lighting systems. Metering connected to real time web-based monitoring program, "Building Dashboard Hardware/Software Program".
- **Smart Building Energy Management** - for HVAC and Lighting with remote interface and tracer summit expansion @ Youth Enrichment Facility.
- **Purchase of one-25 seat hybrid bus** to support City's transit hub system.
- **Photovoltaic array** at Miramar Regional Park for 7,200 SF concession building
- **Establish a Smart Code** for zoning guidelines that promote energy efficient development.
- **Energy retrofits** at the Water and Waste Water Treatment Plants:
  - Re-wind and replace motors to improve efficiencies by up to 40%
  - Phase-regulators to stabilize and reduce incoming electrical service
  - Replace high intensity design (HID) lighting with fluorescent T-5 fixtures